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Investigating Capital Structure Decisions and Its Effect on the Nigerian Capital Market

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Abstract

The Nigerian Stock Exchange is the only stock market exchange that deals with the purchase and sale of shares in Nigeria. The Exchange over the years has witnessed rise and fall in business activities which affected its performance. The objective of the study is to investigate the effect of debt-equity choice of financing on the Nigerian capital market. The hypothesis formulated for the study was that there is no positive relationship between debt-equity ratios and the performance of The Nigerian Stock Exchange. The study was conducted on the consumer sector of The Exchange. The study is a quantitative research and secondary data were used for the study. A multiple regression analysis using SPSS was used for the analysis. Market capitalisation of shares was the dependent variable, and debt-equity ratio, paid up share capital, long term debt, and size were the independent variables of the model. The results revealed a negative relationship between debt-equity ratios and positive relationships between paid up share capital, long term debt and sizes of companies and stock market performance. It was recommended that companies should continue to pay more attention to shares when seeking for long term financing.

Keywords: capital structure, share capital, long term debt

Introduction

Over the years, the issue of funding has been given much prominence in corporate finance. Funding is central and vital for any business entity. Availability of funds for businesses facilitates the smooth running of the business and also guarantees the continued existence of the business. Organisations cannot survive without financing for their operations. Corporate financing has become a global issue where corporate managers in Europe and the United States have always claimed that 'financial flexibility' is the primary objective of their firm's policies (Almeida and Campello, 2010). This makes the issue of funding to be vital and paramount for companies' operations.

Organisations in Nigeria have two main sources of funding their businesses, long term financing and short term financing. Short term financing is financing for a period of one year or less, accessed through the money market. Banks in Nigeria are the main providers of short term funding for companies where surplus funds are channelled to deficit areas. Traditionally short term financing are the most common and easily accessible funds for companies in Nigeria, mainly because of the nature of the instruments and the fact that many companies are not quoted on The Exchange, thereby limiting them to short term funding.

Long term funding is financing is financing for more than one year and The Nigerian capital market is the market for where long term financing are sought. Al – Faki (2006, as cited in Muha, 2011) describes the Nigerian capital market as a "network of specialised financial institutions, series of mechanisms, processes and infrastructure that in various ways, facilitate the bringing together of suppliers and users of medium to long term capital for investment in socio-economic developmental projects." At the hub of the capital market is The Nigerian Stock Exchange which has facilitated the availability of long term funding for companies to finance operations and companies have been doing so over the years.

The issue of capital structure has been a subject of considerable debate as far back as 1958 when Miller and Modigliani (1958; 1963) gave substantial amount of effort to determine which factors determines the firm's choice of capital structure. Capital structure is concerned with the way the company finances its operations through the proportionate combination of debt and equity that will maximize the value of the firm. Ajao and Ema (2012) emphasize that using this proportionate relationship, a company can decide whether to use debt, equity, or a combination of both debt and equity.

In deciding the debt-equity combination of financing, the capital market comes to play because companies that seek for long term funding to finance their business activities will approach the capital market. The relationship between capital structure decisions and the Nigerian capital market lies on how often companies place offers on The Exchange and also on the amount of equities listed and traded on The Exchange. It therefore becomes important to investigate the relationship between capital structure decisions of quoted companies and its effect on the performance of the Nigerian capital market.

Globally, no acceptable position has been made on the acceptability of debt-equity choice of financing or optimum capital structure. Myers (1984) on his paper "the capital structure puzzle" asks on how firms choose their capital structures? and his answer was "we know very little about capital structure. We don't know how firms choose the debt, equity or hybrid securities they issue."

Two schools of thought emerged to explain the relationship of capital structure decisions and its effect on the value of the firm - the relevance and irrelevance schools of thought. The thrust of the relevance school of thought which was advanced by the net income approach and

the traditionalist view is that capital structure matters (Pandey, 2010). The irrelevance of capital structure advanced by the net operating income approach and Modigliani and Miller (1958, as cited in Pandey, 2010) feel differently and state that capital structure decisions are irrelevant in determining the value of the firm (Pandey, 2010). Other theories are the pecking order theory, the trade-off theory, the signalling hypothesis, and the agency theory. With decades of researches, no clear acceptable position has been adopted for capital structure decisions, and the theories have not been able to explain financing behaviour of organisations.

Most of the studies on capital structure conducted were done on developed countries Fan, Titman, and Twite, (2012), Hail and Leuz, (2006), Frank and Goyal, (2009), Rajan and Zingales, (1995) Margaritis and Psillaki (2010), Robb and Robinson (2014), Mahajan and Tartaroglu (2007), Rajan and Zingales (1995) and some on other countries like Pakistan; Jibran, Wajid, Waheed, and Masood (2012), Jordan; Al Farooque, Van Zijl, Dunstan, and Karim (2007), Bangladesh; Chowdhury and Chowdhury (2010), Ghana; Abor (2008), Doku, Adjasi, and Sarpong-Kumankuma (2011), Bokpin and Isshaq (2008). Also looking at past literature Uremadu and Efobu (2012) have observed that most empirical studies are out dated and not recent (Harris and Raviv, 1991), (Hatfield, Cheng, and Davidson, 1994), (Himmelberg, Hubbard, and Palia, 1999), (Rajan and Zingales, 1995), (Rajan, Brien, Diamond, Fama, Kaplan, Kashyap, and Miller, 1994), (Rajan and Zingales, 1994), (Titman and Wessels, 1988), and (Taggart, 1997; Marsh, 1982; Javiland and Harris, 1984, as cited in Uremadu and Efobu, 2012).

A number of these studies investigated capital structure decisions as it affected the value of the firm, to bridge this gap, this paper looks at capital structure decisions on Nigerian companies and its effect on the Nigerian capital market. No serious research on the subject at hand had been conducted to the knowledge of the researcher, which necessitated the need for the study. The study investigates the consumer sector of the Nigerian Stock Exchange, which has not been done in previous studies.

The objectives of the study:

The main objective of the study is to investigate the relationship between capital structure decisions of quoted companies and the performance of The Nigerian Stock Exchange. The specific objectives are:

1. To investigate the relationship between debt-equity ratios of quoted companies and the performance of The Nigerian Stock Exchange.
2. To assess the relationship between paid up share capital of quoted companies and the performance of The Nigerian Stock Exchange.
3. To evaluate the relationship between long term debt of quoted companies and the performance of The Nigerian Stock Exchange.
4. To determine the relationship between size of quoted companies and performance of The Nigerian Stock Exchange.

In line with the objective of the study, the following hypotheses were formulated:

H_{01}: There is no positive relationship between debt-equity ratios of quoted companies and the performance of The Nigerian Stock Exchange.

H_{02}: There is no positive relationship between paid up share capital of quoted companies and the performance of The Nigerian Stock Exchange.

H_{03}: There is no positive relationship between long term debt of quoted companies and the performance of The Nigerian Stock Exchange.
H_{04}: There is no positive relationship between the size of quoted companies and the performance of The Nigerian Stock Exchange.

The paper is divided into five sections. Section one is the introduction and discusses the background of the study, the research problem, the objective of the study and hypotheses of the research. Section two is the literature review and discusses the views of researchers, the theoretical framework, and a brief background of The Nigerian Stock Exchange. Section three is the research methodology, section four is the presentation and discussion of results and section five is the conclusion.

Literature Review

The issue of capital structure is seen differently by many scholars and researchers. Some view the use of more of leverage over equity and others agree with the use of more of equity in favour of debt financing. Financial managers make capital structure decisions based on the requirements or needs of the organisation, or liquidity position of the organisation, the nature of a proposed project, or based on the nature of the shareholders. In choosing debt structuring or long term financing, the capital market is approached which is expected to have a positive impact on performance. Doku, Adjasi, and Sarpong-Kumankuma (2011) in their study of "Financial market development and capital structure of listed firms: Empirical evidence from Ghana," conducted their research on Ghanaian companies and explored the relationship between financial market development and the choice of debt-equity finance as complements or substitutes. Using panel data and pooling 21 listed companies on the Ghana Stock Exchange, they were able to conclude that stock market development has a positive effect on capital structure decisions of listed companies.

Bokpin & Isshaq (2008) on a related study but with opposing views conducted their study on Stock market development and financing decisions of listed firms in Ghana covering a period 1991 to 2005. They regressed the debt – equity ratios on market size and market liquidity variables using ARIMA models and their results showed that market liquidity variables had a mixed impact on debt – equity proportions suggesting that the size of the Ghanaian stock market is not yet significant to impact on financing choices of firms quoted on The Exchange.

Chen and Strange (2005) attempted to investigate the determinants of capital structure on 972 listed companies on the Shanghai Stock Exchange and Shenzhen Stock Exchange in China in 2003. Using trade-off and pecking order theories which tried to explain and predict the signs and significance of leverage as identified by Rajan and Zingales (1994), they included institutional shareholdings (including state agency shareholdings, state owned shareholdings and privately owned shareholdings) as corporate governance variables to examine the effects of corporate structure on the debt financing behaviour of the companies. They found that profitability is negatively related to capital structure at a highly significant level, the size and risk of the firms are positively related to debt ratios in terms of market value measures of capital structures. The years of the companies listed on the stock market were positively related to capital structure indicating access to debt financing.

Baker and Wurgler (2002) concluded that market timing is relevant to capital structure as firms are more likely to issue equity when their market values are high, relative to book value and past market values, and to repurchase equity when their market values are low, while Press

(2015) states that unlike debt issues and reductions equity issues and repurchases have no significant lasting effect on capital structure. Therefore firms that have target debt ratios can engage in timing the equity market.

The capital market's influence on borrowing behaviour is closely related to capital structure decisions of companies which can further lead to capital market development. The Nigerian Stock Exchange was established in 1960 as the Lagos Stock Exchange. In December 1977 it became known as The Nigerian Stock Exchange, with branches established in some of the major commercial cities of the country. The Exchange began operations in Lagos in 1961 with only 19 companies listed for trading. The Exchange grew to about 283 listed companies with a total market capitalisation of about $125 billion as at the end of 2007 and as at May, 2009, there were 295 securities listed made up of 41 Government Stocks, 47 Industrial loans (Debenture/Preference) Stocks and 208 Equity/Ordinary Shares of Companies with a total market capitalisation of N9.45 trillion. The Nigerian Stock Exchange operates an automated trading system for its market, and provides listing and trading services, as well as electronic clearing settlement and delivery services through the Central Securities Clearing System Plc. In 2013 there are approximately 255 listed securities with a market capitalization of N17.441 trillion (US $112.338 billion). The Nigerian Stock Exchange currently has 12 sectors and 10 indices to track market performance. The Nigerian Stock Exchange has emerged as one of Africa's leading Exchanges and is today the second largest financial centre in Sub-Saharan Africa. The Exchange is licenced under the Investments and Securities Act (ISA), and is registered and regulated by the Securities and Exchange Commission. The Exchange is a founding member and executive committee member of the African Securities Exchanges Association (ASEA), an affiliate member of the World Federation of Exchanges (WFE), and an affiliate member of the International Organization of Securities Commissions (IOSCO).

Two schools of thought have emerged on capital structure decisions. The relevance of capital structure and the irrelevance of capital structure schools of thought. Besley and Brigham (2005), Pandey (2010), Van Horne, Wachowicz Jr and Bhaduri (2008), Kurfi (2003), Kapil (2011) and Akinlo (2011) identified the theories of capital structure to be the Net income approach, the Traditional approach, Net operating income theory, and Miller and Modigliani Hypothesis of capital structure. Other approaches are the Trade – off theory, Pecking order theory, Agency theory, and Signalling hypothesis.

Relevance of Capital Structure

The relevance of capital structure are premised on the notion that capital structure decisions are relevant in determining the value of the firm, and that capital structure decisions affect the value firm. In this school of thought, an optimum capital structure reduces the firm's overall cost of capital and maximizes its value. Two approaches relevant to this school are the Net income approach and Traditional views.

Net Income Approach

The idea of increasing market value and decreasing the overall cost of capital is central to this approach. The Net income approach states that the capital structure of any given firm creates an impact on the value of the firm. Thus capital structure is important as a determinant of a given firm's value (Kapil, 2011). Pandey (2010) explain further that as the firm uses more of debt in place of equity, its value will increase and the weighted average cost of capital will reduce. Thus

by increasing debt the firm is able to increase firm value and lower the weighted average cost of capital.

Traditional Approach

The traditional approach to capital structure and valuation assumes that there is an optimum capital structure and that the firm can increase the total value of the firm through the judicious use of financial leverage. This approach suggests that the firm can initially lower its cost of capital and raise its total value through increasing leverage (Van Horne, 2005). Even though investors raise the required rate of return of equity, it does not necessarily mean that the use of equity can offset the benefits of using "cheaper" debt funds. Pandey (2010) further sate that the judicious mix of debt and equity capital can increase the value of the firm by reducing the weighted average cost of capital up to certain level of debt. Van Horne (2005) explains further that as more leverage occurs, investors increasingly penalize the firm's required equity return until eventually the effect more than offsets the use of 'cheaper' debt funds.

Irrelevance of Capital Structure

The irrelevance school of thought on capital structure state that the firm's capital structure does not affect firm value. That firm value is independent of capital structure and that the firm's value depends upon its investment decision rather than its financing decisions, thus financing and investment decisions of the firm are independent of each other. Capital structure is therefore irrelevant for the firm and hence no optimum structure exists for the firm. The theories behind this school are the Net operating income approach and the Modigliani - Miller (MM) hypothesis theory.

Modigliani and Miller hypothesis

Modigliani and Miller (1958) argue that in perfect capital markets without taxes and transaction costs, a firm's market value and the cost of capital remain invariant to capital structure changes. The value of the firm depends on the earnings and risk of its assets (business risk) rather than the way in which assets have been financed (Pandey, 2010). Van Horne (2005) states that the Modigliani and Miller (1958) position is explained in the Net operating income operating approach and made a formidable attack on the Traditional position by offering a behavioural justification for having the cost of capital constant throughout all the degrees of leverage. Kurfi (2003) informs that the MM hypothesis was made on four assumptions and two propositions. The assumptions were:

1. The existence of perfect capital market in which securities (equity and debt instruments) are traded by all investors freely. No restrictions are placed with respect to borrowing, they behave rationally, and the costs of buying and selling do not exist.
2. Firms are grouped into homogeneous risk classes, and firms would be considered to belong to a homogeneous risk class if their expected earnings have identical characteristics.
3. The risk of investors depends on both the random fluctuations of the net operating income and the possibility that the actual value of variable may turn out to be different than their best estimate.
4. That corporate income tax does not exist. This assumption was later removed.

The propositions were that "The market value of any firm is independent of its capital structure and is given by capitalizing its expected return at the rate appropriate to its class," and that "the required rate of return on equity, or cost of equity, increases with financial leverage."

Net operating income approach

The Net operating income approach as stated by Kapil (2011) is an approach where no optimal capital structure for any firm exists, the financing decisions do not affect the average cost of capital of the company and hence the total value of the firm remain unchanged with changes in the debt proportion. This theory was put forth by Durand (1962, as cited in Kapil, 2011) where he stated that the value of the firm depends upon its operating income and business risk and not on its capital structure. Changes in capital structure realign the risk and return between debt and equity and do not alter the total return and the total risk of the firm which impacts its total value. Long term financing mix is independent of the firm's value.

Other important theories about capital structure are trade – off theory, pecking – order theory and signaling hypothesis theory.

Trade-off theory

The trade – off theory refers to the idea that companies make in deciding how much debt finance and how much equity finance to use to balance the costs and benefits. Akinlo (2011) states that the trade – off theory asserts that companies optimize their debt level such that marginal tax advantages of additional borrowing are offset by the increase in costs of financial distress. Since interest payments are tax deductible, raising more debt increases the tax benefits Akinlo (2011) goes further to state that an increase in debt equally increases the probability of default and hence the expected cost of bankruptcy.

Pecking – order theory

The pecking – order theory was pioneered by Myers and Majluf (1984, as cited in Autore and Kovacs, 2003) and explains that firms seeking to finance new investments prefer to use funds according to a hierarchy: first by internal funds then debt issuance, and finally equity issuance. This pecking order arises because managers not wanting to dilute existing shareholders' will only issue overvalued securities. The theory therefore considers that a firm must issue common stock to raise cash to undertake a valuable investment opportunity. It is assumed that management knows more about the firm's value than a potential investor, and that investors interpret the firm's actions rationally. This is one of the most popular theories of capital structure theories. Chang and Song (2013) state further that, by assuming managers have inside information about firm value and always behave in the interests of passive existing shareholders, hence firms prefer internal to external finance, and prefer safe securities to risky ones for raising external finance. Safe securities, also called informational insensitive securities are defined as securities with less future changes when managers' inside information is revealed.

Signaling Hypothesis

The signaling theory as stated by Bini, Giunta, and Dainelli (2010) posits that the most profitable companies provide the market with more and better information. With the signaling theory, as a firm decides to use debt or stock to raise new capital, it gives a signal to investors, and a stock issue sets off a negative signal and using debt is perceived as a positive (or neutral)

signal. Companies are therefore reluctant to issue new stock by maintaining a reserve borrowing capacity (Georgia State University, 2009).

This paper is influenced by trade-off theory of capital structure where companies will look at the option of long term financing. That is financing through the use of the capital market.

Research Methodology

Research Design

This study is a quantitative research investigating capital structure decisions on the Nigerian capital market. The ex-post factor research design was used because all events had already taken place. Secondary data was used to analyse the data. Annual report and accounts of companies (balance sheet and profit and loss account), The Nigerian Stock Exchange fact book, and the internet were the sources of data collection. The data collected for the study were market capitalisation of shares on The Nigerian Stock Exchange, market value of shares, debt ratios of the respective companies, and turnover ratios. The period of study was ten years, covering the financial years 2004 to 2013. Ten years was chosen to get better results for the work.

Population of Study

The population of the study consisted of 27 equities listed on the Consumer Goods sector of the Nigerian Stock Exchange as at 31st December, 2013. Companies that are engaged in the production and manufacturing of final goods are listed in this sector and the products are classified for personal use and specifically intended for the mass market. The products encompass automobile/auto parts, beverages, food products, household durables and products. As of 2013 financial year these equities had a total market capitalization of N3.47 trillion (US$22.30 billion) accounting for 70.87 per cent of performance by the sector (The Nigerian Stock Exchange Fact Book, 2012/2013).

Sample of Study

Non probability sampling technique using purposive sampling was adopted for the study. This was because only companies with available data were used which best met the purpose of the study. Using Krejcie and Morgan (1970, as cited in Umaru, 2013) table for determining sample size, 20 companies were chosen representing 74 per cent of the population of study.

The Model

The study adopts the model from the research of Chidiebere and Nwankaego (2012) and modified by the researcher. Using IBM SPSS statistics version 20, a multiple regression was used to analyse the study. Market capitalisation of shares is the dependent variable and a proxy for capital market performance, while the independent variables are debt-equity ratios, paid up share capital, long term debt, and size of the company being proxy for capital structure.

Market Capitalisation of Shares	Number of issued shares multiplied by the market price per share
Debt-Equity Ratio	Total liabilities divided by shareholders' funds
Paid up Share Capital	Number of shares issued and fully paid up
Long term Debt	Liabilities more than one year
Size	Company turnover

Variable Measurement

The relationship between capital structure and the Nigerian capital market expressed in functional form is:

MCAP = *f* (DE, PAID, LTD, SIZE)

To analyse the relationship between the dependent and independent variables, the regression equation is expressed in equation form as:

$MCAP = a + \beta_1 DE + \beta_2 PAID + \beta_3 LTD + \beta_4 SIZE + Ɛ$ (….1)

Where,

MCAP = market capitalisation of shares

a = the constant

DE = debt – equity ratio

PAID = paid up share capital

LTD = long term debt

SIZE = company turnover

Ɛ = error term

β_1 …. B_4 = coefficients of the independent variables

Expected Outcomes of the Research

The model's a priori expectations are:

DE has a positive relationship with MCAP.

PAID has a positive relationship with MCAP

LTD impacts positively on MCAP.

SIZE has a positive relationship with MCAP

Presentation and Discussion of Results

Descriptive Statistics

Table 1 below shows the descriptive statistics of the pooled data of all the 20 companies analysed over a ten year period from 2004 to 2013. In total there were 197 observations. Market capitalisation of shares had an average value of 4444326.60 and a standard deviation of 23273560.882. Debt – equity ratio had a mean value of 5.03 and a standard deviation of 21.115, paid up share capital had standard deviation of 400686.839 and a mean value of 94108.49, and, long term debt and size had average values of 146183.31 and 2083443.29 with respective standard deviations of 691851.520 and 9135725.873.

	Mean	Std. Deviation	N
MCAP	4444326.6	23273560.882	197
DE	5.03	21.115	197
PAID	94108.49	400686.839	197
LTD	146183.31	691851.520	197
SIZE	2083443.29	9135725.873	197

Table 1: Descriptive Analysis Source (SPSS Output)

Correlation Analysis

The outcome of correlation between the variables as shown in table 2 below indicated a positive correlation between the dependent and independent variables. A 1% increase in market value of shares would be explained by a corresponding increase in 1.6% increase in debt-equity

ratios, 83% increase in paid up share capital, 93.2% increase in long term debt and 90.1% increase in size. The greatest correlation was between sizes of companies and paid up capital.

		MCAP	DE	PAID	LTD	SIZE
Pearson Correlation	MCAP	1.000	.016	.830	.932	.901
	DE	.016	1.000	.039	.039	.018
	PAID	.830	.039	1.000	.886	.974
	LTD	.932	.039	.886	1.000	.933
	SIZE	.901	.018	.974	.933	1.000
Sig. (1-tailed)	MCAP	.	.414	.000	.000	.000
	DE	.414	.	.294	.292	.399
	PAID	.000	.294	.	.000	.000
	LTD	.000	.292	.000	.	.000
	SIZE	.000	.399	.000	.000	.

Table 2: Correlation Source (SPSS Output)

Regression Result

The summary of regression result computed using SPSS is shown in table 3. To test the fit of the regression model, the F statistic at 415.28 indicates that the model is statistically significant at 5%. From the data obtained, all the variables are in millions of Naira except the ratio which was presented as a ratio from the millions of Naira calculated. The overall fit of the model (R^2) was 89.6% indicating a model fit. The adjusted R2 at 89.4% indicated that the cross validity of the model is very good. The multiple regression analysis which shows the relationship between MCAP and the 4 independent variables is expressed as:

MCAP = -117949.244 + -344.676DE + -38.116PAID + 19.962LTD + 2.512SIZE

From the model the contribution of the independent variables showed that debt-equity ratio contributed more to market capitalisation of shares at 344.67 followed by paid up capital with 38.11, long term debt with 19.96 and company size with the least at 2.512.

	Coefficients	Sig
Constant	-117949.244	
DE	-344.676	.989
PAID	-38.116	.000
LTD	19.962	.000
SIZE	2.512	.000
R	.947	
R square	.896	
Adjusted R square	.894	
F Statistics	415.284	
Durbin-Watson	1.726	

Table 3: Summary of regression result (SPSS Output)

Test of Hypothesis

Results for the Test of Hypothesis One

H_{01}: There is no positive relationship between debt-equity ratios of quoted companies and the performance of The Nigerian Stock Exchange.

From the table above, the p value is .989 (.989 > 0.05). We fail to reject the null hypothesis one, and conclude that that there is no positive relationship between debt-equity ratios of quoted companies in Nigeria and the performance of The Nigerian Stock Exchange. This did not confirm to the a priori expectation of the research.

Results for the Test of Hypothesis Two

H_{02}: There is no positive relationship between paid up share capital of quoted companies and the performance of The Nigerian Stock Exchange.

From the table above, the p value is .000 (.000 < 0.05)

We therefore reject hypothesis Two and conclude that there is a positive relationship between paid up share capital of quoted companies and the performance of The Nigerian Stock Exchange. This confirms to the a priori expectation of the research.

Results for the Test of Hypothesis Three

H_{03}: There is no positive relationship between long term debt of quoted companies and the performance of The Nigerian Stock Exchange.

From the table above, the p value is .000 (.000 < 0.05)

We therefore reject hypothesis Three and conclude that there is a positive relationship between long term debt and the performance of The Nigerian Stock Exchange. This confirms to the a priori expectation of the research.

Results for Hypothesis Four

H_{04}: There is no positive relationship between size of quoted companies and the performance of The Nigerian Stock Exchange.

From the table above, the p value is .000 (.000 < 0.05)

We therefore reject hypothesis Four and conclude that there is a positive relationship between size of quoted companies and the performance of The Nigerian Stock Exchange. This confirms to the a priori expectation of the research.

Conclusion

The research is a study on capital structure decisions and its effect on the Nigerian capital market. The purpose of the study is to investigate the relationship between capital structure decisions of quoted companies in Nigeria and the performance of The Nigerian Stock Exchange. Studies on capital structure and its performance on the capital market have not been conducted in Nigeria and the study attempted to investigate the relationship. The hypotheses formulated were that there is no positive relationship between debt – equity ratios, paid up share capital, long term debt and sizes of quoted companies in The Nigerian Stock Exchange and performance of the Nigerian Stock Exchange. The results revealed that debt – equity ratios of the selected companies had no positive relationship with the stock market, whilst all the other independent variables paid up share capital, long term debt, and size had positive effects on the performance of the Nigerian capital market.

The study recommends as follows:

- As there is a positive relationship between share capital and the performance of the stock market, companies in Nigeria should continue to pay more attention to share issues when seeking for long term financing.
- Nigerian companies should continue to pay more attention to their sales so that more revenue can be generated and considering its effect on capital market performance.

- The study recommends capital structure decisions should be researched on other sectors of The Exchange to examine the effect on stock market performance.

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The Holistically Integrated Curriculum: Implications for Personality Development

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Abstract

This paper aims to propose a renewed concept of 'Holistic Integrated Curriculum' (HIC) which will be useful for personality development in integration of the curriculum. It defines the concept of integrated curriculum from a holistic worldview, its theoretical framework and discusses the implications of this concept on personality development. The issue of defining integrated curriculum has received a massive amount of attention from educational theorist and scholars from the West since the turn of the twentieth century. Initially, the integrated curriculum has been practiced by most contemporary educational institutions around the world at all levels i.e. primary, secondary and tertiary. However, there is a great diversity in their curricula, objectives and contents. Hence their claims that their educational systems are fully integrated, brings about confusion. This leads to the first part of the discussion on revisiting the concept of HIC from a holistic worldview. The second part of the paper is an explanation of the theoretical framework. This renewed concept has a flexible theoretical framework which is divided into seven essential components and seven integral elements in personality development. It is a framework that is flexible and applicable to any contemporary educational institutions. The third part of the paper discusses some implications of this renewed concept for contemporary educational system. The study utilizes the 'grounded theory' which is a qualitative approach that generates theory from observation. It is hoped that this conceptual study would lead to the reformulation of educational aims, a more careful selection of curricular contents, as well as the application of pedagogical methods and mode of evaluation for contemporary educational institutions.

Keywords: Personality development, Integrated Education, Holistic Worldview

Introduction

The world today is witnessing numerous problems such as corruption, oppression, depression, and aggression. These phenomena are growing even among highly educated people in both Eastern and Western countries. This resulted from the disintegrated personality of individuals who are, rich in knowledge but poor in ethics. The existing system of education is failing. A depressing statement made by several Presidents of Universities immediately after the Second World War is provided in The Harvard Report. "The scientific methodology is extremely limiting and anti-human and it descends into the mechanization of the human personality." (Ashraf, 1991:18).

In describing personality, personality theorists have attempted to show similarities and differences among humans (Hergenhahn and Olson, 1999). The former issue concerns human nature, and the latter concerns individual differences. Thus, the goals of personality theory are to describe what humans are like and to provide explanations on why humans are like that. Thus far, no single theory has been successful at doing either; rather, different theories emphasize different aspects of human nature and individual differences (Hergenhahn and Olson, 1999).

In the 1980's, William Bennet and his assistant, Chester Finn of the American Secretary of Education, and other authorities criticized the American education system because the products of this system knew little, or nothing that was worth knowing (Lipman, 1991:28-29). The knowledge taught was not relevant to life, but only for examinations. It circumvents on an academic form of education that is obsessed with the cognitive development only and it rejects a dehumanized form of education producing a slave of the system.

As a response to this issue in the West, the emergence of a movement that promoted a holistic education became a novel phenomenon. Holistic education is considered as a recognizable discipline of study and practice in the mid-1980s in North America (Miller, 2004). Its emergence is a response to the dominant worldview of mainstream education namely the "mechanistic" or "Cartesian-Newtonian" worldview. Rather than attempting to provide a model of education, holistic education seeks to challenge the fragmented, Reductionistic assumptions of mainstream culture and education (Miller, 2000). Holistic education is concerned with underlying worldviews or paradigms in an attempt to transform the foundations of education. Hence, holistic education becomes a causative mechanism for the transformation of education in the West.

Meanwhile in the Muslim parts of the world, Muslim reformists called for the transformation of the traditional education system to become more relevant to the new millennium. They advocate the reintegration of knowledge through an integrated system of education: traditional religious education with modern secular education. They believe that both systems should be unified. Hence, the integrated curriculum is proposed as the best solution in solving the issue of the dual systems in Muslim education then to provide a more holistic system of education in this new millennium. It is worth noting that the issue of integrated curriculum is closely related with the proposal of holistic education advocated by Western and Eastern as well as Islamic movements. In sum, it could be generalized that the entire system of education in this world was in crisis, hence, it needs to be wholly transformed in a holistic manner.

Statement of the Problem

The issue of defining integrated curriculum and holistic education has received a massive amount of attention from educational theorist and scholars from the West since the turn of the twentieth century as well from Muslim scholars and academics in the recent times. The practice of an integrated curriculum is not limited to revising the curriculum *per se*, but it also involves restructuring the whole system of education in a holistic manner. As Ron Miller (1992), a prominent leader of the movement of holistic education, argues that the meaning of holistic education should be understood as a paradigm rather a particular method or technique. A holistic paradigm of education consists of a set of basic assumptions and principles that can be applied in diverse ways.

In response to the transformation of education system, many scholars and proponents of Islamic education maintain the practicability of an integrated curriculum. However, the translation of it into practice is a difficult process. Notwithstanding, the majority of contemporary Islamic schools claim their educational systems are integrated with great diversity of philosophy, objectives, curricular content and methodologies. The diversity of this concept can be obviously seen in several perspectives or statements issued by some contemporary education system. It is shown that there are diverse translations of integrated curriculum among scholars and proponents of Islamic education who have interpreted it in accordance to their own needs and aspirations. This indicates the complexity and ambiguity of the concept of integrated curriculum. This 'ambiguous' integration has caused confusion to educational administrators, teachers and policy makers. Oftentimes Muslim schools throughout the world tend to practice a mere combination of religious and modern curriculum or, at the utmost, integrate certain religious subjects into their curriculum. Such superficial and artificial integration should be avoided because it can cause harm to the society, as a consequence of producing a disintegrated personality of man.

Therefore, there is an urgent need to develop an individual with a holistic personality. He or she should be a good individual, a competent leader, a wise professional and a seeker of the Truth. He or she should possess good moral characters which is the manifestation of high spirituality; and has intellectual knowledge and professional acumen to enable him to be globally competent and socially and environmentally conscious. The noble aim to produce such personality may be realized through the Holistic Integrated Curriculum (HIC). Hence this article will revisit the concept of HIC and presents its theoretical framework. HIC provides comprehensive personality development in terms of the spiritual, moral, intellectual, professional, social and physical aspects. Thus, to develop such holistic personality, seven main areas spiritual liberation, moral development, cultivation of intellect, preparation for real life, individual benefits, social benefits and physical growth will be elucidated. This renewed concept give some explicit implications on educational philosophy, curricular contents, methodology of teaching and mode of evaluation for contemporary education system and its institutions.

Methodology

The study utilizes the grounded theory method, which is a qualitative approach that generates theory from observation. The resulting theory is an explanation of categories and their properties and an exposition of the relationships among them. The grounded theory refers to the 'linking-up' of theories, making them relevant to solving the problems that the study presents

(Glaser & Strauss, 1967). In revisiting the concept of HIC, the conceptual and philosophical clarifications are essential so that a firm foundation can be moulded for the transformation of the Islamic education system. According to Rosnani (1996:16) 'before any real integration can occur, its philosophical grounding must be examined so that it can be anchored on a firm foundation'. Since this concept is complex, its nature, characteristics and properties are defined in a connotative manner (Naquib al-Attas, 1980) HIC and its theoretical framework will be conceptualized in a more comprehensive manner that covers both Eastern and Western scholars' thoughts and practices.

Defining the Concept of 'Holistic Integrated Curriculum'

The Holistic Integrated Curriculum (HIC) is proposed as a renewed concept for the transformation of Islamic education system. The term 'holistic' is usually used to differentiate holistic education from other theories of integrated curriculum and traditional education. HIC deals with education in the holistic approach is and based on the criterion of universality which is a reflection of universal worldviews that set the standard of true holistic education. It is necessary to define the terms 'curriculum' and 'curriculum integration' both of which oftentimes bring ambiguity due to their different meanings. Ornstein and Hunkins (1993) present several definitions of the word 'curriculum' which are: "a plan of action for achieving desired goals; a learner's experiences; a system for dealing with people and its processes; a field of study and subject matter or content". HIC covers both types of curriculum formal and prescribed curriculum. It includes subject and textbook selection as well as informal and hidden curriculum. It encompasses all planned educational activities and experiences including co-curricular and extra co-curricular activities and the entire organization of knowledge. In sum, HIC regards curriculum as a sum total of institutional means meant to guide learners individually and collectively according to the levels of schooling.

Regarding curriculum integration, Ingram (1979: 23) defines it as "the process of rediscovering the foundations of knowledge in experience, and making the edifice of knowledge meaningful for life." According to him, it serves three educational functions which are epistemological (dealing with knowledge); psychological (concerned with learning aspects); and social (related to classroom interaction and school-community relationships). HIC must serve all three functions in order to establish a harmonious relationship between knowledge, learning and social living. Thus, curriculum integration is vital for the establishment of a relationship between school and society. Ornstein and Hunkins (1993: 9-10) view integration as the connecting of "all types of knowledge and experiences in the curriculum plan so that it accentuates horizontal relations among various content topics and themes. This occurs within the learner as he attains a unified view of knowledge and an in-depth meaning of the subject matter"

HIC outline five phases of achieving integration (see Table1). The first is the teaching phase, where educators engage in the role of integration in order to ensure that learning is coherent and meaningful for learners and their lives. The second is the learning phase, where learners are motivated to use a personalized approach to develop their multiple intelligences and thereby be able to integrate the learning experience for themselves through their own styles of learning. The third is the personality phase that deals with the value of individuality and the integrity of personality. It aims to produce an Islamic integrated personality or a holistic individual. The fourth is the social phase that harmonizes horizontal human relationships among

learners and their fellow beings as well as other beings in the community and the universe. The final phase is the innate phase which establishes vertical relationships with super nature. This is where the culmination of the holistic process of integration occurs and the ultimate aim of human life is reached.

Phase	Process / focus	Advantages/ objectives
Teaching	Innovative role of Educator	Learning becomes meaningful Learn why and how to become good a person
Learning	Use of personalized approach Integrative learning styles	Develop multiple intelligences. Learning is a personal obligation
Personality	The value of individuality Integrity of the personality	Produce a holistic and integrated individual
Society	Relationships with other humans and the universe Playing the role system manager	Create a healthy environment and a peaceful world
Innate Human Nature/Divinity	Establish relationship with super nature Be a good person	Attain self-actualization

Table 1: The Holistic Process of Integration in HIC

HIC is expected to be a potential mechanism for modernization and the transformation of the education system. The curriculum integration process requires both methodological and substantive elements so that the integrated curriculum and educational experiences become more meaningful.

There are several criteria to define HIC, which are as follows:

a. The subject matter or content components should be integrated with other curricular aspects, learning experiences and activities that they meaningfully facilitate learning.
b. Theoretical knowledge should be integrated with practical elements within and across subject matters that their real understanding and application in life become possible.
c. The learning should be related to the interactive real world to make learning meaningful for life.
d. The curricular content should be based on foundations and fundamental conceptual elements, structures and processes of the holistic worldview.
e. The planned educational activities should provide learners with a unified view of knowledge and empower them to develop new ideas and models.
f. The practice of curriculum integration should enhance learners' skills, encourage depth and breadth in learning and increase quality of time for the discovery of learning.

In sum, curriculum integration is an integrated method of developing effective learning so that leaning can be more meaningful for life. It provides an alternative curriculum design technique of formulating an integrated system in a holistic educational setting and a vital mechanism for making the education system truly holistic in nature and not a mere symbol of deluxe enterprise.

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The Theoretical Framework of HIC

HIC serves all three educational functions: epistemological, psychological, and social, but its psychological function (i.e. personality development) is its main concern. The ultimate aim of HIC is the well-balanced and comprehensive development of an Islamic integrated personality. Thus, the ultimate aim of HIC is the well-balanced and comprehensive development of an Islamic integrated personality. Thus, the philosophy of HIC is design with the aims, goals and objectives that balance between realistic and idealistic concerns. It integrates both theoretical and practical goals. The former aims at cultivating soft skills such as beliefs, values, and intrapersonal, interpersonal and extra-personal skills, all of which are that necessary for an individual to be morally committed, while the latter provides practical training for occupational and vocational skills.

In an attempt to promote an educational guide for the holistic education system, a theoretical framework that consists of seven educational objectives, essential components and integral elements that are interrelated (see fig. 1) has been constructed. Out of all the educational objectives, spirituality is the highest priority, followed by morality, intellectuality, physique, individuality, sociality and life-preparation. These objectives generate seven essential components, which are spiritual education, moral training, intellectual disciplining, physical education, language literacy, social education and professional training. In the cultivation of a learner's soul, belief or faith is top priority. This is followed by values, thinking skills, physical health, concepts, public spiritedness and practical skills. It should be noted that all these objectives, essential components and their integral elements are interconnected.

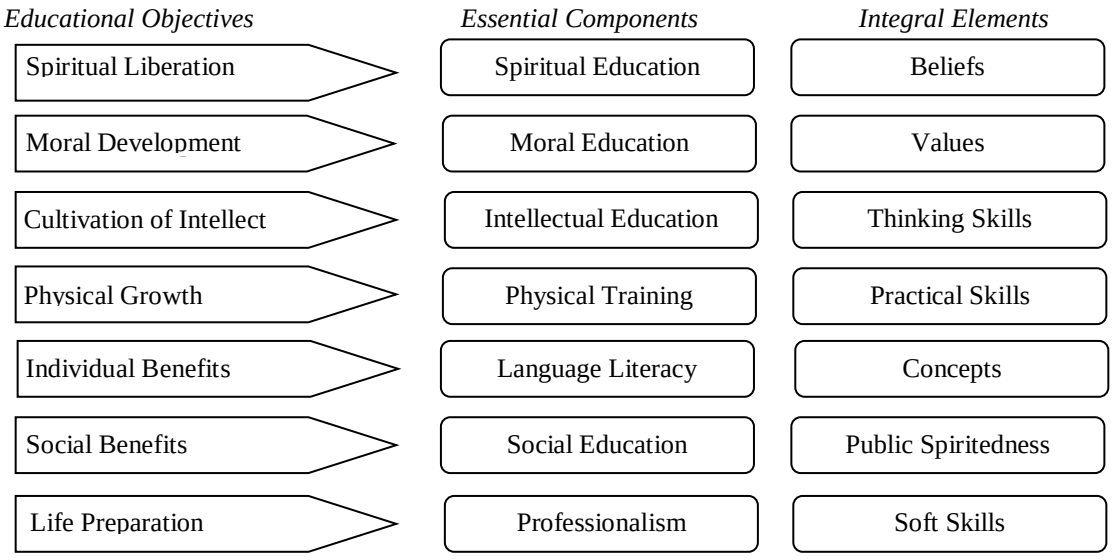

Figure1: HIC Theoretical Framework: Seven Interrelated Educational Objectives, Essential Components and Integral Elements

Objectives of HIC

In order to realize the ultimate aim of HIC, which is to develop an Islamic integrated personality, these seven educational objectives are essential:

a) *Spiritual liberation:* Liberating man spiritually from worldly concerns in order to develop an internally free individual who will attain real happiness in life or self-actualization.
b) *Moral development:* Developing morality as a reflection of the prophetic mission in promoting the perfection of good character.
c) *Cultivation of intellect:* Cultivating intellectual faculty for freedom of thought and intellectual independence.
d) *Physical growth:* learners should go through physical training, because a healthy body is a pre-requisite of a healthy mind.
e) *Individual benefits:* Enhancing learners' personal potentials, intrapersonal intelligences, and communication skills in order to increase their self-confidence, performance and competencies.
f) *Social benefits:* Educating learners to be a part of society with a high sense of public spiritedness towards societal obligations and welfare.
g) *Preparation for practical life:* Preparing learners for real life through professional development according to their interests and talents.

Seven Essential Components of HIC

There are seven essential components that should be integrated in HIC. These components are: spiritual education, moral training, intellectual disciplines, professional training, language literacy, social education and physical education. Brief descriptions on each of these components are provided below:

Spiritual education

Spiritual education aims at liberating the learners' soul from worldly concerns in order to get real happiness of life and achieve self-actualization. Spiritual education is closely related to the study of philosophy of life and religion. The teaching of philosophical and religious knowledge should aim at teaching about the Truth, practicing good life, instilling the aspiration of faith and piety, and nurturing love, a sense of accountability and belongingness to humanity. 'Intuitive knowledge' is also acknowledged as a part of spiritual education.

Moral Education

Moral education is necessary to nurture good character among learners, while the cultivation of intuition is necessary for the development and instilling of both spiritual as well as moral values. Thus, HIC acknowledges the role of mysticism in the purification of the soul. It should be a principle in moral education because it is a pre-requisite for the total instillation of moral and ethical values. HIC also recognizes the importance of ethics (study of moral philosophy) (MacKinnon, 2007). Ethics involves reasoning to understand the concepts of morality and to justify moral principles. Practically, it guides man to live and behave properly. Sex education is also considered necessary, as it helps learners understand the roles of Mother

Nature and Super Nature through the study of the different types of relationships, sexuality, and reproduction and family matters.

Intellectual Disciplines

For the cultivation of the intellect, all intellectual disciplines mainly philosophy and science should be taught alongside with the study of man and the universe. Philosophy is the study of rational knowledge, while science is based on empirical knowledge. It is necessary to teach learners about miraculous scientific discoveries and the laws of the universe. Nelson (1993) asserts that teaching philosophy is "not teaching about philosophers but of making philosophers of the students."(Lipman, 1993: 437-443) HIC also proposes a value-based science education that integrates teachings about both the material and spiritual worlds, and findings from these lessons can be used in seeing the Truth.

Physical Education

Physical education is vital for attaining a well-balanced and good quality of life and physical fitness is a pre-requisite for becoming a leader in Islam. HIC does not ignore the learners' physical development and their wellness, health and fitness are all considered important. Psychomotor learning is important in HIC. In HIC, physical training in the form of swimming, archery and horse riding are recommended. Various other physical activities such as scientific self-defence or martial arts, sports, recreational activities and the lie can also be carried out. .

Language literacy

Language has a major role as a religious, cultural and civilizational mechanism (Naquib al-Attas, 1980) and is necessary for "communication, interpretation, analysis, synthesis, internalization and application of concepts, ideas and reflected realities" (W. M. Nor, 1989). HIC places emphasis on the proficiency of both receptive and expressive forms of language for the development of a well-versed learner. English is considered most important, because it is a lingua franca. Mastering English is vital for learners so they can be competent in this era of globalization and obtain the advantages of modernization without being transformed (Ratnawati, 1997: 2003). The second most important language that should be mastered by the learner is his or her own national language or mother tongue. Mastering one's own mother tongue is required to prevent national integrity. Good command of other languages is useful as a method of communicating with other communities.

Social education

Social education is necessary as it teaches learners how to be good citizens through the cultivation of sense of social responsibility to transform society. It covers social and global issues as well as cultural and media literacy all of which should help learners understand the impact of globalization as well as information technology and communication. HIC also aim to provide the correct and contextual views of realities so that learners will be able teach society effectively. Learners should have a deep understanding of the concepts of universality, unity of humankind, the importance of uniting with one another and being a part of humanity.

Professionalism Training

HIC also stresses the importance of the development of professionalism for it helps learners prepare themselves for the real world and their future careers. The contents and information in this component should be practical and relevant to their lives and careers. This component is necessary ass teachers teaches learners how to be professionals in their future careers. The development of learners' professionalism should begin through the introduction of professional fields such as engineering, medicine, agriculture, technology, entrepreneurship, economics and so on.

Integral Elements

The seven essential components of HIC generate another seven integral elements, which are: for beliefs, values, thinking skills, soft skills, concepts, public spiritedness and practical skills. These components are described below.

Values

The instillation of good values is important in HIC, and so its curricular content should contain lessons and activities that teach learners about these different values. Learner should learn about moral character and develop a deep understanding of positive characteristics or virtues and of negative characteristics or vices. Learners should also learn about manners and etiquette in conversation, greeting others, eating, mingling with the opposite sex and also about purity and cleanliness, as well as etiquettes of disagreement. Other than that, learners should be exposed to their rights and duties as individuals, citizens and humans. Solving the current world issues requires wisdom and values oriented thinking. All these elements are significant in the process of purifying learners' the souls and conscience and instilling good values within them help in the development of true moral character.

Thinking Skills

According to Ornstein and Hunkins, (1993), the possession of good thinking skills allows individual to better analyse problems, collect facts and data, organize and interpret data, present result and think independently. HIC can cultivate good thinking skills by integrating both rational and spiritual thinking in lesson and activities. HIC adopts multi-dimensional method of thinking, where learner are taught how to think critically, creatively and caringly (Lipman, 1991). Berghout (2005) claims that critical thinking can help learners get closer to the truth. It involves philosophical inquiry and critical analytical methods of thinking. Meanwhile, creative thinking helps learners solve problems creatively (Berghout, 2005) and requires reflective thinking (Lipman, 1991) that needs to be integrated with rational and spiritual thinking (Iqbal, 1982). Intuitive thinking is also necessary for leaners, as it is integral to the process of knowledge discovery (Ornstein and Hunkins, 1993). Other necessary thinking methods that should be introduced to learners are inductive thinking and logical thinking (Tyler, 1949). All these skills are necessary for the transformation of the learners' character and way of thinking.

Practical Skills

Hard skills or practical skills are also important, as they are needed for carrying out a certain tasks and activities. Renowned psychologist, Sternberg (2005) introduced a triarchic

theory of human intelligence that is comprised of three essential types of intelligence namely analytical/critical, creative, and practical all of which are as prerequisites of a successful person. Practical intelligence is more important than IQ when it comes to good career performance. It involves using the different components of intelligence when facing new experiences so that better judgments and choices can be made. HIC encourages the development of vocational skills. Learners should also possess certain basic dialing living skills such as cooking, sewing, first aid, nursing the sick, house-keeping and so on. Computer skills and knowledge on how to use the internet are also important. Gatto (2000) asserts that practical skills are necessary in shaping individuals who are economically self-sufficient. These individuals can then contribute to the economy.

Concepts

The content of HIC should be free from elements such as dualism, materialism, naturalism, secularism, and so on. The content of HIC should be based on divine revelation. Islam is distinct; it connects intellectual disciplines with higher spiritual disciplines, morals, social and economic policies as well as with legal practice (Naquib al-Attas, 1980). HIC emphasizes concepts of man, the unity of mankind, faith, knowledge, citizenship, humanity and other basic themes of life. The concept of "Life" has a central importance in HIC. R. Miller (1991b) used the term "life-centred" to describe a spiritually rooted (holistic) education that integrates both a transcendental and immanent principle of the cosmic world. The philosophy of life answers purpose, direction, meaning, and a goal that transcends our personal egos and particular physical and cultural conditioning.

Public Spiritedness

Public spiritedness is a moral aptitude that should be instilled into every learner. It is related to the moral principle of caring for others' wellbeing. A public-spirited learner is motivated to serve public interest, not self-interest and thus work to serve others. He also strives to establish social justice and social welfare. Learners are encouraged to be actively involved in social services charity is evidence of faith and is obligation to all who embrace the faith. HIC also cultivates leadership qualities and encourages volunteerism through social and charity work.

Soft Skills

Soft skills involve both emotional and social intelligences. Goleman (1995) suggests that developing emotional intelligence can accentuate an individual's affective domain and helps the individual achieve success at work and in life. Sternberg (2001) defines social intelligence as an ability to understand and interact with others. It requires a balance between the intrapersonal, interpersonal, and extra-personal skills. This corresponds with the horizontal-vertical relationships of man with super nature, other beings and the universe. Thus, HIC equips learners with soft skills that include good leadership skills, effective communication, problem solving, decision-making, teamwork, self-awareness, self-regulation, self-motivation, empathy and so on. These skills can help learners strive for overall excellence in their personal and social lives, and their professional development.

Implications

HIC encourages the integration of theoretical and philosophical concepts with practical realities based on contemporary contexts and global changes. Consequently, the proper and precise application of HIC can affect the Islamic education system and its institutions in terms of educational philosophy, the selection of curricular contents as well as the methods of pedagogy and evaluation.

Educational Philosophy

HIC mainly affects on conceptualization of the contemporary education system and its institutions. It aims to create a curriculum that is well-balanced and comprehensive so that learners may develop spiritually, morally, intellectually, physically, professionally, individually and socially. It is worth mentioning that pursuing knowledge for vocational preparation and economic gains is not the ultimate goal of the system. The formulation of a well-structured educational philosophy is essential in the development of a holistic integrated personality. Therefore, educational institutions should review its philosophy, vision, missions, goals and objectives thoroughly in order to determine whether they are consistent with the true concept of education or not. This study shows that educational institutions should adopt the integrated curriculum and all lessons and activities should be planned around the HIC.

The Selection of Curricular Contents

A reformulation of educational philosophy requires a reformulation of the curriculum before subjects can be developed. Educational institutions should attempt to integrate all essential components of HIC namely spiritual education, ethics and moral education, intellectual disciplines, physical and health education, language literacy, social education and professional or vocational education. The integral elements that include faith and beliefs, universal noble values, multi-dimensional thinking skills, soft skills, practical skills, the understanding of basic themes of life and the cultivation of public spiritedness should be infused into the curricular content. This integration can be done in two ways; by using a stand-alone approach where the component is regarded as a formal subject or as co-curricular (CCA) or extra co-curricular activity (ECA) or by formally or informally infusing the elements into the existing curriculum. CCA and ECA should be a part of the formal curriculum.

Method of Pedagogy and Teaching

HIC involves the application of universal elements in all educational theories and practices, and also in the relationship between educators and learners. Thus, HIC can empower educators as their roles are vital in the process of curriculum integration. Educators should be encouraged to use effective pedagogical methodologies and approaches such as student-centered teaching, philosophical inquiry, higher cognitive level teaching, integrative teaching, as well as other various pedagogical techniques and technologies. They must be equipped with the relevant skills and knowledge and should be actively engaged in the Islamization of knowledge. Learning environments should also be conducive in nature.

Mode of Evaluation

Since HIC is designed to deal with the whole education system, thus its curricular content, process and product should be evaluated by both learners and educators. The method of evaluation is an effective tool of enhancing the quality of teaching and learning, as well as for quantitatively and qualitatively measuring the effectiveness of the implementation of curriculum implementation. Educational institutions should adopt theoretical and practical assessment methods in measuring HIC's 'educability' before, during and at the end of the educational processes. Both formative and summative evaluations should be carried out. HIC 'manifest educability' related to subject-based education and; 'latent educability' linked to integrative education (Ingram, 1979) should be measured. Educational institutions should also adopt a value-laden method of evaluation to foster each individual's growth and progress; exercise self-evaluation technique for moral refinement and carry out peer-assessment for individual self-improvement.

Conclusion

The lack of literature on the concept of integrated curriculum and on how to integrate it into the Islamic education system has hampered the efforts to design and develop an integrated curriculum. Thus, this research has contributed thought by conceptualizing and theorizing of the "the Holistic Integrated Curriculum" (HIC) and what it ought to be. HIC is expected to be a precursor in the transformation of the Islamic education system by reviving the traditions of philosophical and scientific inquiry, intellectualism and religiosity as well the integration of theory and practice, ideal and real, physical and spiritual. HIC is not a new concept; but it is expected to renew the educational system in the modern context through an integrated approach. It should be reiterated that HIC emphasizes wholeness of all aspects of education that covers philosophical orientations, curricular aspects and pedagogical practices .It aims to create a balances between the materialistic and spiritual worldview. It also proposes that educational experience promote a more balanced and comprehensive development of individuals. It establishes relationships between the individual with other fellow humans, other beings, the natural environment, the inner-self, and the outside world. It provide learners with life experience and skills; and teaches them about worldviews, intentions and actions. Thus, HIC and its theoretical framework can provide general guidelines for policy-makers and curriculum developers to design and develop an integrated curriculum for the contemporary education system in the context of the new millennium, so that learners and the education system itself are capable of facing the impact of globalization and its challenges.

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Geography Education in the Google age: A Case Study of Nsukka Local Government Area of Nigeria

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Abstract

This study employed a critical approach to the examination of the challenges geography educators and students face in keeping up with the present Google age, in a bid to recommend approaches for the advancement of geography teaching and learning in Nigeria. In an era where geography is being perceived as a difficult school subject and there is drastic reduction in the numbers of geography teachers and students, it is important to continuously explore how the relevance of geography education can be restored. Semi-structured interviews were carried out with 10 randomly selected geography teachers and students in Nsukka educational zone in South-east Nigeria. The findings revealed that the teachers and students desire Internet facilities and appreciate its usefulness in overcoming the challenges of teaching and learning geography. Moreover, geography education will be more effective if Google is incorporated into classroom learning as it saves on classroom time and can make up for the impracticability of experiential learning for most Nigerians. These findings have implications for policy makers, curriculum planners and geography teachers; there is urgent need to educate geography teachers on the use of Google to confront the challenges of geography education.

Keywords: Geography education, teaching and learning, case study, Google, Nigeria

Introduction

"The study of geography is about more than just memorising places on a map. It's about understanding the complexity of our world, appreciating the diversity of cultures that exists across continents. And in the end, it's about using all that knowledge to help bridge divides and bring people together." – President Obama (2012).

The above quote by the American president shows that the study of geography is very crucial to the unity and development of people all around the world. Many other scholars support this view and empirical studies have shown that this discipline can foster national and international unity (see Gregory, 2000; Okpala, 1990; and Fan, Monday & Tandu, 2014), as well as enhance social, economical and environmental sustainable development. This is possible because geography is about understanding conditions in other places and our connections with those places. Students (present and future citizens of the world) should learn about the land, climate, economy, politics and culture of their environment as well as of other places. As Gersmehl (2014) opined, this knowledge will help them deal with an increasingly interconnected and often highly competitive world.

However, despite these benefits of geography, its study is on a decline, especially in Nigeria where 'professional' disciplines like medicine, engineering and law are prioritized to the detriment of other fields. Geography is not present in Nigeria's primary school and junior secondary curricula and optional in the last three years of secondary school, where only a few students choose it (usually because they need to have a minimum of nine subjects for the final certificate examination). These may be responsible for the scarcity of geography teachers and the declining popularity of the subject among young people in the country. Overall, this has resulted in a populace with low geographical awareness of local and foreign people and events. As a geography teacher in Nigeria, this situation, which permits mediocrity, is important to me and it is hoped that this study will contribute to an improved geography education in the country, especially with respect to the use of Google to increase its popularity.

Purpose of this study

This study is very significant in many ways. First, there is need to explore ways of sustaining interests in geography education, especially in Nigeria where the subject is dying off, and Google can contribute if effectively employed. In addition, there is a dearth of studies focused on the application of the Internet and/or Google to educational activities in Nigeria, as Shittu et al (2013) noted, and only one of them is focused on geography (but in the western region of the country). Furthermore, the few studies available are on universities and there is none on secondary schools. In Nigeria, Geography's fate is dependent on its success at the secondary school level (since this is where students are first introduced to it). Reduction in the number of people studying it at that level implies reduction in the numbers opting for it at higher levels and this has serious implications for the future of the discipline and its important role in the society. Thus, this study is expected to fill the highlighted gaps, especially since there is no study on the application of Google to geography education. This study goes further by taking the views of geography teachers and students of secondary schools in the study area because both groups are important participants in geography education. Furthermore, as opined by Kubiatko, Mrazkova & Janko (2012), understanding students' views is important for supporting their achievements

and interests towards a particular discipline and research suggests that students are motivated to learn if the educational content is interesting, connected with everyday life and useful for their future development.

Literature review

In order to properly assess geography education in the Google age in Nigeria, it is pertinent to evaluate the literature on geography teaching and learning in Nigeria, Google and Nigerian education and Google as a dangerous tool, as examined in the ensuing sections.

Geography teaching and learning in Nigeria

The teaching and learning of geography in Nigeria started in the second half of the 19th century which was a primary school subject. When secondary and university education started in 1859 and 1948 respectively, geography was included in the subjects of study. According to Okpala (1990), geography teaching in Nigerian schools was dominated by British influence, both in personnel and philosophy. The textbooks were the same as those used in British schools and regional geography was the main focus.

However, in the wake of national independence, there was a steady growth of geography in Nigeria as indigenous geographers such as Mabogunje (1970) began criticizing the fundamental objectives, content and methods of school geography, which they found inadequate for the needs of Nigerian children. The geographic studies of North America, the British Isles and South East Asia were removed and there was an emphasis of study on the home region, with most of the teachers being Nigerians. As the country struggled towards relevant education and vocational independence, new education policies were formulated. Geography became a senior secondary subject, with a little of it infused in social studies being taught in the junior secondary schools. It was also an elective to be chosen in place of history or literature in English. This relegation of geography was perhaps the beginning of its difficulties in Nigeria.

Furthermore, Nigerian geographers such as Ofomata (1971) and Ologe (1984) agreed that geography, unlike professional disciplines as engineering, medicine and law did not directly lead to a profession even though it made valuable contributions to individual and national development. The unprofessional status of geography results in its relegation in Nigeria, with the emphasis on professional training in the country. In addition, several other factors have been attributed to its unpopularity among Nigerian students; Okpala (1988) identifies them as the wide scope of the subject, poor results in school certificate geography examinations, geography being unrelated to their future career and poor teaching.

As a geography teacher in Nigeria, it is easy to understand these problems. The geography curriculum, for example, is saddled with far too many current and environmental issues, in addition to obsolete content and many other items, which need to be removed for better focus and effectiveness. This, coupled with poor teaching and the lack of passion students bring to class because it is not related to their future 'professional' careers, eventually results in poor results in the school certificate examination. Poor geography teaching has been attributed to lack of appropriate teaching qualifications (Alaba, 1988) and lack of teaching materials (Okpala, 1990).

Based on a study conducted in 15 secondary schools in Northern Nigeria, Mohammed (2014) has recommended the need to make geography more interesting since she found that lack of interest was a major problem affecting the teaching and learning of geography in the schools she surveyed. Providing the necessary teaching facilities and qualified teachers can improve geography's appeal.

Geography seems to be the most difficult subject to teach in Nigerian secondary schools. Adejuyigbe and Majasan (1970) opined that the study of geography from its inception was through verbal description of geographic features, which made the study very abstract and quite uninteresting. The teaching of geography in Nigeria has also been focused on the theoretical aspect, to the detriment of scientific and experimental approaches. These discourage open questions, inquiry and active participation of students and makes geography classes difficult and boring (Sofowora & Egbedokun, 2010). Okoruntifa (1970) also showed that students were just made to learn geography concepts in the abstract form and were subjected to too much imagination of geographic features instead of learning through practical observations and this is still the situation today. Smiths (1997) emphasized the importance of relevant instructional materials and the need to diversify the strategy for teaching geography. Google can serve a very useful purpose here if employed appropriately and its prospects are discussed in the ensuing section.

Google and Nigerian education

Many teachers are still apprehensive about using new technologies for instruction in Nigeria. The use of Google especially needs to be promoted in the country because of the vast amount of information that can be found through it, which can bring fun to geography classes. But teachers have been found to be apprehensive about improving and modifying instruction by incorporating new technologies (Sofowora & Egbedokun, 2010). Lack of appropriate skills has also been proffered as a reason for the low utilization of ICT among Nigerian geography teachers. In a survey of technological application in teaching geography in Nigerian secondary schools, Sofowora & Egbedokun (2010) found that even though 55% of geography teachers in a western state of Nigeria had access to computers, majority of them do not have the prerequisite ICT knowledge and skills needed. The Internet was not included in the ICT facilities surveyed and it is widely known that, with the exception of a few private schools, Nigerian secondary schools do not have Internet facilities. Therefore, the use of Google and other Internet facilities would be at the teachers' or students' personals costs, and most likely in their homes.

Modern day students are Internet savvy: most of their activities involve using the Internet. Yet, this phenomenon is not universal because majority of secondary school students from the third world nations especially, cannot operate computers, much less use the Internet (Nganji, Kwemain & Taku, 2010). Many higher institutions in Nigeria are creating Internet-friendly environments for students' learning but this does not seem to be happening in secondary schools. Many secondary school students, especially those in urban areas, have smart phones and are connected to the Internet but mostly for social networking (Shittu, Gambari & Sule, 2013) and there has not been sufficient research on whether they use the Internet to supplement their education as Shittu et al (2013) noted. This is one of the enquiries of this study: do geography teachers and students who have access to the Internet and Google employ these for educational purposes?

Shittu et al 2013 conducted a study to test the technology acceptance model (TAM) by exploring students' attitude and behavioural intention on adoption of Internet for learning among students in a Nigerian university. TAM states that user acceptance of any technology is a function of perceived ease of use, perceived usefulness and user's attitude towards the technology itself (Davis, 1989). The researchers included "facilitating condition" as a fourth factor in the model because this is perhaps the most important in the Nigerian context. Acceptance is dependent on availability, even though availability does not guarantee usage.

Even though they found facilitating condition to be statistically insignificant in influencing students' attitude to adopt the Internet for learning, I argue here that this is a fundamental factor and this qualitative study will explore that. Perceived ease of use and usefulness were found to be statistically significant however.

The benefits of the Internet and Google as teaching and learning tools have been widely documented but to realise these benefits, teachers and students must use these tools. Aboderin, Fadare & Kumuyi (2012) investigated the use of the Internet and computer among secondary school teachers and students in SouthWest Nigeria (Ondo state). They found access rates to the Internet and computer by both teachers and students to be around average, even though teachers reported use of school cyber café while students reported use of mobile phones. The study also reported that the use of Internet and computer had contributed to personal cognitive interests rather than enhancing the teaching and learning activities in the secondary schools studied. This serves as a distraction and will be explored further in the subsequent section.

Google as a dangerous tool

Despite the merits of Google, it is important to highlight the dangers Internet search tools like Google pose to education. According to Stafford (1999), academic research involves three steps: finding relevant information, assessing the quality of that information and using appropriate information either to try to conclude, uncover or argue about something. The Internet is very useful for the first step, a little useful for the second and not useful at all for the third. Yet, it is common to find it being used for all three steps, especially in Nigeria. Thus, it is important to emphasize to Google users (especially students) that the Internet contains a variety of information that ranges from scientific facts to personal opinions. Therefore, after the first step of information retrieval, the source must be scrutinised and further searches carried out to confirm the authenticity of the information being revealed. This is especially important if it is not an academic source. The third step requires critical thinking and judgement, independent of Google and the Internet, but this step seems to be diminishing in Nigeria's education system especially.

The popularity of Google is encouraging laziness, poor scholarship and compliant thinking, as Brabazon (2007) reported. She went on to state that poor quality online materials are used as an avoidance strategy to dismiss important scholarly work that can be found on library shelves. Libraries are a good reference for information because the materials there are usually from authentic sources and authors and the quality has been checked. Scholarly thinking is also encouraged with the use of libraries, where the scholar searches out information from an array of options and has to put them all together bit by bit. But this process appears to be too tedious for the Google-age scholars and clicking is replacing thinking. This assertion is supported by Loertscher (2003) who wrote that search engines such as Google are so easy and immediate that many young people faced with a research assignment just Google their way through the Internet rather than struggle through the hoops of a more traditional library environment. Furthermore, a 2001 study by Lenhart, Madden & Rainie (2006) revealed that 71% of American students relied mostly on the Internet for major assignments at school, 24% on library and only 4% on both Internet and library. The situation is worse in Nigeria, with more dependence on the Internet, due to poorly equipped libraries and limited access to them. However, as Brabazon (2007) recommends, students need to actually move between the digital and analogue: the un-refereed web and scholarly databases in libraries.

Furthermore, Benson & Wright (1999) reported that over 20 per cent of their students found that access to computers and the Internet actually hindered the completion of assignments. These teachers were therefore concerned with the ethical implications of digitisation. Thus, Olojo, Adewumi & Ajisola (2012) have advised that incorporating Google as an educational tool requires inculcation of certain skills like critical thinking, research and evaluation due to the increasing volumes of information from different sources that have to be sorted through. It will be interesting to know the prevalent ways Nigerian geography teachers and students seek information, as well as the reasons for their choices. This study is also interested in revealing how much they know about the kinds of information available via Google; are they aware of the inherent dangers?

Research questions

1. Is there a significant gap in interests and access to Google between geography teachers and students in Nigeria?
2. How is the rapidly expanding knowledge base on Google affecting geography teaching and learning in Nigeria?
3. What are Nigerian geography teachers and students views on the current geography curriculum with respect to the Google age?

Methods

The participants of the study comprised 5 geography teachers and 5 geography students in Nsukka Educational Zone of South Eastern Nigeria. A summary of their demography is shown in Tables 1 and 2 below.

Participants

Teacher	Gender	Age	Qualification	Experience
John	M	Above 50	B.Ed. Geography	Above 20 years
Mark	M	30-40	BSc Geology	Less than 5 years
Queen	F	30-40	BSc Geography	Less than 5 years
Christy	F	30-40	MSc Geography	5-10 years
Ben	M	41-50	MSc Soil Science	11-20 years

Table 1: Profile of the teachers

Student	Gender	Class
1	F	SSS2
2	M	SSS3
3	F	SSS2
4	F	SSS1
5	M	SSS2

Table 2: Profile of the students (SSS* = Senior Secondary School and indicates their level)

The study area and schools were chosen because there is no study of this nature in the area (South eastern Nigeria). Geography is not taught in primary and junior secondary schools, only senior secondary schools; thus, the student sample is from the senior secondary classes. Convenience sampling was used to select the schools but the teachers and students were randomly selected and those who gave their consent to participate in the study were interviewed. A pilot study was carried out in a school within the zone that was not included in the main study, to test the appropriateness of the research instrument – the interview schedule. This helped in the refining of the questions to make them less ambiguous and more focused on the study's purpose. The schedule was found to have face validity.

Research ethics were observed throughout the conduct of the study. Participants were informed of the purpose of the study and only those who consented were interviewed. They were also informed that they could withdraw at any time and assurance was given that all information is confidential. This is the reason for the use of pseudonyms throughout the study's report.

Findings

The findings of this study have been organised according to 4 themes, based on the outcome of the thematic coding of the interview transcripts. The teachers' views are presented first, before the students.

Teachers

Interests and Access

All the teachers reported being interested in the Internet and Google. Christy said she uses them everyday on her mobile phone and personal computer for research and social media. Ben, Mark and Queen reported less usage due to problems of access, as well as John who agreed that the Internet is informative but not available to him (he owns neither a computer nor a smartphone). However, Queen added: *"my school's library is well equipped with both old and modern geography textbooks and materials so I do not have much need for the Internet, except to get additional instructional materials like diagrams and pictures."*

Problems of access appear to be the major hindrance to the use of Google and the Internet in Nigeria secondary schools. Those who cannot afford to provide it for themselves have no means of applying Google to their teaching.

Challenges

Christy and John mentioned a lack of instructional materials as their major challenge as geography teachers. Christy: *"The unavailability of teaching aids and materials like slides and pictures makes it difficult to teach some topics."* Mark and Queen had similar responses:

Mark: *"some things we talk about, we have not even seen them and can barely imagine them. So how do we teach these things? We just assume that the students can imagine it."*

Queen: *"certain areas you'll be teaching but because they've not seen it, it is hard to imagine or understand. They (the students) always request for field trips but this is difficult to organize. The time and resources are not available."*

Mark also reported that the geography curriculum is not well arranged. *"for example, map reading is placed in SS 1 whereas they shouldn't learn that yet because they do not know the basic aspects of geography."*

Ben's challenges include lack of funding and teacher involvement: *"There are topics that are practical oriented, but schools don't sponsor excursions. For example, mountains, rocks,*

caves… students are supposed to go see. But they (schools) *are not ready to provide materials and sponsor trips. It is difficult for students to identify without seeing it. No support from ministry of education and school heads. I improvised the globe we have here using bamboo, so that they can picture some things like lines of longitude and latitude. They introduced climate change, GIS, remote sensing but no materials to teach. Curriculum planners lump these in the curriculum without involvement of teachers who can tell them the problems on ground. They don't bother whether it's achievable or not."*

Importance of Google

All the teachers agreed that Google is very important because it contains so much information that can be easily retrieved. Except for John who is not conversant with the Internet, they all spoke extensively about how Google aids research and is a good source of teaching materials. For example, Mark said: *"The map of Nigeria of the 1980s is not the same as today's. The Internet helps you get updated"* and Queen reported that: *"you can get pictures of mountains and volcanoes, for example, from the Internet and use them to teach."*

They all reported that their students ask them questions beyond the scope of the lesson and they encourage this because it helps develop knowledge. However, John said *"they (the students) are too young for the Internet. But a few clever ones use it to know whether the teacher is right."* John also acknowledges that the students ask questions he is unable to answer *"for example, they told me about a new planet they heard about and wanted to know more. But I told them I do not know about it but they can go and research on the Internet."*

Christy made a similar comment about a question on GIS she could not answer: *"these concepts are new in the curriculum and were not there in our time as students so we can only learn about them through the Internet."* She also opined: *"It is very important for teachers to have the Internet. For example, many teachers do not teach glaciers and volcanoes because they have not seen slides or pictures or documentaries on it and find it difficult to picture it in the mind and teach."*

Queen recommends that: *"teachers should be trained to use the Internet and Google and these should be provided in schools. Google can generate maps with longitude and latitude, for example. So you may not get the map of an area in a textbook but you can generate it via Google."*

Mark: *"Google needs to be embedded in teaching and learning because of changing knowledge."*

Ben: *"Google is very important because geography is a practical subject. When you are talking about mosaic disease, for example, Google can show how this disease affects the leaves of cassava."*

Despite the unanimous endorsement of Google, Christy says *"Google is good but it makes people lazy. It sharpens and encourages but makes us believe we don't have to think."* Ben's response revealed more harmful consequences: "*…they* (students) *are not ready to spend on education. Instead of going to Internet for educational purposes, they go there for porn and other useless things."*

Geography curriculum and Google

Google or the Internet is not featured in the secondary school geography curriculum and the teachers do not seem pleased with it. Their dissatisfactions were expressed in various ways. Christy said: *"Africa was removed from the new curriculum. It would affect this generation*

because they would not know outside Nigeria. It is good they brought in GIS and remote sensing and a little of climate change but removing the study of our continent is not satisfactory. Geography should be a study of the world; it is bad enough we do not study other continents but removing ours is unacceptable, so I still teach it."

John: *"the national curriculum is not up to date, that is why we use a different one in my school. It is not standard and so everyone in different schools is doing different things and teachers do not participate in making the curriculum so we are not carried along."*

Mark believes that: *"map reading should start form mid SS 2 not at the beginning of SS 1 when students have not understood the basics of geography."*

Queen is of the opinion that the curriculum is too vast. *"It is impossible to handle the specified topics in the little time given."*

They all believe teachers should improvise if need be, like reinstating important aspects of the curriculum that were removed and leaving off more difficult topics until the basics have been taught. John: *"the quality of a good teacher is bringing in innovation."* However, Queen warns: *" WAEC (Senior School Certificate Exam) is based on the curriculum so if you don't follow it, it will affect the students."*

They all seemed open to the incorporation of Google and the Internet to the teaching and learning of geography but access remains a major problem. Though, Christy thinks it may not be effective for the students because *"what they know is social media, give them any assignment to do on the Internet and they say it's hard."*

Students

Interests and access

3 of the students do not use the Internet because they do not have access to it. Of these 3, 1 is not interested in the Internet because her parents forbade her from using it *"because of corruption"*. She was referring to the pornographic content on the Internet. The other 2 have been hearing of it and know it contains plenty of information that can be useful, but do not know what it looks like.

2 students reported the use of the Internet with their phones, though not often due to the high cost of subscription. One of them reported that she uses Google to get information for assignments while the other uses it for only social media.

All 5 students acknowledged that they know that not all the information on the Internet is true, even though they do not know how to discern true information from false.

Challenges

All the students reported the bulky notes they are given as their major challenge of studying geography. 1 reported, *"It is a difficult subject with big grammar that is not easy to understand."* And this response echoes the opinions of 2 others who also felt that the subject is difficult. Only 1 acknowledged that despite the bulky notes the subject is simple and interesting.

Importance

They all believe that Google can be useful in the learning of geography because it is very informative. A student reported: *"it would be good to have Internet for geography to make the*

work easy. Any problem you find difficult, just go to Google." Though one student said *"I wish to have Google but not now. I feel it would distract me."*

4. Geography teacher

It was difficult to get the students to talk about their teachers, perhaps because of fear or respect, despite the researcher's explanation that all information given would be confidential and anonymous. So, they all expressed satisfaction with their teachers. However, 1 said: *"geography needs to be more practical because it is the study of the environment. It would be more interesting if teachers can take us out to see these things we are learning about."* Another student reported: *"our teacher gives too much notes and we do not understand most of what we are writing"* and wishes the teacher will give less notes and explain more.

Discussion

Based on the reports from the teachers and students, it appears that they are all interested in Google and the Internet but have varied levels of access. Except for one teacher who has regular access to the Internet, others wish it could be more available to them. In Nigeria, it is expensive for the average citizen to afford to pay for Internet. The teachers have more access generally, but there is no significant gap in the interests and access to Google between the geography teachers and students interviewed. Despite how much the Internet and Google have evolved around the world, they are not being fully utilized in Nigeria, mainly due to the problem of access. The challenges of geography education in Nigeria are numerous but can probably be solved to a great extent if Google and the Internet are publicised, made available and incorporated in the teaching and learning of geography.

The knowledge base on Google is expanding rapidly but this hardly has any influence on the teaching and learning of geography in Nigeria. The major reason is the problem of access as discussed above. However, the teachers and some students are aware of the vast information available on the Internet via Google and how these can improve geography education. The geography teachers have similar challenges and these revolve around lack of instructional materials and unsatisfactory geography curriculum. These were also found to be major problems of implementing the geography curriculum in the Nsukka area by Ajaps, Ibezim & Udoye (2010).

The importance of Google for geography teaching and learning in Nigeria cannot be over-emphasized because the nature of the curriculum as well as the teachers available require very accessible knowledge bases to augment curriculum delivery by teachers who are either not properly trained to teach geography or do not have the necessary instructional materials. The expanding knowledge base on Google can provide richer contents and better teaching strategies for the teachers to make geography classes more interesting. Also, since the students' major challenges revolve around excess noted and theories, Google can help make geographical topics more practical with pictures and videos. Both teachers and students are open to the inclusion of Google to geography teaching and learning and it is important to harness the positive contributions Google can bring to geography classes.

The results of this study have also shown that the teachers and students are dissatisfied with the current geography curriculum and have ideas on how to improve it. For example, reordering contents so that simpler concepts are understood before more complex concepts and bringing in innovations in the delivery of the curriculum. They believe that the curriculum needs to go hand in hand with the Internet in this present age for updated knowledge and effective delivery of educational content.

However, despite the importance of Google for geography education, the dangers need to be acknowledged, as examined earlier in the literature review section. A student inferred this by stating that her parents forbade her from using the Internet because of the corruption it contains and how distracting it can be. One of the teachers also highlighted the tendency of young students to spend their time on irrelevant things, including pornography, when they have access to the Internet. So, parents and teachers are sceptical about exposing secondary school students to the Internet.

For geography education to be made more interesting and relevant in the twenty-first century, Google and the Internet have big roles to play. It is important therefore for young people to be orientated on the importance and use of the Internet for academic purposes. Almost every good thing is susceptible to abuse, but this does not mean that it should be thrown out of the window. Proper orientation and guidance can play a big role in guiding people to use the Internet productively.

Conclusion

This study has shown that the deteriorating state of geography education can be salvaged with the use of Google and other Internet facilities to make geography classes more interesting and satisfying. It is probable that these results can be generalized to other regions of Nigeria but until such studies are conducted, this study's results are restricted to the study area (Nsukka Local Government Area of South Eastern Nigeria). Low sample size may affect the study's generalizability even within the study area but 10 teachers and students were decided on because it is a case study and the major intent is to get extensive explanations from the participants. Future studies need to incorporate larger samples, as well as other regions of the country.

However, from the results obtained from this study, which shows that access, and not interest, is the major challenge of incorporating Google in geography teaching and learning, the following recommendations are made:

Recommendations

1. In view of the huge academic resources available on the Internet via search engines like Google, and their usefulness to learning, teaching and research, it would be necessary for secondary schools in Nigeria to provide guaranteed access to the Internet. Inadequate Internet connectivity is a major challenge and the government needs to step up to this by providing Internet facilities in secondary schools.
2. Google should be featured in Nigeria's geography curriculum. This would make governments and other stakeholders more committed to the provision of Internet facilities in schools. Also, it is envisaged that teachers and students who already have access to it will be guided or motivated to seek guidance on how to use it productively and have a more encouraging environment to use Google for academic purposes.
3. Most people do not know about Google and how to use it. Awareness and training on the use of Information and Communication Technology is necessary, especially in semi-urban schools like the ones employed in this study.
4. Geography teachers need to update their knowledge about modern approaches to teaching. This could be done through workshops, conferences and seminars. Teachers should be encouraged to apply modern technologies to re-conceptualize the curriculum and make schooling and learning more interesting. However, for this to be successful, better facilities like steady supply of electricity must be ensured. The present erratic power supply being experienced in the country is not good for technological

advancement.

5. Governments and other agencies responsible for curriculum development and reforms should always involve teachers and students at every step, because they are also major stakeholders and are better positioned to give feedbacks on the practicability and effectiveness of the curriculum's content and process.

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Impact of Banking Reforms on Service Delivery in the Nigerian Banking Sector

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Abstract

The banking reforms introduced in 2005 was basically to move the Nigerian economy forward and to re-position the banking system to a sound reliable catalyst of development. These reforms became necessary owing to the decaying state of our banking operations that was characterize by low capital base, large number of small banks with relatively few branches and congested environment, poor asset quality, illiquidity, insolvency, inaccurate reporting, non-compliance with regulatory requirements et al. Nigerian banking business has gone beyond armchair banking era to highly competitive business among banks. Banking sector reforms in Nigeria was designed to promote the viability; soundness and stability of the system to enable it adequately meet the aspirations of the economy in terms of accelerated economic growth and development. The reform agenda was motivated by the need to proactively put the Nigerian banking industry on the path of global competitiveness to enable it effectively respond to the challenges of globalization. The study used primary and secondary source of data collection, questionnaire was administered to the staff of the banks to seek their opinion on the subject matter, chi square was used to measure the differences between the expected frequency and the observed frequencies and t-test was used to ascertain whether there was a significant relationship between Customers Deposit and Reforms, and relationship between banking reforms and service delivery in the Nigeria banking sector comparing the pre and post consolidation. The findings of the study revealed that there is increased in the customers deposit after banking reforms as compared with before banking reforms, it was also revealed that the performance of the bank increase in terms of profitability and service delivery. The study concluded that the performance of Nigerian banks has increased in terms of profitability; deposit from customers and these enable the bank to have the ability to grant their customers' loan which significantly increased the level of customers' satisfaction. It was recommended that the central bank of Nigeria should provide a viable and effective supervisory framework to ensure the viability and sustainability of the banking industry. The apex bank should foster an enabling environment in which the interest of all parties is protected, vis-à-vis investors, depositors, borrowers and the larger society.

Key words: Banking reforms, service delivery, pre and post banking reforms, banking sector

Introduction

The Nigerian banking sector, which plays the intermediation role between the surplus and deficit sectors of the economy, propels the development and growth of the economy. Soludo (2004), proposes the reform of the banking sector with the sole objective of moving the economy forward and to re-position the banking system to a sound and reliable catalyst of development and to compete favorably with its counterpart globally.

Prior to the 2005 banking reforms in Nigeria, congestion and long queues were the order of the day in the banks, leaving the banking hall stuffy, untidy and choking as the air conditioners are rendered ineffective. Most times, the queue extends outside the banking hall. Most of the banks have realized the negative effects of this and have worked on them by developing products and services that reduce the inflow of people into the banks, expanding the banking halls and opening up new branches all over the country. This congestion also has to do with the parking spaces of some banks prior to consolidation. Some banks' buildings were more or less cubicles or cash centers where customers cannot conveniently park their vehicles or motorcycles to walk in and do transactions, but the recapitalized banks have drastically ensured that the banking premises is such that existing and prospective customers have access to park their vehicles.

The attitude of the staff of the banks towards the customers is also an important measure of service deliverables. The fact remains that no bank can expect to meet global service delivery standard unless it has the best human capital and promotes its competent staff to pivotal positions. Staffing in most banks before the reforms was inadequate and, often times, a staff may be over-loaded with jobs meant for three staff or more. This becomes so obvious when the same staff is called upon to attend to a customer at a point of delivering a service on another product to a different customer. Closely related to the inadequate staff situation was the shortage of experienced staff as most banks preferred cheap labor in the name of "contract staff". As a result, the quality of their job output in terms of service delivery is sub-standard and customers' expectations are not met.

The banking business in Nigeria today has gone beyond armchair banking era where the customers had to look for the banker to transact business. It is now the era of highly competitive business among banks. It is against this backdrop that the study is conducted, to assess the impact of banking reforms on service delivery after the reform exercise using variables such as customers' deposits, profitability, productivity and viability of service, time taken to open accounts, speed of withdrawal and depositing money, quality and quantity of products as indicators of services measured among others.

To achieve this aim, the study formulated three null hypotheses:

Ho: There is no significant relationship between bank reforms and service delivery in the Nigeria banking sector.

Ho_2: There is no significant relationship between customers' deposit and Nigerian banking reforms

Ho_3: There is no significant relationship between Profit after Tax as tool for service delivery and Nigerian banking reforms

The study covers a period of ten years spanning from 2004 to 2014. The paper is divided in to five sections. The first part is the introduction as seen above, second part of the paper reviews past researcher's studies and also literatures on service delivery in financial institution

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and also other countries experience. The third part is on methodology, the fourth and fifth gives the findings, conclusions and recommendations respectively.

Literature Review

According to Petit (1987), a service is an intangible commodity. More specifically, services are an intangible equivalent of economic goods. Service provision is often an economic activity where the buyer does not generally, except by exclusive contract, obtain exclusive ownership of the thing purchased. The benefits of such a service, if priced, are held to be self-evident in the buyer's willingness to pay for it. He further stated that by composing and orchestrating the appropriate level of resources, skill, ingenuity, and experience for effecting specific benefits for service consumers, service providers participate in an economy without the restrictions of carrying inventory (stock) or the need to concern themselves with bulky raw materials. On the other hand, their investment in expertise does require consistent service marketing and upgrading in the face of competition.

Berry (1990) opined that services can be paraphrased in terms of their generic key characteristics which are: Intangibility; Perishability; Inseparability; Simultaneity; and Variability. Each of these characteristics is retractable and their inevitable coincidence complicates the consistent service conception and makes service delivery a challenge in each and every case.

Service Delivery

According to Steve (2001), the delivery of a service typically involves six factors:

The accountable service provider and his service suppliers, equipment used to provide the service , the physical facilities, the requesting service consumer, other customers at the service delivery location, customer contact the service encounter is defined as all activities involved in the service delivery process

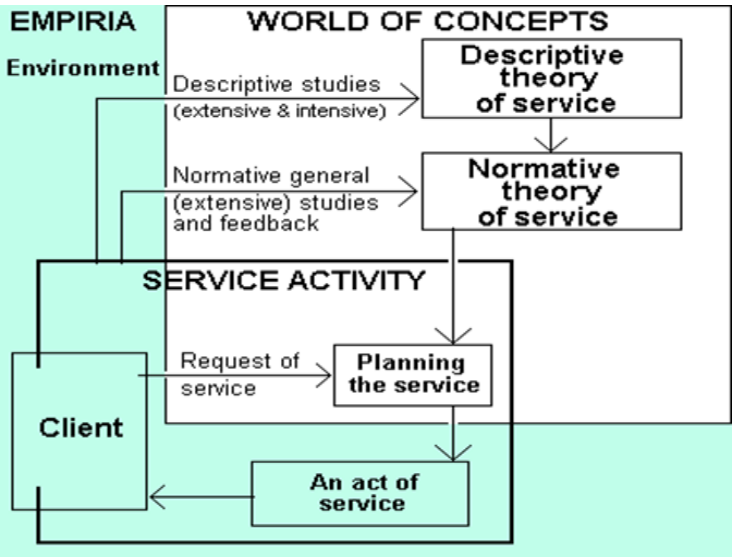

Figure 1: Theories of Services ModelsSource. (Microsoft, 1985)

Most studies of service use either one of two alternative approaches, that is, they have either descriptive or normative purpose, as can be seen in the diagram on the right. The two resulting theory paradigms differ from each other even when the object of study is the same.

Descriptive theory

Descriptive theory contains knowledge about past or present activities of producing or using a service but does not much help for modifying it to correspond better to the latest requirements. Academic or historical studies are often of this type. They are sometimes categorized in two types: extensive studies of a large number of cases, and intensive studies of one or a few cases.

Normative Theory

Normative theory of service contains generally applicable knowledge and tools that can be used in producing the service, especially for optimizing it or planning improvements to it. Research for creating normative theory is usually extensive because it needs a large number of cases for its material.

Moreover, a third type of research can take place in connection with the "request of service" marked in the diagram. It means simply studying and planning the execution of individual tasks, for example preparing for a new type of service, or removing problems in an existing service. These case-specific or "intensive" studies seldom produce a generally applicable new theory and therefore this study adopted the request of service as seen in the diagram above.

Service Delivery in the Banking Sector

The banking sector which is a prominent and pertinent sector of the economy determines to a great extent the overall growth of the economy. Hence, the need for establishment of many commercial banks giving grounds to the competitive banking services that is available to its customers. These services could vary depending on the patronage of the customers, their level of consumption and savings. With stiffer competition among domestic and foreign banks, therefore it is important for the commercial banks in Nigeria to improve the quality of their services.

According to Turban et al. (2002), "customer service is a series of activities designed to enhance the level of customer satisfaction- that is, the feeling that a product or service has met the customer's expectation." Customer service may be provided by a person (e.g., sales and service representative), or by automated means called self-service. Customer service is normally an integral part of a company's customer value proposition. From the point of view of an overall sales process engineering effort, customer service plays an important role in an organization's ability to generate income and revenue. From that perspective, customer service should be included as part of an overall approach to systematic improvement. A customer service experience can change the entire perception a customer has of the organization.

According to Osuagwu (2002), customer service is concerned with establishing, maintaining and enhancing relationships between and/or among relevant business parties in order to achieve the objective of the relevant parties. The challenge of ethics and professionalism came into being in a bid to survive the stiff competition in the market; a number of operators had resorted to unethical and unprofessional practices. Strictly speaking, some even went into businesses that could not be classified as banking. In appreciation of the enormity of the problems caused by the failure to adhere to professional and ethical standards, the Bankers' Committee set up a sub-committee on "ethics and professionalism" to handle complaints and

disputes arising from unwholesome and sharp practices, coupled with the challenge of poor corporate governance practices.

The Effect of Banking Reforms on Service Delivery

Soludo (2006) recounted the "dividends" of recapitalization and bank reforms, as the most popular reform in the thirteen-point agenda for the financial service sector. According to him, "the Nigerian banking industry is the fastest growing in Africa". Some of the already visible gains of the regulatory-induced consolidation exercise are the "emergence of 25 strong and reliable banks, the soundest the banking sector has ever been, with no unsound bank and that the 25 banks are now the size of the first and the second largest bank in South Africa combined".

Poor service delivery has been the bane of the banking industry even after the several financial reforms in the banking sub-sector. While the era of "arm chair banking" is extinct, that of "tally number and mat" is still practiced by some of the banks even after the reforms. Practices such as these have caused scholars to describe the service delivery by banks as still poor.

The regulatory authorities must beam their searchlights to the area of service delivery as much as they pay attention to the figures the banks submit to them. Otherwise customers and investors alike will continue to suffer in the hands of some of these banks that have relegated service delivery to the background.

Methodology

The paper seeks to evaluate the impact of banking reforms on service delivery in the Nigerian banking sector. The population for the study is the entire staff of GT Bank having 400 branches nationwide and its potential customers spread across the nation. For the purpose of this study, the stratified sampling technique was adopted where the banks were grouped into the six geo political zone and five staffs were selected from each of zone making a total of thirty staff members and 25 customers from each zone, thus rendering a total of one hundred and fifty customers.

The data used were obtained from several sources (primary and secondary). The primary data were obtained through a questionnaire that was administered to the customers and bank employees. For secondary data, the study used profit after tax for pre and post reform period of five years each as well as customers deposits. For the purpose of testing the hypothesis, the study adopted the use of regression, chi square and percentage table for analysis and interpretation. These combinations provide accurate and absolute measures of data collection from the respondents. It is also very simple to justify such data since it does not involve any critical and complex mathematical calculations.

Variables used in analysis

Customer Deposit

Basically, the cash deposits of customer' pre and post the reforms era was tested in this research work to ascertain the satisfactions of customers vis–a–vis service delivery. It is expected that the inflow of customers into the bank is a function of their satisfaction, and this satisfaction can be viewed from the point of cash deposits in the Bank.

Loans Advanced to Customers

The relationship between service delivery and accessibility to credit facilities is very important. This is owing to the fact that the Nigerian economy is driven by the private sector that

rely mostly on financial aid from Bank. For a Bank to effectively and efficiently deliver good services to their customers; they MUST be able to avail credit with a flexible repayment plan to their customers.

Profit after Tax

Banks are in the business of making profit to enable them to pay dividends to shareholders, salaries to staff, meet community obligations etc. However, for a Bank to ensure that this primary aim is achieved, they must develop products and services through which profits can be achieved. Hence, it is a very important indicator to measure the strength of a bank and the level of satisfaction given to their customers.

Service Delivery

The reforms agenda is expected to enhance synergy, improve efficiency, induce investor focus, trigger productivity and welfare gains, and most importantly, customers are expected to have full value for their patronage in terms of quality product, convenience, accessibility and exceptional service delivery. Hence, its measure in the successes of the banking reforms cannot be over-emphasized

Results and Discussion

The questionnaires were administered to the staff and customers of the bank in the entire geo political zone. 30 and 120 questionnaires were sent to the staff and customers of the banks respectively. A total of 130 questionnaires were properly filled in and returned by the staff and customers. The analysis of the study is based on the return questionnaire.

VARIABLES	NO. OF RESPONDENTS	PERCENTAGES (%)
1-5 years	15	12%
6 – 10 years	25	19%
11 years and above	90	69%
Total	**130**	**100**

Table 4.1.1: Length of Banking with GTB (Source: Field Survey, 2014)

The above table shows that 15 respondents' representing 12% have worked in the bank between 1- 5 years, while 25 representing 19% of the respondents have worked in the bank between 6 – 10 years while 90 respondents representing 69% have worked in the bank between 11 – 15 years. These respondents could give better information on the events or activities of the bank before and after the periods of their reforms.

VARIABLES	NO. OF RESPONDENTS	PERCENTAGES (%)
Strongly Agree	26	20%
Agree	65	50%
Undecided	26	20%
Strongly Disagree	13	10%
Total	**130**	**100**

Table 4.1.2 New developments to enhanced large customer base and increased deposits motivated banks' reforms (Source: Field Survey, 2014)

Table 4.1.2 shows that 20% of the respondents strongly agreed that new developments imposed high fixed costs; hence the need to spread these costs across a large customer base is one of the reasons for banking reforms**.** 65 respondents representing 50% agreed while 20

respondents were undecided and 10% of the respondents do strongly disagreed with the new developments.

VARIABLES	NO. OF RESPONDENTS	PERCENTAGES (%)
Strongly Agree	27	20.8%
Agree	90	69.2%
Undecided	-	-
Strongly Disagree	13	10%
Total	**130**	**100**

Table 4.1.3 Customers deposit increase in banks as a result of banking reforms (Source: Field Survey, 2014).

Table 4.1.3 shows the response of the respondents as regards to whether Customers deposit increase in banks as a result of bank reforms. 27 respondents strongly agreed with 20.8% of strongly agreed ranking and 90 respondents represented by 69.2%, while 10% strongly disagreed on the issue.

VARIABLES	NO. OF RESPONDENTS	PERCENTAGES (%)
Strongly Agree	52	40%
Agree	54	41.5%
Undecided	12	9.23%
Strongly Disagree	12	9.23%
Total	**130**	**100**

Table 4.1.4 There is a significant relationship between reforms and service delivery in the Nigeria banking sector (Source: Field Survey, 2014).

Table 4.1.4 above shows that 52 respondents representing 40% strongly agreed that there is significant relationship between reforms and service delivery in the Nigeria banking sector, 54 respondents agreed, 12 respondents were undecided and strongly disagreed respectively. This means that there is significant relationship between consolidation and service delivery in the Nigeria banking sector.

VARIABLES	NO. OF RESPONDENTS	PERCENTAGES (%)
Strongly Agree	51	39.2%
Agree	63	48.4%
Undecided	3	2.3%
Strongly Disagree	13	10%
Total	**130**	**100**

Table 4.1.5 ATM and internet banking is the most preferred service delivery channel and customers service in banks (Source: Field Survey, 2014)

The table above shows that 51 respondents strongly agreed, 63 respondents agreed and 3 respondents were undecided while 13 of the respondents strongly disagreed. This means that customers preferred ATM and internet banking service delivery.

VARIABLES	NO. OF RESPONDENTS	PERCENTAGES (%)
Strongly Agree	26	20%
Agree	91	70%
Undecided	-	-
Strongly Disagree	13	10%
Total	**130**	**100**

Table 4.1.6 Customers deposit increase in banks as a result of reforms (Source: Field Survey, 2014)

Table 4.1.6 shows that 26 respondents strongly agreed that customers deposits has increased in banks as a result of the reforms, 91 respondents representing 70% agreed and 13 respondents representing 10% strongly disagreed.

There is no significant relationship between banking reforms and service delivery in the Nigeria banking sector.

Variables measurement:

Level of significance (α) = 0.05 (5%)

Degree of Freedom (df) = (r – 1) (c – 1)

Where: r = number of row,

C = number of column

1 is constant

Variable	SA	A	U	D	TOTAL
There is improvement in the services of GTB before and after reforms.	38	61	21	10	130
Bank reforms has significant impact on loan advanced to customers in Guaranty Trust Bank Nigeria Plc.	45	75	3	10	130
Total	**83**	**136**	**24**	**20**	**260**

Table 4.1.7 Contingency table showing observed frequency (Source: Author's computation)

$$\text{Expected Frequency} = \frac{\text{Column Total x Row Total}}{\text{Grand Total}}$$

Number of row = 2

Number of column = 4

df = (r – 1) (c – 1)

= (2 – 1) (4 – 1)

= 1 x 3 = 3

Combine with level of significance (5%) on chi-square table $\chi 2 = 7.81473$

Step 3: Decision Rule – Accept the Null hypothesis (Ho) if $\chi 2$ computed is less than table value 9.488 and reject Hi, otherwise, reject Ho and accept Hi.

Step 4: Test Statistics ($\chi 2$)

$$\chi 2 = \sum \frac{(O - E)^2}{E}$$

O	**E**	**O – E**	**$(O - E)^2$**	**$\frac{(O - E)^2}{E}$**
38	41.5	-3.5	12.25	0.295181
45	41.5	3.5	12.25	0.295181
61	68	-7	49	0.720588
75	68	7	49	0.720588
21	12	9	81	6.75
3	12	-9	81	6.75
10	10	0	0	0
10	10	0	0	0
Table 4.1.8: Computed Value for Chi Square Source: Author's computation				**$\chi 2 = 15.53154$**

From the above table the calculated $\chi 2$ is **15.53** while the $\chi 2$ critical table value is **7.82**. **Decision**: Since the calculated value of chi-square **15.53** is greater than the table value **7.82**, the null hypothesis Ho will be rejected and Ha accepted, that there is significant relationship between reforms and service delivery in the Nigeria banking sector.

Table 4.1.9 Customers' Deposit

Pre – Banking Reforms	**Post Banking Reforms**
24,138,561	294,501
31,372,594	362,936
51,067,765	470,606
74,222,497	683,081
95,563,587	761,195
276,365,004	**2,572,319**

Table 4.1.10 Hypothesis Test (CD): Independent Groups (t-test, pooled variance)

CD PRE	CD POST	
55,273,000.80	514,463.80	Mean
29,751,813.13	201,603.48	std. dev.
5	5	N

8	
54,758,537.000	difference (CD PRE - CD POST)
442,605,514,178,965.000	pooled variance
21,038,191.799	pooled std. dev.
13,305,720.787	standard error of difference
0	hypothesized difference
4.12	T
.0034	p-value (two-tailed)
24,075,489.868	confidence interval 95.% lower
85,441,584.132	confidence interval 95.% upper
30,683,047.132	margin of error

Interpretation of Results

From our analysis, it can be seen that deposit from customers before and after, that in the column labeled Sig. (2-tailed) our p-value is less than our alpha value of 0.05 which means that there is a significance difference in the deposit by customers before and after reforms at the $p<0.05$ significance level. The mean was 55273000.8 at pre- reforms and 514463.80 at post-reforms. Therefore, we can conclude that there is significant difference in Deposit from Customers of GTBank in pre and post reforms period.

Test of Hypothesis

Ho_2: There is no significant relationship between Profit after Tax as a tool for service delivery and Reforms in Guaranty Trust Bank Nigeria Plc.

Pre – Reforms '000	**Post – Reforms '000**
5,330,796	7,906,000
4,056,557	5,331,000
3,211,439	28,073.250
3,081,268	28,063,080
1,503,694	39,320,660
17,183,754	**108,693,980**

Table 4.1.11: Profit after Tax

Table 4.1.12 Hypothesis Test (PAT): Independent Groups (t-test, pooled variance)

PAT PRE	PAT POST	
3,436,750.80	21,738.7966	Mean
1,404,048.52	14,575.7129	std. dev.
5	5	N

8	Df
3,415,012.00340	difference (PAT PRE - PAT POST)
985,782,346,396.71800	pooled variance
992,865.72425	pooled std. dev.
627,943.41987	standard error of difference
0	hypothesized difference
5.44	T
.0006	p-value (two-tailed)

Results

While for profit after tax by GT Bank, our analysis shows that there is a significant difference in the profit after tax, since we have a p-value of 0.006 which is less than our alpha value of $p<0.05$. We got a mean score of 3436750.8 for profit after tax of GT Bank during the pre-reforms; while for the post-reforms our mean is 21738.8. This confirms that there is significant difference in profit after tax of GT Bank before and after the reforms era.

Conclusion and Recommendations

There is no doubt that the banking sector reforms programme is the right step to take by the CBN as it is capable of prompting healthy competition among banks and aiding banks to become more creative and innovative. It also has the potential to accelerate the rate of economic growth and development of the country. However, to ensure that the synergy it promises is fully harnessed, and to mitigate post-consolidation conflicts, adequate steps should be taken to train and retrain the staff of all the banks that have scaled the capitalization huddle, while the regulatory environment should be tightened to close all potential loopholes that may result from an the company growth in the industry. Based on the findings, the study concludes that banking reforms have an impact on service delivery of the banking sector in the area of increased in customers deposit and profits of the banks are enhanced as well.

The importance of customer service is becoming a vital business issue, as organizations have become sensitive to the benefits of customer service and customer satisfaction. The CBN should provide the enabling supervisory environment to ensure the viability of the envisaged banking industry. The apex bank should foster on environment in which the interest of all parties

is protected, vis-à-vis investors, depositors, borrowers and the larger society. Specifically, the CBN has to be disciplined and committed to its agenda for improving the industry. As such, the necessary internal machinery for effective supervision of the industry must be put in place. The current CBN change program, tagged eagles is designed to deliver this.

Also, banks are also expected to imbibe best practice corporate governance, improve in self-regular, enhance the capital base, institute IT driven culture, and seek to be more competitive in today's globalizing world. There is still the need to set up Asset Management Company (AMC) as soon as possible in order to reduce the risk exposure to banks

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Green IT Curriculum: A Mechanism For Sustainable Development

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Abstract

This research, which proposes that environmental issues should be integrated into the Information Technology (IT) Education in Botswana and Botho University is presented here as a case study. Green Computing or Green IT like other global green initiatives has generated massive interest the world over. The importance and growth of Green Computing is evidenced by the sharp rise in international conferences on the subject, introduction of Green Computing courses in many developed countries such as Canada, USA and United Kingdom and incentives for graduates with Green Computing qualifications/knowledge. Despite this growing trend 'to go green' in the IT industry, countries like Botswana and the rest of Africa are still behind as confirmed by the lack of Green Computing courses in Universities (or any level of education), and very few conferences on the subject. A research titled "Green Computing: Students, Campus Computing and the Environment-A case for Botswana" (Batlegang, 2012) was conducted to measure the Green Computing awareness levels and capture any green initiatives at Botho University (then Botho College) and gives further impetus for this research proposal as it established that the levels of Green Computing awareness at the university are low and that there are minimum green initiatives. This research proposal aims to establish prudent means of integrating Green IT into the computing curriculum at Botho University.

Key Words: Green Computing, Curriculum, Sustainability

Introduction

The research proposes that environmental issues should be integrated into the tertiary education in Botswana and Botho University, which is presented here as a case study. Botho University is one of the leading private tertiary institutions in Botswana. From the time Botho University was allowed degree awarding powers in 2012, many programmes have been developed such as; Diploma in Computing, Professional Diploma (Honours) in Computing, Bachelor of Science (Honours) Computing, Post Graduate Diploma in Higher Education and Masters of Education in Higher Education. As Botho University moved towards becoming an independent degree-awarding institution, there was a need to revamp their academic structure to better manage the increased responsibility of curriculum and assessment development, service delivery, research, and quality management.

Unfortunately as Botho University made progress in developing various curricula for new programmes, there still remains an omission of a much needed Green Computing curriculum. Batlegang (2012) established that the awareness level of over 4000 computer users at Botho University with regards to Green Computing is low. The research also established that generally the green initiatives at Botho University are minimal. This research proposal aims to establish prudent means of integrating Green IT into the computing curriculum at Botho University. The development of Green Computing programmes/curricula will ensure that the awareness levels of students and staff are elevated. It is important to educate students in environmental responsibility throughout their education. In order to achieve a change of attitude, repetitive themes of Green Computing can be introduced especially in hardware and network oriented courses. The course on Green Computing should also be made compulsory so as to ensure that all students at the University are educated about environmental responsibility. The course will inform the students on the dangers of ICT equipment and also provide strategies on how the dangers can be mitigated (Tedre, Bangu and Nyagava, 2009).

Literature Review

Siegler and Gaughan (2008) define Green Computing or Green IT as "information technology and system initiatives and programs that address environmental sustainability". Agarwal, Goswami and Nath (2013) conquer with the above definition as they define Green Computing as "the study and practice of using computing resources in an eco-friendly manner in order to tone down the environmental impacts of computing". The continued growth of Information, Communication and Technology (ICT) rises sharply by the day as computers are used in educational, commercial, corporate, banks and government sectors all over the world.

- In business computers are used for organization, self-sufficiency, reducing costs, increasing transaction speeds and managing sales.
- In the academic world, computers are used for teaching and learning for example the use of powerpoint slides, use of virtual learning platforms such as Blackboard, YouTube videos and other online learning facilities such as digital libraries and Google.
- In medical industry, records are kept using relational database management systems such as ER Medical, Open MRS, SQL Server databases, Oracle databases etc. while life support systems all run using computers. Ground breaking research in this field has also been greatly enabled by computers, while patients' visitors can access visit schedules online.

The above are a few examples of how computers continue to influence our lives and make them easier. This rise in computer usage means that computers also contribute to the rising cost of energy, depletion of natural recourses as more and more computers are

manufactured and associated peripherals such as printers and paper are used. This generally has led to increased concern for the environment and growing interest in Green IT. There has been a growing number of Green IT conferences and curricula being introduced to schools and universities all over the world. The essence of these conferences is to share techniques for improving energy efficiency and reducing e-waste that maybe generated from the time computing equipment is manufactured, during its use and ultimately when it is disposed. The curricula serve to sensitize the end users on various means of using computers in a sustainable manner (Sobbota, Sobotta and Gotza, 2009).

The use of computers ought to be optimum given its importance in the world today. Bello, Badariah, Ahmad and Nordin (2013) argue that users must be given the knowledge of proper utilization of computers e.g. computers should not be used unnecessarily and should not be left on when unused. Reuse and recycling must become integral part of sustaining computers and prolonging the lifespan of computers. Disposal should be the last resort. Companies must use e-resources instead of printing so as to reduce the carbon dioxide emission footprint. This knowledge must be incorporated into each individual and universities can be seen as a starting point if no prior knowledge regarding this matter exist. If this knowledge exists eco-friendliness can be maintained.

Methodology

Research Objectives

It is envisioned that the development of a Green Computing curriculum will educate end users about responsibility to the environment throughout their education. At the end of this research work the following objectives must be met:

- To develop a Green Computing curriculum that will develop users' knowledge and understanding on sustainable access to computing and networking resources.
- To highlight how existing computer technology can be used for sustainability in other fields of studies.
- To ascertain how a Green Computing qualification or certification can be used as an incentive to students who have successfully completed the programme and to the employers who stand to gain in hiring environmentally aware/sensitive graduates.

Research Questions

This study is focused on coming up with a Green Computing curriculum with an aim to raise awareness levels of computer users at Botho University. The research seeks to answer the following questions:

- How can a Green Computing curriculum be developed so as to develop user's knowledge and understanding on sustainable access to computing and networking resources?
- Can existing computer technology be used for sustainability in other fields e.g. Business, Accounting and Education?
- Green Computing certification/qualification; how can it be used as an incentive for both students and employers?

Problem Statement

The impact of IT and computer systems on the environment is well acknowledged and recognised. As one mechanism to address lack of green IT awareness and lack of green

computing programmes at Botho University, the research proposes the need for a Green IT course which will cover inter alia the following themes; dangers of ICT equipment and mitigation strategies (e.g. consumption of electricity, electronic waste toxicity, correct disposal of ICT waste, pollution of environment by computer hardware and cleaning agents etc.), measurement of energy consumption/cost, reduction of carbon dioxide emission (CO2e), local and international laws on environmental issues . In the end the Green IT curriculum will be evaluated to measure its effectiveness.

Purpose and significance of research

As already alluded, the main purpose of the research will be to study about how environmental issues can be incorporated into the already existing IT curriculum. It is envisioned that the development of the aforementioned curriculum if implemented will have the following goals/results:

- Making students aware of the dangers and seriousness of ICT-related pollution.
- The students will learn to understand the environmental effects of computing installations and to weigh the trade-off between those effects
- To instill in students the attitude that environmental issues are all about small choices they can make.
- Providing a measurable increase in the awareness level. The objective is that the awareness levels will have been raised to above 90% at the end of the Green Computing course.
- Providing measurable evidence of reduction of energy cost at Botho University.
- Reduction of total carbon dioxide emissions (CO2e) by Botho University staff members and students.
- Providing a distinctive advantage for Botho University students with regards to their careers.
- Making students aware of local and international environmental laws and regulations (Tedre, Chachage and Faida, 2009; Batlegang, 2012)

Studies such as (Sobbota, Sobotta and Gotza, 2009) have shown that companies, organizations and governments that are not implementing Green Computing strategies use large volumes of energy but we have to be mindful of the fact that there is insufficient green energy to meet the large demands of the ICT infrastructure hence the more energy consumed the high the impact on the environment due to the use of environment unfriendly energy resources (African Development Bank, 2009).

The significance of this research is that it has the potential of changing lives, not only at Botho University but lives of the entire Botswana population. In order to fully reap the benefits of Green Computing the changes in behaviour have to be a collective responsibility. The more the people respond positively to the program and implement what they have learnt the greater the impact. The project will be an important contribution to the education curriculum in Botswana which currently lack Green Computing programmes.

Sample

The research methodology was designed such that the required data is gathered from the following groups: university students and graduates, lecturers & university management, and industry representatives. The sample consisted of 224 students and 56 lecturers from Botho University, a private university in Botswana. The sample also consisted of 40 alumni

of the same private university. In addition, 10 university management representatives formed part of this research study. A further 25 respondents came from industry representative with a bias towards ICT. The total of the sample was 355 respondents which constituted 70% of ICT related domains and 30% non ICT specializations. The respondents were selected using a combination of random and purposive sampling techniques. The diagram below shows the major categories of the research participants.

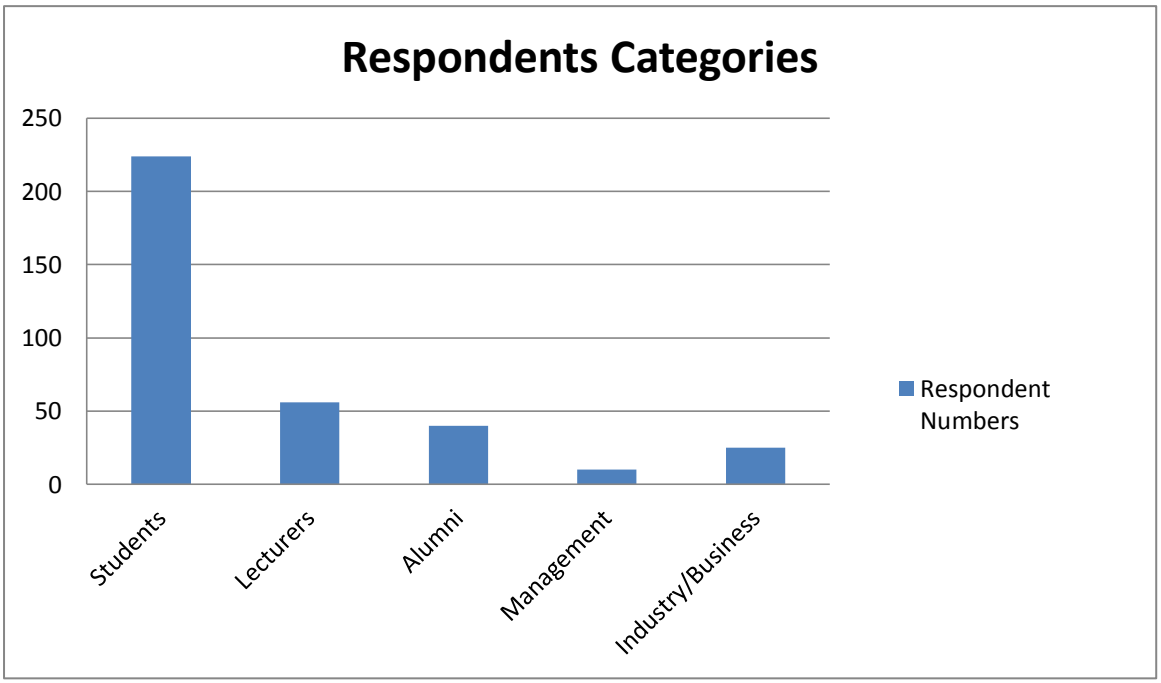

Figure 1: Respondent's categories

With regards to gender, 45% were female and 55% male as shown in the diagram below.

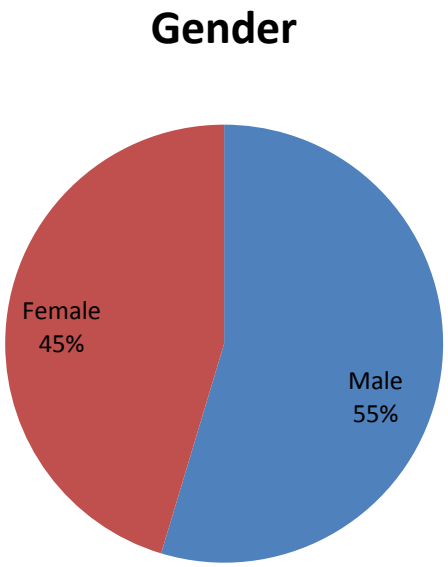

Figure 2: Gender ratio

In order to extract the required data, consultations with the above groups was done through questionnaires, discussion groups and individual interviews. The questionnaires were administered by hand and also through e-mail. A couple of follow-up measures were employed such as paying a visit to the respondents (office visits especially to the lecturers and management), e-mail reminders and making phone calls. This was done in order to achieve a high response rate. It should be noted that out of the 450 questionnaires sent out, 355 usable questionnaires were returned constituting a 74% response rate.

Research instrument

The researcher developed a questionnaire (see Appendix A) that constituted 2 sections: Demographic data in Section A and Green Computing Curriculum Data in Section B. The demographic data section of the questionnaire was used to collect information such as the age, gender and familiarity with Green Computing concepts. Section B of the questionnaire was used to extract information on the Green Computing curriculum such as the suitable modules to include, how to integrate the Green Computing curriculum and ascertain how a Green Computing qualification can be used as an incentive to both graduates and employers who stand to gain in hiring environmentally aware employee. E-mail interview questions were also generated and sent to industry experts, management and IT lecturers. The interview questions asked participants about things such as module sequence, milestones, number of credits and notional learning hours of each Green Computing module. Further, semi-structured interviews were conducted by telephone and in rare occasion in person to obtain an in-depth understanding of the participants' perception on Green Computing curriculum and their experiences of sustainability issues in general. After data/items were generated, they were subjected to validation by ICT experts and then pilot tested on a representative sample of the target respondents. The reliability of the study was high on average at $\alpha = 0.93$.

Data Analysis

The research data were analyzed to understand how Green Computing curriculum can be integrated into an existing curriculum, and how the existing systems can be used more effectively as well as establishing how a Green Computing certification can be used as a motivation for both students and employers. The analysis was done by the researcher, who followed several steps in analyzing the data. The first step was to ensure that all the data is written data and as such, all telephonic interviews were transcribed to produce data for analysis. This process was done manually by the researcher. Once this stage was completed, the researcher read and re-read all the written interview responses to have an in-depth understanding of what the respondents were saying. This new found data was interweaved with already existing questionnaire data to make sense of the entire direction of the research. The researcher then did open coding to mark participants' responses with regards to a) topics to be included in the Green Computing curriculum, b) notional learning hours and credits for the course, c) how the Green Computing certification can be used as an incentive for both students and employers. From the open coding, the researcher developed preliminary categories which were based on the respondents' narrative. From the open coding, the researcher used a combination of axial and holistic coding to further analyze the data. With axial coding, the researcher made an attempt to make connections between the preliminary categories (from open coding) and developing new, more abstract categories with structural variations. The chief aim of this coding was to find similarities and differences between the categories with the aim of further grouping similar concepts. The holistic coding was used to look at the most frequently used keywords and key terms (e.g. energy saving, cost cutting, recycling) in the interview questions and questionnaire responses. To conclude analysis, the

researcher identified themes related to the research questions and looked for relationships to the key concepts of Green Computing curriculum integration and associated the resultant themes with the literature reviewed.

Discussion of results

Results against research question 1

The first research question asked was "How can a Green Computing curriculum be developed so as to develop user's knowledge and understanding on sustainable access to computing and networking resources?" What follows below is the response to the above question. A percentage analysis of the respondents shows that 86.5% of respondents want Green Computing Curriculum to be introduced at Year 1 of university study. A further, 67.8% want the modules of the Green Computing course to be spread across the 4 years of study.

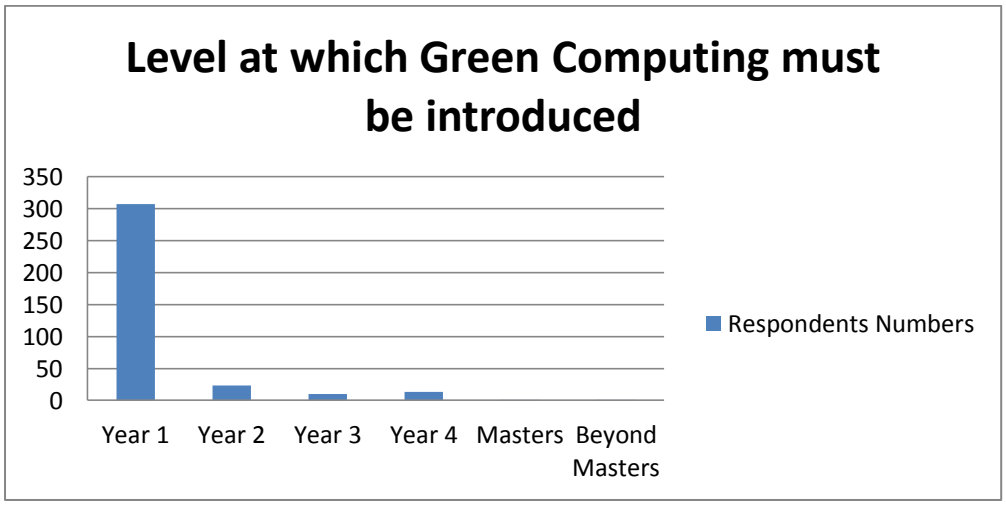

Figure 3: Year at which Green Computing curriculum must be introduced

A further 67.9%, which was 241 respondents want the modules of the Green Computing course to be spread across the 4 years of study. The respondents gave reasons for spreading the modules across the four year degree programme. Please see the diagram below too see the distribution of the yes and no.

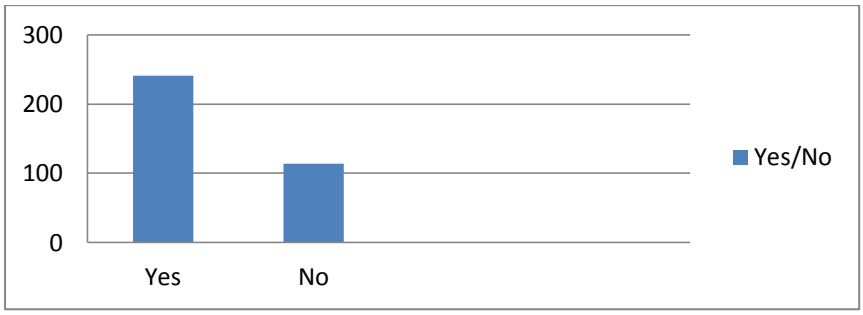

Figure 4: Yes / No

Regarding the first research question, the research also established that from the given set of modules/subject for the course, the respondents were happy with the selection of the topics. The table below gives results of the questionnaire regarding the fourth question which

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looks at the modules that can be added to this course. Below the table is a diagram showing the same information.

	No Opinion	Very Unimportant	Fairly Unimportant	Fairly Important	Very Important
Green Computing Fundamentals	0	0	0	0	355
Regulations and Industry initiatives	0	0	0	4	351
Power management and saving	0	0	0	1	354
Material recycling and waste management	0	0	0	0	355
Education and certification	0	0	0	0	355

Table 1: Modules

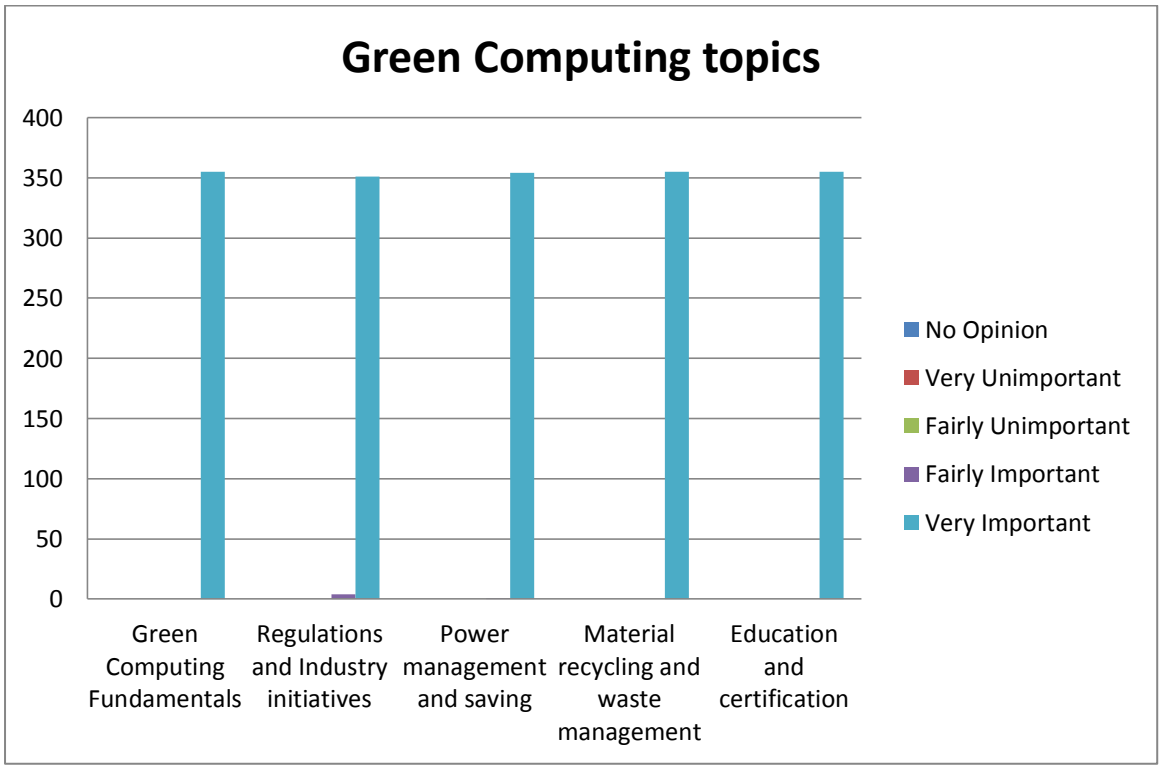

Figure 5: Green Computing Subjects

To conclude on research question 1, the participants of this research believe that it is important to integrate the Green Computing curriculum into the existing curriculum. The participants also gave recommendations that the programme should be integrated into all degree programmes at the private university being used as a case study. They also suggested that, a shorter version of the course can be developed as part of the short programmes that can be run under the Corporate Training department at Botho University. Interview, especially with Industry/Business experts gave valuable feedback on the number of credits that can be allocated for the course. They suggested that when integrated into the degree programme, the course should be allocated 20 credits, meaning that 200 notional hours of study is required to

successfully complete the module. For the short programme, they suggested that this could be a 3 credit course that can be completed in 30 hours.

Results against research question 2

The second research question reads as 'How can existing computer technology be used for sustainability in other fields e.g. Business, Accounting and Education?' In order to answer that question, the researcher engaged with the IT lecturers, Industry/Business experts and management. The following were some of the responses from the respondents:

'...The goal of green computing is not necessarily to come up with new interventions but to use existing technologies in a sustainable manner. This means that other faculties also need to be taken onboard and taught for instance, the negative effects of unnecessarily printing of files and e-mails which can lead to lots of paper waste which means more chopping down of trees!'

'Procurement officers in the relevant departments or faculties must be trained about purchasing energy efficient equipment with energy star logo. Furthermore, the procurement officers must be trained to only purchase from dealers that that espouse socially responsible environment selling and procurement of computers.

Some participants gave tips on how projectors can be used for projecting instead of giving out handouts; switching computers and associated devices such as projectors, air cons etc when they are not in use. Some suggested that the university must define a Green Computing policy that includes recommendation of reuse before recycling, define a recycling program, and green procurement. The structured interview questions and semi-structured interviews helped to generate this type of data.

Results against research question 3

The third research question reads as 'Green Computing certification/qualification; how can it be used as an incentive for both students and employers?' Most of the respondents who were asked this question did not give concrete answers as to how the Green Computing certification can be used as an incentive for both students and employers. However, 63.6% of the participants who answered the interview questions indicated that though at the present moment, Green IT qualification is not a requirement for employment in Botswana, in future those who possess the qualification might be at an advantage. The Industry/Business experts who answered the interview questions also affirmed that, they will definitely give preference to hiring an employee who is well versed in Green IT and general sustainability issues than an individual who does not, and definitely the certification will validate individual's competence.

Conclusion

This proposal attempts to bridge the gap that exist in the education system in Botswana and Botho University is used as a case study. Fantastic programmes in Computing, Business, Finance, Accounting, Hospitality etc. exist at Botho University but there is a grave concern that despite the obvious increase in energy consumption due to increased ICT usage as well as overall negative impacts of ICT hardware and carbon dioxide emission on the environment, little or nothing is being done to sensitive users on the effects of ICT equipment and peripherals on the environment. This proposal aims to develop a Green Computing curriculum to deal with issues of raising green IT awareness to computer end users as well as educating on environmental legislation and preaching the incentives for both students and employers who are green conscious. The research established prudent means of integrating Green IT into the existing curriculum as well as establishing how existing IT infrastructure

can be used in other domains in a sustainable manner. Lastly the research established how a Green IT qualification can be used as an incentive to both employers and graduates.

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Appendix

Paper Title: Green IT Curriculum: A Mechanism For Sustainable Development

You are invited to take part in a research conducted by Billy Batlegang from Botho University Botswana. The aim of this research is to come up with a Green Computing curriculum that will educate computer users about sustainable use of computers and about their responsibility to the environment throughout their education. This research also seeks to highlight how existing computer technology can be used for sustainability in other fields of studies. The research will also ascertain how a Green Computing qualification can be used as an incentive to both students and employers and in the process raising Green Computing awareness in the academia and industry.

Your participation will involve answering the questionnaire that follows in relation to the research described above. Your participation in this research will contribute towards the possible integration of Green Computing curriculum in Botho University and other institutions worldwide which may be having interest in Green Computing.

Your participation in this research is really appreciated and any queries about your participation in this study may be directed to the following:

- Researcher Name: Billy Batlegang
- Cell: +267 76135513
- Email: billy.batlegang@bothouniversity.ac.bw

Boston, USA
ISSN: 2330-1236

SECTION A: DEMOGRAPHIC DATA

1. Please indicate your gender with a tick (√).

   Male ☐ Female ☐

2. Please indicate your age group with a tick (√).

   Below 20 ☐ 20-30 ☐ 31-40 ☐ 41-50 ☐ Above 50 ☐

3. Please indicate whether you are a student or not with a tick (√).

   Student ☐ Not a student ☐

4. If your answer to question 3 is 'student' please indicate with a tick (√) the level of your study.

   Undergraduate ☐ Postgraduate ☐

5. If your answer to question 3 is 'not a student' please indicate with a tick (√) a category below that best describes you.

   Unemployed ☐ Employee ☐ Employer ☐

6. If your answer to question 5 is either 'employee' or 'employer' please state the industry you are in e.g. ICT, Education, Public Health

   Industry _____

7. Please indicate with a tick (√), your familiarity with Green Computing (or Green IT) concepts

   Not at all Familiar ☐ Somewhat Familiar ☐

   Moderately Familiar ☐ Very well Familiar ☐

SECTION B: GREEN COMPUTING CURRICULUM DATA

1. At which level of study must Green Computing Curriculum be introduced at university education? Please tick (√) the appropriate box.

   Year 1 only ☐

   Year 2 only ☐

   Year 3 only ☐

   Year 4 only ☐

   Master's level only ☐

   Beyond Masters ☐

2. Should the Green Computing concepts be taught in all the years of a bachelor study (Year 1 – 4?) Please tick (√) the appropriate box.

   Yes ☐ No ☐

3. Please give reasons for your answer in question 2.

   _____
   _____
   _____
   _____
   _____

4. How important is it to include the following topics/modules into the Green Computing curriculum? Please tick (√) the appropriate box.

	No Opinion	Very Unimportant	Fairly Unimportant	Fairly Important	Very Important
a. Green Computing Fundamentals					
b. Regulations and Industry initiatives					
c. Power management and saving					
d. Material recycling and waste management					
e. Education and certification					

5. In your opinion what is the best way to integrate Green Computing into an existing curriculum? Please tick (√) the appropriate box.

a. Teach as an independent short programme_____ ☐ 1

b. Integrate the module into the existing programme i.e. as part of the undergraduate studies

_____ ☐ 2

c. Integrate the module into the existing programme i.e. as part of the postgraduate studies

_____ ☐ 3

d. Other (please specify)_____ ☐ 4

6. Please indicate with a tick (√)

	No Opinion	Very Unimportant	Fairly Unimportant	Fairly Important	Very Important
a. Is Green IT certificate important?					
b. Should Green IT certificate give graduate an advantage?					

21st Century Academic Forum Conference Proceeding
2015 Conference at Harvard

Student Perception of Classroom Management and Productive Techniques in Teaching

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Foreign Languages Department,
Faculty of Education,
Durrës

Abstract

The way a teacher manages the classroom has been shown to directly influence students learning(Wang, Haertel, & Walberg, 1994). Research shows classroom management to be one of the critical ingredients of effective teaching which also has a powerful impact on students' achievement (Marzano et. al 2003).

In this study, classroom management is conceptualized in twelve dimensions which have been grouped in three domains. This paper will present some findings for the first domain. The first domain is "Productive Techniques in Teaching" and includes six dimensions.

For the analysis of the data of this quantitative study the SPSS program, version 21 was used. The participants of the study were 1020 students of secondary schools in three cities of Albania, Tirana, Elbasan and Durres.

It was found in this study that students have an average level of perception of productive techniques in teaching related to their acquisition of English as a foreign language, and the highest perception in this domain was for the dimensions "Effective communication with students" □=25.15, and "Time management" □=23.96.

Key words: classroom management, productive teaching techniques, student perception.

Introduction

According to the literature, a well-managed classroom gives every student the chance to have one of the best learning experiences of his or her life (Wong & Wong, 2005). Classroom management became an area of interest as researchers connected positive student behavior with fewer disruptions and more engagement in learning to the techniques used by the teacher (Evertson, 1985; Evertson, Emmer, Sanford, & Clement, 1983). The teacher's knowledge and skills in classroom management have long been considered central to teaching competence (Emmer, & Evertson, 1980) and today, we know more about teaching than we ever have before as research has shown that teachers' actions in their classrooms have a very big impact on student achievement (Marzano, & Marzano, 2003). In their analysis of 30 variables influencing student achievement, Wang and colleagues (1993) listed classroom management as the most influential variable. In fact, management literature reflects the perspective that effective management results in high levels of student involvement or engagement in classroom activities, and low levels of inattention, disruption, or off-task behavior (Emmer, & Evertson, 1980).

Productive techniques in teaching, like effective planning skills, effective implementation of lesson plans, effective communication with the students, assessment and feedback, knowledge of the subject matter, and time management, are important to effective classroom management. All these six dimensions of classroom management were investigated in this study in order to understand students' level of perception on each of them related to the acquisition of English as a second language.

Literature review

Effective planning skills

Planning skills are crucial to classroom management. Good teachers are flexible and respond creatively to what happens in the classroom, but they also need to have thought ahead, to have a destination which they want their students to reach, and some idea of how they are going to get there, and a plan helps to remind teachers what they intended to do (Harmer, 2007, p. 156). Harmer asserts that for students, evidence of a plan shows that the teacher has devoted time to thinking about the class, and it strongly suggests a level of professionalism and a commitment to the kind of research they might reasonably expect (p. 156).

Creating and implementing a productive learning environment requires careful planning. According to Emmer and Evertson (2009), classroom management begins long before students come into the classroom. Effective teachers plan their classroom management before the school year begins, and know what tasks they will need to undertake at the beginning and throughout the year (Simonsen et al, 2008). In fact, classrooms with more *structure* have been shown to promote more appropriate academic and social behaviors. Students in high structure classrooms exhibited greater task involvement, friendlier peer interactions, more helpful behaviors, more attentive behavior, and less aggression (Simonsen et al, 2008).

Regardless of the amount of control teachers have over what and how they teach, in order to design and implement effective lessons, every teacher should have a system for writing daily lesson plans that is easily managed, long-range plan and focused vision, method for obtaining and organizing new teaching ideas and plan for reflection on teaching strategies and making improvements (Powell, 2009, p. 250)

Research highlights the importance of pupils always being aware of the purpose of the content of lessons. Research also shows that effective learning occurs where teachers clearly explain the objectives of the lesson at the outset, and refer to these throughout the lesson to maintain focus. These objectives should be related to previous study and to things of personal relevance of the pupils (Brophy & Good, 1990 in Sammons et al,1995).

Stronge, (2014) states that teachers should consistently plan using state and local school district curricula and standards, effective strategies, resources, and data to address the differentiated needs of all students. For a better instructional planning the author suggests that teachers should continually seek and use multiple data and real world resources to plan differentiated instruction to meet the individual student needs and interests in order to promote student accountability and engagement. Some of the performance indicators according to Stronge (2014) are as follow, but are not limited to: The teacher; analyzes and uses student learning data to inform planning, develops plans that are clear, logical, sequential, and integrated across the curriculum (e.g., long-term goals, lesson plans, and syllabi), plans instruction effectively for content mastery, pacing, and transitions, plans for instruction to meet the needs of all students, aligns and connects lesson objectives to state and local school district curricula and standards, and student learning needs, develops appropriate course, unit, and daily plans, and is able to adapt plans when needed (p. 35).

Effective implementation of lesson plans

Even the best planned lessons are worthless if not conducted with the right procedures. In order for effective implementation of lesson plans to happen, teachers should ask students questions about their previous knowledge and experience, match the activities with the set objectives, lead the students to practice the acquired knowledge, and give students the opportunity to work individually, in groups or as a whole class, according to the task being performed. Teachers should also give clear instruction to pass from one activity to another, make sure the students are able to perform what they are asked to, and make a summary of the acquired knowledge at the end of each class.

As it was mentioned above teachers should ask students questions about their previous knowledge and experience. Loughran (2010) explains that the ideas, information, beliefs and attitudes that learners bring with them to the classroom are some of the elements that comprise what could be termed as their *prior knowledge*, or knowledge gained prior to formal teaching (p. 57). Loughram suggests that students learn much more effectively when they are placed in positions where they are building on what they already know because they can link the new information to their existing information. In so doing, it is more likely that their curiosity will be aroused and that they will be encouraged to create and build their knowledge in ways that might help them to better understand the topic being studied (p. 61).

A key ingredient for successful implementation of lesson plans is the choosing, applying, and monitoring of classroom activities. Key dimensions of an activity are duration, the physical space in which the activity occurs, the type and number of students, the props or resources used, and the expected behavior of students and the teacher (Doyle, 1980). In selecting an activity, the teacher defines, organizes, and directs what a group of students are to do for a specific block of time. Once an activity is operating, it carries much of the burden of controlling behavior. Events become predictable. The teacher and students are able to anticipate what is likely to happen. The careful selection and arrangement of activities reduces the complexity of the classroom and furnishes a framework for order. Doyle distinguishes three phases to the life history of an activity. Seatwork is an especially good example of this cycle. At the beginning of seat-work, engagement is usually low as students assemble materials and ask questions to clarify procedures. This is a time when

experienced teachers monitor behavior closely and work to get the activity started. During the middle phase of seatwork, involvement typically in-creases until most students at least appear to be working. During this phase the demand for continuous teacher vigilance is often reduced (Doyle, 1980). As a last issue concerning activities, Doyle states that efficient monitoring is more than simply looking. A teacher must know when to look and what to look for. Classrooms are complex environments and must be monitored selectively. Teachers who know what is likely to happen in a classroom are able to anticipate events and see signs that indicate the direction an activity is taking. A teacher who is aware that a particular student is easily distracted from assignments, for example, can watch that student carefully whenever an interruption occurs (Doyle, 1980).

Furthermore, according to Emmer and Evertson (2009), well-planned lessons with a variety of appropriate activities support the positive learning environment (Emmer & Evertson 2009). In order to effectively implement lesson plans, teachers should have knowledge about activities, and their types. Emmer and Evertson explain that the term activity describes organized behavior that the teacher and students engage in for a common purpose (p. 88). The authors explain that typical activities in secondary classes include discussions, recitations, group work, presentations, seatwork, and checking, although this is by no means a complete list (p. 88).

Activities may be content based or procedural, and both of them require several levels of planning, both long range and short range, because without the needed planning activities can appear unrelated to each other. In addition to their potential for helping students reach learning objectives, activities are selected in part for their potential for maintaining students' involvement throughout the period (Emmer & Evertson, 2009, p. 89).

Effective communication with the students

Research suggests that there are three core teacher characteristics that help to create an effective learning environment. These are respect (a positive and non-judgmental regard for another person), empathy (being able to see things from the other person's perspective, as if looking through their eyes) and authenticity (being oneself without hiding behind job titles, roles or masks) (Scrivener, 2011). When a teacher has these three qualities, the relationships within the classroom are likely to be stronger and deeper, and communication between people much more open and honest. The educational climate becomes positive, forward looking and supportive. The learners are able to work with less fear of taking risks and facing challenges. In doing so they increase their own self-esteem and self-understanding, gradually taking more and more of the responsibility for their own learning themselves rather than assuming that is someone else's job (Scrivener, 2011, p. 24).

According to Rickheit, Strohner, and Vorwerg (2008), the ability of people to reach their goals depends to a large extent on their communicative competence (p. 15). They state that communicative competence is a complex term with a rich internal and external structure. Regarding the internal structure, we have to relate it to subordinated terms such as effectiveness and appropriateness. Whereas *effectiveness* describes the outcome of communicative competence, *appropriateness* connects it with the situational conditions of the actual social interaction (p. 16).

Argyle (1969 as cited in Rickheit, et al, 2008) defined communication skill as an "organized, coordinated activity in relation to an object or a situation, which involves a whole chain of sensory, central and motor mechanisms" (p. 180). Argyle developed the following specific dimensions of communicative competence: (1) extroversion and affiliation, (2) dominance-submission, (3) poise-social anxiety, (4) rewardingness, (5) interaction skills, (6) perceptual sensitivity, and (7) role-taking ability. Because of their centrality to communicative competence, Argyle (1969) mentioned two general interaction management skills (1) "the ability to establish and sustain a smooth and easy

pattern of interaction" and (2) the ability to maintain control of the interaction without dominating (Rickheit, et al, 2008, p. 19).

After presenting communication skills in general, let us see these skills as related specifically to the teaching and learning process in the everyday class. Every teacher has come to find out that even the best of strategies and procedures of classroom management do not work all the time. This is the case because every classroom is unique with its own dynamics and characteristics, but as research and studies show effective communication can improve the quality of teaching and learning. A teacher with good communication skills, communicates clearly and effectively, is open to information, is a good listener, and tries to understand students' concerns and feelings (Emmer & Evertson, 2009, p. 151).

According to Emmer and Evertson (2009), to become an effective communicator, and to bring a change in students' behavior in case of a possible problem, a teacher needs three related skills:

1-Constructive assertiveness. This includes communicating your concerns clearly, insisting that misbehavior be corrected, and resisting being coerced or manipulated.
2-Empathic responding. This means listening to the student's perspective and reactive in ways that maintain a positive relationship and encourage further discussion.
3-Problem solving. This involves following several steps for teaching, mutually satisfactory resolutions to problems; it requires working with the student to develop a plan for change (p. 151).

For an effective communication the teacher should communicate in ways that enhance student learning (Stronge, 2014). Some of the indicators that Stronge suggests are;
The teacher: uses verbal and non-verbal communication techniques to foster positive interactions and promote learning in the classroom and school environment, engages in ongoing communication and shares instructional goals, expectations, and student progress with families in a timely and constructive manner, collaborates and networks with colleagues and community to reach educational decisions that enhance and promote student learning, uses precise language, correct vocabulary and grammar, and appropriate forms of oral and written communication, explains directions, concepts, and lesson content to students in a logical, sequential, and age-appropriate manner, creates a climate of accessibility for parents and students by demonstrating a collaborative and approachable style, listens and responds with cultural awareness, empathy, and understanding to the voice and opinions of stakeholders (parents, community, students, and colleagues), and uses modes of communication that are appropriate for a given situation (p. 43).

Assessment and feedback

Assessment

Professional practice requires that teachers make good decisions about classroom assessment both because testing requires much time and because its effects on students are important. Typically, tests cover only a small portion of the content and objectives taught, so decisions have to be made about what to include. It is important to sample from the full range of content taught and to include enough items to allow reliable measurements (Good and Brophy, 2008 p. 365).

Although each teacher and testing situation is unique, Good and Brophy, (2008) offer six general guidelines for assessment:

1- If you consider testing important, it is probably a good idea for you to test frequently over short time spans, so that you can use your test data for reteaching and individualized instruction as well as grading.

2- Be clear about learning objectives, so as to minimize problems such as lack of content validity.
3- Allow students ample time to finish a test, unless time is a relevant factor.
4- If you intend to test over the entire course content, be sure that you test samples equally from different parts of the course.
5- On the other hand, if you wish to stress certain content, alert students to this so that they can adjust their preparation accordingly.
6- Try to maintain some balance between essay tests and objective tests, because certain students do notably better on one type of test than the other. A balance between test types is usually preferable to reliance on only one (Good and Brophy, 2008 p. 311).

Philpott (2009) suggests that assessment should support learning. According to Philpott, assessment for learning is the most critical tool in developing and personalizing an individual student's route through school, as it takes account of the specific learning needs of each student. It is through assessment for learning that a teacher and student come to a purposeful understanding of the individual's learning needs (p. 63). Assessment for learning can allow teachers to know and guide all their students as individual learners. It has many facets and is a complex process that is more than grades and levels. Assessment for learning is most effective when its many aspects become integral to everyday teaching and learning and make up a framework of student classroom provision (Philpott, 2009 p. 64).

Teachers should systematically choose a variety of diagnostic, formative, and summative assessment strategies and instruments that are valid and appropriate for the content and student population, and also guide students to monitor and reflect on their own academic progress (Stronge, 2014). According to Stronge, for teachers to do the above mentioned, they should at a minimum; align student assessment with the established curriculum and benchmarks; involve students in setting learning goals and monitoring their own progress; vary and modify assessments to determine individual student needs and progress; use formal and informal assessments for diagnostic, formative, and summative purposes; use grading practices that report final mastery in relationship to content goals and objectives, use assessment techniques that are appropriate for the developmental level of students; and collaborate with others to develop common assessments, when appropriate (p. 38).

Feedback

Feedback is an important feature of both teaching and learning as it can make it possible for students to be reflective about their achievements, and both teacher and students become aware of their next step to learning.

Aims of feedback for students	**Aims of feedback for teachers**
• To evaluate their progress • To work towards and meet targets • To understand marking criteria • To maximize their own potential • To be rewarded for their success • To move students forward	• To monitor progress • To set work related and personal targets • To measure learning and understanding • To maximize student potential • To improve literacy • To mark effectively and efficiently

Table 0.1. Adopted from an example of whole school feedback policy (Philpott, 2009 p. 79)

Black and Wiliam (1998) as cited in Philpott (2009) state that feedback to any pupil should be about the particular qualities of his or her work, with advice on what he or she can do to improve, and should avoid comparisons with other pupils. Feedback has shown to improve learning where it gives each pupil specific guidance on strengths and weaknesses, preferably without any overall marks (Philpott, 2009 p. 73).

In order to clarify the difference between marking and feedback Philpott gives the following definitions of both terms. This definition of feedback does not only explain what feedback is but also offers a view of its benefits.

Marking students' work involves passing a judgment on their work and measuring against an internally or externally imposed benchmarking system. Marking allows students to gain a sense of performance against a set criteria and offers a more summative approach to assessing a student's progress. If a student is aware of their target grade they can determine whether they are on target to meet it and plan their future learning upon their current and predicted performance.

Feedback is the information communicated to a student in regard to their understanding of shared learning objectives of a given task against an agreed set of criteria. This information will include guidance on how to improve. Feedback is the information that is relayed to the student about their progress and can be based upon a variety of forms of evidence including: marked work, un-graded teacher checked worked, oral contribution, practical displays, draft work and re-drafted work. This information can be relayed to the student in a written comment or in a face to face discussion. It is widely agreed to be the single most determining factor in enabling student to make progress and is recognized as such through the personalization agenda (p. 74).

Knowledge of the subject matter

When providing a general profile of effective teachers, Sammons and Ko (2013) state that effective teachers:

1. are clear about instructional goals
2. are knowledgeable about curriculum content and the strategies for teaching it
3. communicate to their students what is expected of them – and why
4. make expert use of existing instructional materials in order to devote more time to practices that enrich and clarify the content
5. are knowledgeable about their students, adapting instruction to their needs and anticipating misconceptions in their existing knowledge
6. teach students meta-cognitive strategies and give them opportunities to master them
7. address higher- as well as lower-level cognitive objectives
8. monitor students' understanding by offering regular appropriate feedback
9. integrate their instruction with that in other subject areas
10. accept responsibility for student outcomes (p. 19).

Therefore, adequate knowledge is seen as a necessary prerequisite (although not in itself a sufficient condition) for effective teaching and learning (Sammons et al,1995). Several studies have found that deep content-area knowledge appear to positively impact student achievement (Brown & Bachler, 2013). Through deep knowledge of content the teacher knows how to transform the instructional design into a sequence of activities and exercises that make it accessible to students (Brown & Bachler, 2013).

According to Good and Brophy (2008), teachers need to make instructional decisions about both content (subject matter) and process (teaching methods). Teachers need to decide what to teach before they think about how to teach it, for two important reasons:

(1) They need to make sure that the content they intend to teach is worth teaching; and

(2) Any given type of content is better suited to some teaching methods than others, so they will need to use methods that are well suited to the content they want to develop (Good & Brophy, 2008 p. 275).

According to Shulman (1986, 1987) the literature of research on teaching till that time focused on how teachers manage their classrooms, organize activities, allocate time and turns, structure assignments, ascribe praise and blame, formulate the levels of their questions, plan lessons, and judge general student understanding, but missed important questions about the content of the lessons taught, the questions asked, and the explanations offered (Shulman, 1986, p. 8). He states that mere content knowledge is likely to be as useless pedagogically as content-free skill. But he suggests that to blend properly the two aspects of a teacher's capacities requires that we pay as much attention to the content aspects of teaching as we have recently devoted to the elements of teaching process. He introduced "Content Knowledge" as referring to the amount and organization of knowledge per se in the mind of the teacher, and "Pedagogical Content Knowledge" a second kind of content knowledge, which goes beyond knowledge of subject matter per se to the dimension of subject matter knowledge for teaching (p. 9).

Categories of knowledge that underlie the teacher understanding to promote comprehension among students according to Shulman (1987) should at a minimum include; content knowledge; general pedagogical knowledge, with special reference to those broad principles and strategies of classroom management and organization that appear to transcend subject matter; curriculum knowledge, with particular grasp of the materials and programs that serve as "tools of the trade" for teachers; pedagogical content knowledge, that special amalgam of content and pedagogy that is uniquely the province of teachers, their own special form of professional understanding; knowledge of learners and their characteristics; knowledge of educational contexts, ranging from the workings of the group or classroom, the governance and financing of school districts, to the character of communities and cultures; and knowledge of educational ends, purpose, and values, and their philosophical and historical grounds (Shulman, 1987, p. 8)

As far as the teaching of English as a foreign language is concerned, apart from the ability to create and foster good teacher-student rapport and the possession of skills necessary for organizing successful lessons, teachers need to know a lot about the subject they are teaching, they need to know what equipment is available in their schools and how to use it, what materials are available for teachers and students, and they should do their best to keep abreast of new developments in teaching approaches and techniques (Harmer, 2007, p. 30).

Time management

According to Brophy and Good (1984) key indicators of effective management include (1) good preparation of the classroom and installation of rules and procedures at the beginning of the year, (2) withitness and overlap-ping in general interaction with students, (3) smoothness and momentum in lesson pacing, (4) variety and appropriate level of challenge in assignments,(5) consistent accountability procedures and follow up concerning seatwork, and (6) clarity about when and how students can get help and about what options are available when they finish.

Emmer and Evertson (2009), state that effective teachers, who establish an efficient management system from the beginning of the school year, will have more time to devote to student learning, than teachers who are constantly trying to use an inefficient management system, but not all time allocated to academic activities is actually spent engaged in these activities (Marzano, 2001, Brophy & Good, 1984). Engagement rates depend on the teacher's ability to organize and manage the classroom as an efficient learning environment where academic activities run smoothly,

transitions are brief and orderly, and little time is spent getting organized or dealing with inattention or resistance.

Various studies have examined the relationship between time management behaviors and other variables such as academic achievement, stress, and creativity, and the results from these studies showed that time management behaviors or skills were often related to academic achievement; effective time management lower stress and strain; good time managers preferred planning and organization; older subjects and women engaged more frequently in planning and time management behaviors; and on the other hand, inefficient time use, lack of control over time demands, and inadequate amounts of time appeared to have a negative impact on individuals' psychological resources (Hellsten, 2012).

Marzano (2001) explains that allocated time is that time in the school day specifically set aside for instruction, such as classes, as opposed to non instructional activities, such as recess, lunch, passing time, and the like. Instructional time is the in-class time that a teacher devotes to instruction as opposed to management-oriented activities. Engaged time is that portion of instructional time during which students are actually paying attention to the content being presented. Finally, academic learning time is the proportion of engaged time during which students are successful at the tasks they are engaged in (Marzano, 2001). Regarding allocated time, engaged time and academic learning time Aronson, Zimmerman, and Carlos (1998) state that literature reveals a fairly consistent pattern:

- There is little or no relationship between allocated time and student achievement.
- There is some relationship between engaged time and achievement.
- There is a larger relationship between academic learning time and achievement.

In short, time does matter. How much or little it matters, however, depends greatly on the degree to which it is devoted to appropriate instruction, so, any addition to allocated education time will only improve achievement to the extent it is used for instructional time, which must then be used for engaged time, which, in turn, must be used effectively enough to create academic learning time (Aronson et al., 1998).

Carroll (1989 as sited in Sammons et al, 1995) cautioned "time as such is not what counts, but what happens during that time". The issue of how teachers choose to use their class time is clearly critical to the flow of the class as well as the individual learning of each student. Recent brain research suggests that the brain operates using a *primacy/recency effect*, and therefore the first and last minutes of class should be spent in learning new material. The brain's ability to remember the first and last items in a list, while rarely storing the 'middle' information is counter to many teachers' inclination of class time design (Wells, 2005), for this reason a time saving procedure is to take absences while students are doing an activity and not at the beginning of the class, like it happens in most classes.

Research Methodology

Population and sampling

The population of this study consisted of all secondary school students in the cities of Tirana, Durres and Elbasan. Out of the total population, a sample of 1020 students was randomly selected as respondents. To ensure equality of representation, the secondary schools were selected from private and public schools, general and professional schools. These schools were chosen from

the suburb as well as the central areas of the cities. Of all the 1020 participants in this study 35.4% (n=361) of the respondents were males, and 64.6% (n=659) of the respondents were females.

Analysis of the data

Data was collected from a sample of 1020 secondary school students using a questionnaire. After presenting the instrument and its aim to the students, they were told that the filling in of the questionnaire was not obligatory. The students that accepted to fill in the questionnaire were 1020, and the 1020 questionnaires that were personally administered to each respondent were collected by the researcher and the response rate was 100%. The collected data were analyzed using the SPSS program, version 21.

The instrument

Considering the complexity and the variation of learning settings, research findings – no matter how clear the relevant theory or how robust the findings – must be interpreted in relation to individual teachers and schools. Effective use of any concept taken from research on teaching can take many forms, and a teaching behavior may be appropriate in some context but not in others (Good & Brophy, 2008 p.31). For this reason the questionnaire used in this study was created with the Albanian education system in mind, for example the use of technology, the classroom equipment encountered in many books about classroom management in other studies is not applicable for most Albanian classrooms, with the exception of private schools.

The questionnaire used in this study investigates three main areas of classroom management which are further subdivided in a total of twelve dimensions. The first area of the questionnaire aims at measuring the importance of productive teaching techniques according to students' perception in relation to their language acquisition. The dimensions included in this area are; effective planning skills, effective implementation of lesson plans, effective communication with the students, assessment and feedback, knowledge of the subject matter, and time management. The questionnaire design is based on a Five Point Likert scale; 1 - It never happens in my class, 2 - It helps me very little in knowledge acquisition, 3 - It helps me somehow in knowledge acquisition, 4 - It helps me very much in knowledge acquisition, 5 - It is one of the elements that helps me the most in knowledge acquisition.

To ensure the validity and reliability of the data collecting tool, a pilot study was conducted in three secondary schools; each one selected from each city included in the study. The questionnaire was reviewed and revised in the light of the results gained from the pilot study. Furthermore, three lecturers of SLA and Didactics in the Foreign Language Department were engaged to cross check the items and finally the questionnaires were administered to the selected sample by the researcher. Cronbach Alpha was calculated to ensure reliability of the instrument (Tab. 1).

Dimensions	Cronbach's Alpha (Piloting)	Cronbach's Alpha (Final)
Effective planning skills	.754	.771
Effective implementation of lesson plans	.773	.781
Effective communication with the students	.796	.713
Assessment and feedback	.767	.739
Knowledge of the subject matter	.816	.723
Time management	.781	.655

Table 1. Instrument reliability. Cronbach's Alpha after the piloting of the instrument and after the total collection of the data.

Findings and discussion

Findings and results of this study are presented in the following tables.As far as effective planning skills are concerned the students of secondary schools, participants of this study, have an average level of perception about the influence that these skills have on the acquisition of their knowledge in English as a foreign language. From the calculations of the items in this dimension, a mean of $\bar{x}$=10 to $\bar{x}$=23.3 would be considered as a low level of perception, a mean of $\bar{x}$=23.4 to $\bar{x}$=36.7 would be considered as an average level of perception, and a mean of $\bar{x}$=36.8 to $\bar{x}$=50 would be considered as high level of perception. As it is shown in the table below (tab. 2), there is a mean of $\bar{x}$=34.16 for this dimension, being so an average level of perception as it is lower $\bar{x}$=36.8.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Effective planning skills	911	11	50	34.16	6.962
Valid N (listwise)	911				

Table 2. Students' perception on Effective planning skills.

Low level of perception $\bar{x}$=10 to $\bar{x}$=23.3

Average level of perception $\bar{x}$=23.4 to $\bar{x}$=36.7

High level of perception $\bar{x}$=36.8 to $\bar{x}$=50

The same average level of perception is found for the second dimension, effective implementation of lesson plans. From the calculations of the ten items in this dimension, a mean of $\bar{x}$=10 to $\bar{x}$=23.3 would be considered as a low level of perception, a mean of $\bar{x}$=23.4 to $\bar{x}$=36.7 would be considered as an average level of perception, and a mean of $\bar{x}$=36.8 to $\bar{x}$=50 would be considered as high level of perception. In table 3 it can be seen that there is a mean of $\bar{x}$=36.74 which shows that there is an average level of perception for this dimension as it is lower 36.8. Even though it should be noticed that a very small value would bring this dimension to have a high level of perception.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Effective implementation of lesson plans	921	16	85	36.74	6.983
Valid N (listwise)	921				

Table 3. Students' perception on Effective implementation of lesson plans.

Low level of perception $\bar{x}$=10 to $\bar{x}$=23.3

Average level of perception $\bar{x}$=23.4 to $\bar{x}$=36.7

High level of perception $\bar{x}$=36.8 to $\bar{x}$=50

The dimension with the highest level of perception is that of effective communication with the students. From the calculations of the seven items in this dimension, a mean of $\bar{x}$=7 to $\bar{x}$=16.3 would be considered as a low level of perception, a mean of $\bar{x}$=16.4 to $\bar{x}$=23.7 would be considered as an average level of perception, and a mean of $\bar{x}$=23.8 to $\bar{x}$=35 would be considered as high level of perception. The mean from this dimension, as shown in table 4, is $\bar{x}$=25.15. This dimension has a high level of perception as the mean is higher than $\bar{x}$=23.8.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Effective communication with the students	934	7	35	25.15	5.256
Valid N (listwise)	934				

Table 4. Students' perception on Effective communication with the students.

Low level of perception $\bar{x}$=7 to $\bar{x}$=16.3

Average level of perception $\bar{x}$=16.4 to $\bar{x}$=23.7

High level of perception $\bar{x}$=23.8 to $\bar{x}$=35

Students' level of perception on assessment and feedback that are presented in table 5 show an average level of perception with a mean of $\bar{x}$=27.35. From the calculations of the eight items in this dimension, a mean of $\bar{x}$=8 to $\bar{x}$=18.6 would be considered as a low level of perception, a mean of $\bar{x}$=18.7 to $\bar{x}$=29.2 would be considered as an average level of perception, and a mean of $\bar{x}$=29.3 to$\bar{x}$= 40 would be considered as high level of perception.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Assessment and feedback	918	8	40	27.35	6.009
Valid N (listwise)	918				

Table 5. Students' perception on Assessment and feedback.

Low level of perception $\bar{x}$=8 to $\bar{x}$=18.6

Average level of perception $\bar{x}$=18.7 to $\bar{x}$=29.2
High level of perception $\bar{x}$=29.3 to $\bar{x}$=40

According to the present study students have an average level of perception on knowledge of the subject matter with a mean of $\bar{x}$=22.01. From the calculations of the six items in this dimension, a mean of $\bar{x}$=6 to $\bar{x}$=14 would be considered as a low level of perception, a mean of $\bar{x}$=14.1 to $\bar{x}$=22.1 would be considered as an average level of perception, and a mean of $\bar{x}$=22.2 to $\bar{x}$=30 would be considered as high level of perception (table 6).

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Knowledge of the subject matter	964	6	30	22.01	4.477
Valid N (listwise)	964				

Table 6. Students' perception on Knowledge of the subject matter.

Low level of perception $\bar{x}$=6 to $\bar{x}$=14
Average level of perception $\bar{x}$=14.1 to $\bar{x}$=22.1
High level of perception $\bar{x}$=22.2 to $\bar{x}$=30

The second dimension with a high level of student perception is that of time management with a mean of $\bar{x}$=23.96. This dimension has a calculated low level of perception of $\bar{x}$=7 to $\bar{x}$=16.3, an average level of perception of $\bar{x}$=16.4 to $\bar{x}$=23.7, and a high level of perception of $\bar{x}$=23.8 to $\bar{x}$=35. As the mean for time management is $\bar{x}$=23.96, that is higher than $\bar{x}$=23.8, makes this dimension to have a high level of students' perception (table 7).

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Time management	945	9	35	23.96	4.917
Valid N (listwise)	945				

Table 7. Students' perception on Time management.

Low level of perception $\bar{x}$=7 to $\bar{x}$=16.3
Average level of perception $\bar{x}$=16.4 to $\bar{x}$=23.7
High level of perception $\bar{x}$=23.8 to $\bar{x}$=35

Conclusion

As it was mentioned at the beginning of this article, productive techniques in teaching, such as effective planning skills, effective implementation of lesson plans, effective communication with the students, assessment and feedback, knowledge of the subject matter, and time management, are a very important part of effective classroom management. In the actual study, these six dimensions of classroom management were investigated in order to understand students' level of perception on each of them related to the acquisition of the second language. From the statistical analysis it was found that students have a high level of perception of dimensions as helpful to their language acquisition of effective communication and time management and an average level of perception about effective planning skills, effective implementation of lesson plans, assessment and feedback, and knowledge of the subject matter. From the results of the mean for each dimension, the students' level of perceptions about the effect these dimensions have in their language acquisition are ranked as follows;

- Effective communication
- Time management
- Effective implementation of lesson plans
- Knowledge of the subject matter
- Assessment and feedback
- Effective planning skills

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21st Century Academic Forum Conference Proceeding
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Developing Digital Literacy in Teachers and Students

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Abstract

This article discusses the development of digital literacy in teachers and students. A discussion of digital literacy concerns in the various K12 constituent groups associated with the educational system is investigated. Data from an implementation study are included that confront the topic of the impact of teacher enthusiasm for the digital tools available to them on student achievement. The concept of apperception is also discussed with respect to how it impacts the building of digital literacy. Finally a model for building digital literacy is included through the lens of protocols that have been experienced by the author in various environments.

Key Words: digital literacy, technology, integration

Digital Literacy for Teachers and Students

The teaching of literacy in schools is an age old tradition. Literacy, generally, is a competence or knowledge in a specified area. For decades the term literacy was much more narrowly defined in our schools than it is today. Literacy was thought of mostly as the ability to read and write in a particular language. Other types of literacy were expected to be taught at home. For example, the social conventions of how to dress in various situations, how formally to speak to certain audiences, when to use the proper fork at a dinner party, were all taught at home. Some may argue the importance of these literacies, but it is clear that there are uneven amounts of resources available to teach these literacies in certain areas. If a particular literacy is deemed important by a community or culture, schools have a moral responsibility to help students develop that literacy. Another literacy has emerged that is much more generally agreed upon as a priority, digital literacy. The issue becomes that we need to define what digital literacy looks like in a given setting. Ward, for one, believes that digital literacy in schools is mostly about a pedagogical approach to learning. (Ward, 2015) Ward goes on to say that digital literacy is a process that needs to be developed in similar ways to language and mathematical literacy.

A decade or more ago there was an influx of technology into the schools almost nationwide. Poorer communities were able to find funding from philanthropic organizations to get the technology, wealthier communities were able to allocate funds of their own. As these technologies became available, schools were given the task of determining how to implement the use of these tools into their classrooms. Getting the computers was only the first step. At that point the next steps were about software and training for teachers. In the last decade, the focus has shifted significantly. The exponential growth of online resources has created opportunities not thought of in the original implementation plans of the technology boom. An important literacy has emerged due to the availability of online resources: digital literacy. One integral element of digital literacy is "knowing" where to go in order to get trusted information in the online setting. Teachers find themselves in a potentially uncomfortable situation. They need to teach their students how to authenticate online resources, but the perception is that the students are much more familiar with the technology then are their teachers.

Marc Prensky (2001) writes about the digital natives who have grown up with this technology that was always available to them, and the digital immigrants who were taught in a different way, before this availability. While our students are certainly mostly digital natives, they haven't necessarily been taught how to authenticate the information they see online. They are prone to use resources such as Wikipedia, or another site of that ilk, for information. This comment is not meant to disparage Wikipedia, nor sites like it; in fact those sites are an important part of what the internet can provide. The issue with them is the concept of shared ownership. Most of the time the information on these shared sites is accurate. When someone puts incorrect information on there, it is corrected by another user. But at any given instant, it cannot be thought of as an academic source since its accuracy cannot be verified by that site alone.

The thoughts about authentication of online resources are not new. Alan November (2008) was talking about this to anyone who would listen as far back as the 1990s, when the availability of information online was in its infancy. I remember hearing him speak in a small setting in the late 1990s where he showed an example of a website purported to be information about Dr. Martin Luther King, Jr. It looked like a valid site, had pictures, links, etc. However the information on the site was grossly inaccurate, intentionally false and defamatory. He went through an exercise of seeing who was hosting the website, and what other websites they were hosting. When you traced back a couple of levels, you could see the host of the site was also the

host of a white supremacist site. This exercise has stuck with me and informed my use of the internet in my teaching ever since. More importantly, I have made it a priority to attempt to get my students to develop digital literacy of their own. Hughes (2014) agrees that "there should be a culture in education and in the workplace that would lead to a more lifelong approach because no one had the digital skills they would need in five years time, let alone in 50 years." (p. 8) Giving students the experience of developing digital literacy is therefore a life-long skill that they will need to keep up with emerging changes in the digital realm.

It is important to begin developing this digital literacy as early as possible. Khoo, Merry and Nguyen (2015) found that the iPad is motivating to young children's developing literacy and learning skills. It is important to remember that the tool itself is secondary to the type of access it gives to students and how we choose to use the tool.

Another way to develop digital literacy with students is to create a controlled online environment. There are resources available where you can create your own search engine for a group. When the students use this search engine the search only goes to sites that the teacher has included as website options. If the instructor simply creates the site, one goal will be accomplished. You will know that the information the students are accessing is valid. They need to understand how the suffix of the website (.net, .com, .gov, .org) might influence the credibility of the information on the site. However, if the teacher creates the list of sites together with their students, the students will be developing the digital literacy as well. As students progress through school to the later grades opportunities to develop this digital literacy without scaffolding need to be provided as well.

To understand how to help teachers develop digital literacy, it is important to consider the concept of apperception. Apperception is an important, and often overlooked, concept in learning across disciplines. In psychology apperception is defined as perspective. A "big" snow storm in a southern state might not be looked at in the same perspective should the same number of inches fall in Chicago. In philosophy apperception is really thought of as experiencing new stimuli. In the general field of education apperception is about connection. How does new information fit with what the student already knows? How do they match the new idea with their prior schema?

Specifically in the field of teaching this term is more about how the teachers learned the information themselves. When I was a high school teacher and was teaching a calculus theorem to my students, my first point of reference was how it was taught to me when I was a calculus student. The issue with this concept is that many of us weren't taught in an era where the technology was available. So many teachers, especially those that grew up in the time frame described above, don't have a point of reference from which to think about teaching this concept.

Although universally thought of as an important piece of the educational setting today, every constituent group has their concerns about the integration of technology. School administrators have concerns that include policies about the use of the technology. Most germane to this topic is the acceptable use policies (AUP) that schools have created, which spell out in detail who is allowed to use the technology, when they are allowed to do so, and for what purposes. There has been an evolution in AUPs over the last decade as well. Early on, AUPs were very restrictive. I taught in a district that had policies in place that required any student wanting to use a school computer to have a detailed permission from a teacher. If a student got a pass from a history teacher to work on a paper that was all they were allowed to do. If they finished their history paper and wanted to move on to doing some research for their biology class, it was not allowed per this restrictive policy. Steadily more reasonable discretion has built

better AUPs that make sense for allowing the students to be productive users. One possible reason for this progressive thinking is that the younger teachers who were more likely to be digital natives are now becoming administrators and giving input into these policies.

In addition to the AUP, administrators are worried about cyberbullying. Between social media and texting, the concept of bullying has become an epidemic. A generation ago students were bullied in person. The pervasiveness of social media and texting has opened up new channels to pick on other children. We have all read the awful stories of what bullying can lead to. Too often we hear about bullied students who hurt themselves and/or their classmates.

Administrators are also concerned about the financial and time related costs technology. The initial cost of the hardware is substantial, but so are the costs associated with training, repair and maintenance, and connectivity. Moore's Law determined that technology doubles in speed and therefore becomes obsolete every 18 months. There are some large investments made, and they come with continued financial and time investments to stay current.

Because of all of the time and money invested in these tools, administrators are very sensitive to using the technology well. Technology is not always the best tool for the job, but when it is, our teachers need to have the skill set to optimize its use. The term "death by PowerPoint" refers to a teacher that uses the software PowerPoint to simply digitalize their lecture notes. A teacher that is accused of this would simply be reading what is on the screen. This would be an example of when technology isn't the right tool for the job. However presentation software like PowerPoint, Prezi and others can be an excellent tool when used well. This tends to happen when the display is used for the scaffolding of the idea being discussed, rather than trying to fit the complete idea on the screen.

As is the case in almost every corner of our educational system, administrators have to be concerned about equity of availability of resources as well. Mostly, this concern is with regard to students having access to the technology. We cannot have our teachers requiring something outside of school time that requires using technology if the students do not have access to it.. In some more economically challenged areas, grants are written to move to a "one to one" environment. "One to one" refers to each student having their own device. They sign out the devices as they used to sign out textbooks for the year. However there is much more of a risk of damage or loss, and a bigger price tag to replace the item, than when students were signing out textbooks. In some wealthier communities, the students already have cell phones or other devices, either handheld or in their home, that gives them access.

Along with the hardware access concerns are the inconsistency of a wireless infrastructure in some parts of the country. The availability of access to the internet can be spotty in very rural areas, or in areas where there is a large population trying to wirelessly access a network that isn't capable of handling such a big demand. There are some local and national projects that are looking to fund large scale solutions to this issue. The evolution of 3G, then 4G infrastructures has made strides towards solving this issue for some types of devices.

Teachers also have concerns about the integration of technology into their teaching that impacts the development of their own digital literacy. The first and most major concern for teachers is the concept of multiple stimuli. The theory of apperception discussed earlier comes into play here too. The optimal environment for a digital immigrant to complete work can vary from the optimal environment for a digital native. Most digital immigrants need a quiet space, free of distractions and other stimuli to be most productive. Digital natives are used to multiple stimuli and that is how they are most comfortable.

Consider the way digital immigrants acquired information. They got their news from either the morning newspaper or the 6:00 or 11:00 news on the television. With the exception of USA today, most of those newspapers were black and white print, and articles in the paper were linear and uninterrupted. When digital immigrants watched the nightly news there was typically one person on the screen, perhaps with a picture about the event being discussed over his shoulder. The people delivering the news tended to be similar as well. It appeared that TV executives believed that older white men were going to be the ones that people trusted to give them information. There were certainly some that broke these stereotypes, but the majority of newscasters of this era fell into this category.

Now let's consider how digital natives acquire information. The distribution of newspapers has fallen significantly. Information is now acquired mostly in one of two ways, either online or via the television's 24 hour news cycle. The 24 hour television news cycle has substantially changed how the delivery of news looks to the consumer. No longer is there one old, white male on the screen delivering the news. In fact there are now typically multiple people on the screen at once, often a diverse group of races and gender. They don't remain on any one topic for very long. Opinions and facts are communicated interchangeably. At any given time while the majority of the screen is taken up by the aforementioned people delivering news there is typically a ticker at the bottom of the screen that is giving some running news, either headlines, sports scores, or stock values. The left side of the screen is also often devoted to a list of upcoming topics, presumably to attempt to keep viewers on their station to hear the news about one of those topics that interests them. The viewers are also not paying 100% attention to the screen. They are doing multiple tasks at once. Multiple stimuli is the norm with digital natives. Yet, when it comes to how they are coached in school (or outside of school) to perform tasks, it is in the old paradigm of a quiet, formal, often cold space free of "distracting" stimuli. Because of apperception, that is how many teachers believe their students can be most productive. However that is not the environment that they gravitate to when left to their own devices.

When I was a high school teacher I would periodically survey my students. I'd do so for multiple reasons, to get information to improve my teaching, to optimize learning situations for the students, and to get to know them better. One of the surveys that I would repeatedly use during the first couple of weeks of school was about their study environments outside of school. Sometimes just asking the questions could influence them to think about their learning spaces and how that works, or doesn't work, for them. This informal data collection yielded consistent results. The students do not sit at home at the dining room table to do their school work. They are at a computer, there is social media with which they are checking in, there is music or the television on in the background, they are texting and on rare occasion they are also working together in physical proximity. They are always in virtual proximity and interacting that way (text or social media). The other thing that came up repeatedly was their first inclination if they ran into any confusion about their school work. Their first stop was the internet. Since this is their starting point to get information, we need to make sure that they are digitally literate about where to get accurate and complete information. We need to steer them towards scholarly sites. They need to be prudent consumers of this information. They need to be sure to authenticate the sources they are using. When they do find authentic resources, they also need to know how to properly cite these sources to avoid plagiarism.

As a side note plagiarism is a big issue at both the high school and collegiate levels. In speaking to students that I know to have plagiarized work, it is evident that the majority of them

don't really understand how simple it is to cite what they are finding and therefor avoid this pitfall. The building of digital literacy is an important part of the solution to this problem as well.

As was the case with administrators, access to technology outside of the classroom is a concern of teachers as well. When a teacher gives an assignment to their students, they want the students to be able to get the outcomes of the assignment without wasted efforts and energy on finding ways to access the technology. They also want to minimize the excuses for students that don't complete the assignment.

Inside of the classroom teachers have concerns as well. When I speak to teachers about their use of technology I perform an exercise where I force them into rating their openness to technology use in their classrooms. Those that are on the low implementation end of this scale voice two major concerns. Their first concern is that technology doesn't always work. I believe this is less and less of an issue as technology becomes more reliable, but it was something that would often derail a class in the earlier days of implementation. A teacher would spend a great deal of time and effort setting up some part of the lesson that used technology and the internet would be down, or the bulb in the projector would go out, or some other technology would fail and the teacher would have wasted that time, and then have to think quickly about how to move forward with the class.

The other concern that they voiced most often was that felt students would use technology to cheat. If the technology was being used to perform the assessment they were worried about them sending information back and forth. Even if the assessment was more traditional in style, the teachers were worried about students using computers or phones to cheat by using their devices to communicate with each other. These teachers that were nervous about implementation of technology in their classes were comfortable voicing these concerns. However, the bigger concern was bubbling underneath the surface. Their real concern was the shifting role of the teacher in the classroom.

Teachers, especially those that are digital immigrants, are not necessarily the expert in every facet of the classroom if the students know more about the technology than they do. It is ingrained in teachers that they are to be "in control" of the classroom. That is the learning environment in which most of them went to school. It is also built into the instruments upon which they are being assessed. If teachers give up some control of the classroom, they need to change their approach to what goes on in their classroom. The progressive writings on this topic call the role "guide" or "coach". You may call it whatever you would like to, but it isn't what they have seen done effectively and understandably, it is something that makes many teachers nervous.

Many teachers fall into these category of being less than enthusiastic about using technology in the classroom. I set out to see if this lack of enthusiasm would impact student achievement. I looked at 361 students in 19 high school mathematics classrooms in Connecticut. These schools were from a wide array of economic reference groups (ERGs) as designated by the State Department of Education. The teachers were given a survey to ascertain their level of enthusiasm with respect to the implementation of technology in their classroom, and to measure the amount of their implementation. Their students were then asked to complete an instrument that had two parts, one where they were allowed to use a graphing calculator and the other where they were not allowed to use the device. I broke these teachers into four groups, high enthusiasm- high integration, high enthusiasm- low integration, low enthusiasm-high integration,

and low enthusiasm- low integration. I compared these four groups' students with respect to each other using an ANOVA.

Enthusiasm-Integration	H-H	H-L	L-H	L-L
Calculator	7.1	6.9	5.0	5.2
Non-calculator	7.1	6.9	5.4	6.0
n	83	112	145	21

Table 1: Teacher Enthusiasm vs Integration of Technology

When comparing these four groups there were some predictable outcomes for the calculator portion of these data. Both of the low enthusiasm groups (high or low integration) scored statistically significantly lower on the calculator portion of the instrument. The conclusion that can be drawn from this is that, for these students, the more enthusiastic the teacher is about the technology implementation the better their students did on the calculator tasks. This isn't a surprise. We know that teachers impact student achievement in many ways. Certainly it is reasonable to hear that students that had teachers that were enthusiastic about the technology would produce students that performed better with the calculators available to them.

The more interesting data came from comparing the results on the non-calculator portion of the assessment. When comparing the four subgroups only one statistically significant difference emerged. That was when comparing the low enthusiasm- high integration group with respect to the two high enthusiasm groups. Students in the low enthusiasm- high integration group did statistically significantly worse than the two high enthusiasm groups. The difference didn't exist when comparing the two high enthusiasm groups to the low enthusiasm- low integration group. The conclusion that could be drawn here is that, in these students, those that had teachers that didn't really believe in the use of the technology, but used it a lot anyway, performed worse even on the non-calculator portion of the instrument. This has long been a concern specific to math teachers, that the overuse of technology could become a crutch that could atrophy the paper and pencil abilities of the students. At least from these data, it appears that this is only true when the teachers go against their beliefs and implement a great deal of technology even when they don't believe it to be the correct tool.

Part of being a digitally literate teacher is knowing what is available with respect to resources (both electronic and otherwise) and making good, data driven decisions about how to best teach a particular topic. The model of building a digitally literate teaching force that works best in my experience is one that starts with a small group of able and interested teachers and grows from there. In this model a handful of teachers begins in year one with training. The enthusiasm of this group is incredibly important. Their internal motivation is the key to this working. Building on the enthusiasm they already have will be what draws in their fellow teachers in the next phases of this model. This group of teachers needs three things, sustained training, tangible benefits and regular accountability.

The one-time professional development model does not have sustainable impact on teaching. Teachers that go to a one-time training report high energy immediately after the training, but the implementation and the enthusiasm dissipate if there is not follow up. Teachers need to have regular trainings and professional development that is ongoing over the entire first year of the project. They need to have real world connections that they can use immediately in

their classrooms, and that they can see results from immediately. I would recommend that these trainings be very focused and that they spend time as a group taking the new stimuli and finding direct connections to the teaching that they can use the next day. Start with an interest inventory of these teachers and see where they would like to begin. Use this information to start with topics that interest them most.

The next thing that this phase of the training needs is to have tangible benefits for these teachers. This could be in the form of workload reduction, additional compensation, or extra professional development money. More importantly this benefit needs to have increased access to technology. Depending on your model, this could be a free device, subscriptions to paid sites or applications, or something else that they can use in their teaching immediately. All of these will capitalize on their enthusiasm and ability to implement technology well.

Lastly there needs to be regular accountability that comes along with these opportunities. This accountability is simply to get them into the routine of using data to see if what they are doing is working or not. The mindset of failure being a bad thing needs to be challenged. In this phase, trying something and it failing is important data to be used in making further decisions. This can be a challenge. Teachers are not wired to believe that it is acceptable to fail at anything. A method that we used in order to attempt to minimize this concern is to treat the data as shared data. The data we are collecting may be from the classroom of one of these teachers, however as the group looks at the data the ownership shifts to the entire group. The facilitator of the frequent, ongoing meetings will refer to the data being examined as "our data". What does our data tell us about this tool? What does our data lead us to think about its match with the topic being taught?

After a year of phase one, these teachers become the most important piece in phase two. Phase two is trying to implement on a larger scale in the school. Depending on the size of the school and the funding available for resources it might be the entire school or a subset of the school. Spend time at the end of the first school year giving the original group of teachers the opportunity to disseminate information about the experience. I've seen this done well in a couple of different venues including small or large group settings. This, along with word of mouth, will be how you spread the successes of this group. The phase one participants also become the trainers of groups the following year, guiding them through processes similar to what they experienced.

Students have their own set of concerns about digital literacy. First of all, as digital natives, they often think they are inherently digitally literate. This belief is true in many ways, but their digital literacy typically doesn't extend to the academic use of technology. They are quite familiar with the devices and interfaces, but not necessarily with what we need them to understand to most effectively use technology as a learner. One of the first shifts that happens is that some of the burden of learning gets thrust onto them. They are required to be a more active part of the learning process. This is one of the major benefits of this paradigm shift. Passive learning environments need to become more active. Students are required to be more a part of their own learning. This enhanced role might appear in flipped classroom settings, in more group work inside of class, and in more structured online work even outside of the classroom.

Students are now asked to be peer editors and critics. They are asked to become teachers of new information. In order to teach their peers, they need to learn how to assess understanding, which requires an understanding of formal and informal assessment and grading plans, perhaps even rubrics. Students now require the development of the digital literacy to identify online resources that are appropriate on their own.

In all, whether you are working with administrator, teachers or students, there are some common things that need to happen in order to develop a digitally literate learning environment. The infrastructure needs to be in place. If your plan requires the use of the internet, make sure you have the wifi and bandwidth to accommodate what you are asking the community to do. All parties involved, including parents, need to be a part of the development of a protocol that is appropriate for the community.

Most change in the field of education is created by a leader, or group of leaders, with a big personality. The only way to have sustaining change is to move beyond the personality and alter the culture itself. This requires a commitment from the entire school, teachers and students, or it will eventually revert back to the old paradigm when these people are gone. The most important piece in this change is the shift comes from those within the culture, not simply from above.

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Ontario (Canada) Education Provincial Policy: Aboriginal Student Learning

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Ontario, Canada

Abstract

Educational policy related to publicly funded schools in Ontario, Canada, is intended among other things to address the gap between Aboriginal and non-Aboriginal student academic achievement. The Ontario Ministry of Education's (2007) *The Ontario First Nation, Métis and Inuit Education Policy Framework* draws attention to the nuances of Aboriginal knowledge, Aboriginal student epistemologies, and learning preferences. The Framework also identifies the importance for publicly funded provincial schools and school boards to recognize these distinctions in both their policies and practices in order to prepare Aboriginal students as 21st century learners. According to Ball (2009), public schools in Canada have not proven that they are capable of successfully addressing the learning needs and community realities of Aboriginal students and families, as evidenced by their inferior levels of achievement in comparison to their non-Aboriginal peers. Hence, this study investigated the experiences of Aboriginal students in 3 public elementary schools across northern Ontario in light of the mandate of the policy Framework. The core categories grounded in the voices of 16 participants from different regions across northern Ontario are described as 2 phases of student discernment. The initial phase includes students' discernment of the influence of the various relationships they share with peers and teachers. The second phase is described as students' discernment of their social location as Aboriginal peoples in public schools. The core categories describe the most significant factors that distinguish high- and low-functioning public schools and contribute to students' sense of engagement in their education.

Key Words: Aboriginal education, policy, relationships

Introduction

Educational policy related to publicly funded schools in Ontario, Canada, is intended among other things to address the gap between Aboriginal and non-Aboriginal student academic achievement (Ball, 2009; Canadian Council on Learning, 2009). The focus on Aboriginal student achievement is pressing given that the Aboriginal population in Canada is growing almost six times faster than the non-Aboriginal population, and that the Aboriginal child and adolescent population is in excess of 6% of the total population of this demographic (Miller, Laye-Gindhu, Bennett, Liu, & Gold, 2011). Some projections estimate that Aboriginal elementary school students will represent more than 25% of the entire population in certain provinces and territories across Canada (Young et al., 2010). Moreover, although 50% of the Aboriginal population in Canada resided in urban dwellings 10 years ago, more Aboriginal children are projected to attend Canadian urban-centered schools over the next decade (Richards, Vining, & Weimer, 2010).

The 2007 Ontario policy document, *The Ontario First Nation, Métis and Inuit Education Policy Framework* (the Framework) draws attention to the nuances of Aboriginal knowledge, Aboriginal student epistemologies, and learning preferences. The Framework also identifies the importance for publicly funded provincial schools and school boards to recognize these distinctions in both their policies and practices in order to prepare Aboriginal students as 21st century learners. Given the projected increase of Aboriginal students in publicly funded schools, it makes sense that the Ontario educational policy Framework brings to light the uniqueness of Aboriginal student epistemologies, histories, and traditions and calls upon teachers, principals, and school board administrators to reflect these preferences accordingly. Battiste (2002), Cajete (2000), Hampton (1988), and others have identified Aboriginal knowledge as being distinct from more western-based understandings. Aboriginal knowledge, according to these scholars, represents an array of relationships that implicate profoundly upon language, place-based beliefs, and local culture. According to Ball (2009), public schools in Canada have not proven that they are capable of successfully addressing the learning needs and community realities of Aboriginal students and families, as evidenced by their inferior levels of achievement in comparison to their non-Aboriginal peers (see also Canadian Council on Learning, 2009).

Ball's (2009) statement is some respects provides the impetus for the central question that this study addresses; specifically, what distinguishes successful publicly funded urban northern Ontario elementary schools (with significant enrolments of Aboriginal students) in terms of their response to the mandate 8 years into the 2007 policy Framework's implementation and, in turn, their capability to equip Aboriginal students as 21st century learners? However, rather than focusing on the empirical evidence that typically includes student grades and test scores, this investigation concentrates upon the voices of the Aboriginal students themselves—in what Bishop, Berryman, Cavanagh, and Teddy (2009) term "the sense-making and knowledge-generating processes of the culture the system marginalizes" (p. 735).

Consequently, the paper will first provide an overview of the Ontario policy Framework. Second, the literature review will serve as the conceptual underpinnings of the key notions that inform the investigation, including concepts related to curriculum, pedagogy, teachers, and schooling. The methodology section of the paper provides the relevant details regarding the student participants and data analysis. The paper subsequently presents the findings of the study that consist of two core categories that emerged in response to the central question. The categories are grounded in the voices of the student participants and described as two phases of student discernment in view of their educational experiences in provincial northern Ontario

schools. The initial phase includes students' discernment of the influence of the various relationships they share with peers and teachers. The second phase is described as students' discernment of their social location as Aboriginal peoples in public schools. The core categories describe the most significant factors that distinguish high- and low-functioning public schools and contribute to students' sense of engagement in their education.

Contextual Overview

The Ontario Ministry of Education (OME) policy Framework draws attention to the historic and socio-cultural realities of Aboriginal students that often have adverse effects on their achievement levels and educational experiences (Castellano, Davis, & Lahache, 2000). The Framework alludes to the achievement gap that positions Aboriginal students in lower standing than their non-Aboriginal peers, and self-declares the OME's commitment to provide top-notch education for all students across the province. The Framework is a strategic policy that calls upon teachers, principals, school board administrators, and local communities to improve Aboriginal students' experiences and achievement in public schools. The Framework represents

> "A holistic and integrated approach to improving Aboriginal student outcomes. The overriding issues affecting Aboriginal student achievement are a lack of awareness among teachers of the particular learning styles of Aboriginal students, and a lack of understanding within schools and school boards of First Nation, Métis, and Inuit cultures, histories, and perspectives" (OME, 2007:6).

The Framework targets specific strategies for the various stakeholders involved in public education to more adequately respond to the unique learning and cultural needs of Aboriginal students through programs and services that complement a broader engagement of Aboriginal parental and community involvement in public schools. School and board administrators, according to the Framework, are commissioned to professionally develop teachers' knowledge of Aboriginal students' learning styles and advance teachers' skills towards implementing more culturally respectful pedagogical practices that better position Aboriginal students to succeed in public school classrooms. In turn, teachers are required to implement practices that resonate with the socio-cultural and epistemic realities of Aboriginal students. The intent of the Framework is to raise educators' awareness of the diverse needs of Aboriginal students, improve their academic achievement in order to close the aforementioned gap, and enhance the formal schooling experiences of Aboriginal learners.

The Framework is a central policy to this study since its principles served as the foundation for the semi-structured questions posed to the Aboriginal student participants. The questions focused upon the strategies outlined in the Framework and essentially informed the dialogue between participants during each of the research conversations.

Literature Review

Curriculum and Pedagogy

Postcolonial notions of Canadian public school curriculum and pedagogy have not favoured Aboriginal students and have not been reflective of their epistemological practices (Battiste, 2002; Cajete, 2008; Frideres & Gadacz, 2005). The more western-based provincial curriculums have generally not been aligned to Aboriginal knowledges, while classroom pedagogy has in many instances ignored Aboriginal students' learning styles (Duggan, 2003; Piquemal, 2005).

There is also a wave of literature that underscores the need for educators at all levels of K to 12 schools to have better understandings of Aboriginal students' epistemic needs (Aldous, Barnes, & Clark, 2008; Mellor & Corrigan, 2004). As Hampton (1993) explains, "Traditionally Indian forms of education can be characterized as oral histories, teaching stories, ceremonies, apprenticeships, learning games, formal instruction, tutoring, and tag-along teaching...all of the traditional Native methods took place within cultural settings that were characterized by subsistence economies, in-context learning, personal and kinship relationships between teachers and students" (as cited in Waller et al., 2002, p. 268). Mainstream teachers and learning practices that rely on memorization, the regurgitation of facts, individual competition among students, and test-driven assessments are not necessarily culturally appropriate practices for Aboriginal learners (Barnhardt & Kawagley, 2005; Holmberg, 2010). The repercussions of such misaligned practices have resulted in negative public school experiences for Aboriginal students. Aboriginal epistemologies tend to reflect a holistic view of teaching and learning whereby the individual student benefits from a balanced education that nurtures intellectual, physical, social/emotional, and spiritual characteristics (Pearce, Crowe, Letendre, Letendre, & Baydala, 2005).

There remains, therefore, a glaring disconnect between Aboriginal students' epistemic realities and socio-cultural traditions and public school educational practices related to teaching and learning (Cherubini, Hodson, Manley-Casimir, & Muir, 2010). Multifaceted, unique, and complex Aboriginal worldviews have typically not been represented in Canadian provincial schools. Aikenhead and Michell (2011) have observed that Aboriginal children who learn best by demonstration, repetition, and practice, as well as those who prefer to assume active roles in their learning, do not benefit from the rote learning and standardized assessments that often drive pedagogy and evaluation in publicly funded provincial schools, such as those in Ontario. Aboriginal student epistemologies, including holistic models of educational practice that are centred on visual, oral, and group activities, have essentially not been a meaningful part of public school curriculum and teachers' pedagogy (Pearce et al., 2005) and in the process have ignored teaching and learning practices that contribute to the strong development of Aboriginal learners (Archibald, 2008). Strengthening Aboriginal learners in culturally appropriate and sensitive ways in public schools "is critical to the well-being of Aboriginal people" (Canadian Council on Learning, 2009, p. 5).

Educators

Public school teachers must be aware of Aboriginal students' epistemologies and learning preferences in order to meaningfully incorporate such traditions in their practice. Teachers, according to Aikenhead and Michell (2011), must have a genuine understanding of learner-centred instruction and be able to adopt their classroom practices to further Aboriginal student achievement in the same manner as non-Aboriginal learning. Such an understanding entails that quality educators are willing to interrogate their own personal biases and assumptions about Aboriginal students, communities, and traditions. Quality educators also possess effective communication skills that allow them to dialogue with Aboriginal students, parents, and members of the community in a meaningful way. The ability to be a contributing member of a team includes participating in networks across Aboriginal communities.

In the Canadian context, the western-based curriculum and standardized practices that measure student achievement are generally implemented by mainstream teachers who often have not been adequately trained to develop the aforementioned key characteristics of quality

educators (Cherubini, 2010; 2012). Although it is important to resist generalizations, mainstream teachers in Canadian and Ontario public schools are often products of and formally educated in a specific paradigm of teaching and learning that involves teachers positioned at the front of the classroom of students as they deliver a specific lesson focused on a topic of one particular subject (Cole & Cole, 2001; Stigler & Hiebert, 1999). Aboriginal student epistemologies, their unique socio-cultural traditions, and the focus on community relations are typically not part of an educator's repertoire in publicly funded Canadian and Ontario schools and classrooms. This has been detrimental for Aboriginal students' learning and engagement in public education and has resulted in higher dropout rates, more student absenteeism, and lower enrolments in post-secondary education programs.

Additionally, the alarmingly high number of Aboriginal students who fail and become disengaged from formal schooling in northwestern Ontario has been described as deplorable for more than 40 years (see Latus & Bauman, 1980). Although some educators may understand the holistic and spiritual nature of Aboriginal worldviews and their effect on Aboriginal student learning (see Jegede & Aikenhead, 1999; Sutherland & Dennick, 2002), the international literature on the characteristics of quality educators makes the significant distinction that such understandings need to be juxtaposed with educators' own reflections of their socio-political positions as teachers and learners before they can meaningfully act upon their knowledge. Without an understanding of Aboriginal epistemologies and of one's position as a mainstream educator, teachers and administrators in public schools cannot begin to decolonize the western-based practices that have historically marginalized Aboriginal students and communities (Howitt & Stevens, 2005: Shaw, Herman, & Dobbs, 2006).

Methodology

This research was located in three public elementary schools in northern Ontario that were identified as having a proportionately high enrolment of Aboriginal students. The schools did not all belong to the same school board. English is the language of instruction in each school. Prior to the study a senior administrator from each of the respective school boards was asked to identify K to 8 schools that were considered to be high and low functioning in terms of the culturally relevant activities and programs offered to Aboriginal students, and staff and student resources pertaining to Aboriginal languages, customs, and histories. Two high-functioning and one low-functioning schools were selected as research sites. Information sessions were hosted at each site in advance of the interviews. All Aboriginal students in each of the schools were invited to participate.

Student Participants

Sixteen students (eight female, eight male) of various Aboriginal ancestry participated in the research conversations. The students resided in different communities across a vast geographical area in northern Ontario that included Missanabie Cree, Michipicoten, Ojibway, and Anishnabai groups. The students were in grade 7 (approximately 12 and 13 years of age). The three publicly funded schools represented different school boards that spanned over 15,000 square kilometres, included 15 Aboriginal groups, educated over 20,000 students, and employed nearly 1,700 teachers. More than 3,200 students across these school boards self-identified as Aboriginal, representing 16% of the total student demographic. Permission to participate in the study was granted by the students' parents/guardians. The student-participants who were enrolled

in the same school did not necessarily have the same homeroom teachers, although since they were on a rotary schedule each of the students shared the same teachers for certain subjects.

Research Conversations

Information sessions were presented at various Aboriginal community gatherings in order to inform the respective parents and community Elders. The research conversations with students were conducted in June near the conclusion of the school year (see Kanu, 2011). The interviews were semi-structured in design and included questions that were based largely on the principles and strategies of the Framework. Students were encouraged to elaborate on their responses and speak to their experiences as senior-level elementary school students. Each research conversation was audio recorded, transcribed, and returned to each student for member check. The research conversations were between 90 and 120 minutes in duration. Key excerpts from the students are included in the paper. Students are identified by pseudonyms.

Data Analysis

A grounded theory approach was best suited for this study. This qualitative design is grounded in the words of the participants (Kennedy & Lingard, 2006; Strauss & Corbin, 1990) and includes the coding of basic units of analysis as a result of a line-by-line examination of transcripts (Charmaz, 2006). Coding is grouped into concepts to create initial themes and eventually core categories; hence, the findings are grounded in the voices of the participants and not influenced by the researcher's dispositions (Cherubini, 2007). The analysis and findings were triangulated by two Elders who were not involved in the research conversations and did not reside in the jurisdiction of any of the schools. It is important to offset the data analysis with the authentic insights and cultural awareness of Elders (see Fasoli & James, 2007).

Findings

Grounded in the voices of participants are two core categories described as distinct phases of Aboriginal student discernment. The categories represent the most significant factors that distinguish high- and low-functioning schools. The first category includes Aboriginal student discernment of the influence of the various relationships they share with their teachers. The second category is distinguished by student perceptions of the extracurricular activities associated to public schooling whereby they clearly discern their social location as Aboriginal students in the broader public school culture. Further, and particularly significant, the analysis concludes that it is precisely the combination of these two factors that contribute most to students' sense of engagement in their education.

Discerning Relationships

During the research conversations the student participants from the higher- and lower-functioning schools consistently discerned the manner in which they related with their teachers and, in some cases, amongst themselves. In one of the higher-functioning schools Brad distinguished the significance of teachers who discussed Aboriginal values and traditions to complement and extend the mainstream curriculum. Brad identified with a specific teacher who was willing to "talk about" traditional knowledge like the seven grandfather teachings during the school day and appreciated opportunities to "do a lot of research about the Aboriginals [to] find out that when the white people came they took the land and they kicked [the First Nations Peoples] out." Student participants appreciated teachers who incorporated Aboriginal history as a

meaningful and accurate component of the Canadian history curriculum. Students discussed how in these instances they felt represented in Canadian history.

Students from the higher- and lower-functioning schools noted that teachers who tailored curriculum and pedagogy to include culturally relevant material made on obvious contribution towards building stronger relationships with students. Fred, typical of the other students in his research conversation circle, praised teachers who are "just not teaching" and instead invest the time and energy in "getting to know you better." Fred explains that students cherish relationships in which teachers "get to know you and what you struggle with in your school work." Students appreciate teachers who are willing to better understand their individual nuances as learners and, very importantly to the findings of this study, discern those teachers who understand students' individual learning styles and personal interests and account for this in their actual practice. Even at this relatively young age (approximately 12 to 13 years old) the students discern those educators who are committed to Aboriginal student welfare and want to build relationships with them to foster Aboriginal student learning.

Student discernment of the relationships between them and their teachers in the lower-functioning school was equally profound albeit less promising. Emma, on behalf of the other students in the research conversation circle, observed that her teacher "never picks [her] to answer the question so [she is] just sitting there, kind'a not even listening." Victoria, who was sitting in the same circle, stated that her teacher "made [her] cry before"; Matt, her classmate, added that one teacher made him cry "three times already." These and other examples speak to students' sense of isolation in public school classrooms where they discern that the teacher has no confidence in their aptitude and intentionally ignores their willingness to actively participate in their learning. Jack suggested that the teachers notice and relate better to students "who do their work" and as a result "kind of avoid" the Aboriginal students. There is no sense of engagement on the part of these students with either their teachers or with the provincial curriculum. Such a lack of engagement seems to take a toll on students' insecurity. Feeling neglected amongst her peers during lessons, Victoria admitted that "some people think that I am dumb," while Emma added that "Sometimes I just don't even want to talk because I don't like my teacher…he is rude." Students in these instances choose to disengage from the learning environment.

Students' response to this lack of relationship with their teachers and peers is essentially a complete withdrawal from the dynamics of their classrooms as they choose to stay silent rather than to converse on any level with their teachers and in some cases with their non-Aboriginal classmates. Emma and Jack commented upon teachers' treatment of the Aboriginal students who struggle with completing their assignments. Emma stated, "[The teacher] says it [in reference to the Aboriginal student's name] straight out to the other kids in the class. …He actually treats [student identified by name] like he is retarded." Jack added that the same student to whom Emma refers is treated "like garbage." Students discern how the teacher's tactic of public humiliation makes them feel more vulnerable, disengaged, and isolated in school. These children feel, as Emma declared, "not wanted as a student" since they do not perceive themselves as having a meaningful presence in the classroom due in large part to the absence of genuine relationships between them, their teachers, and for some, their non-Aboriginal classmates as well.

The students in the higher-functioning schools appreciate those teachers who relate to their epistemic preferences. Brad, as one example, struggles with reading and prefers oral language and activity-based learning are favoured. For him, and others like him, he favours

activities that allow him to best demonstrate his learning. He readily voiced his pleasure in describing these opportunities: "Last week we built [structures] to hold up textbooks." But even in reference to classroom activities in which he and others like him struggle, Brad noted how his teachers "always help me" because "they understand I have a hard time." Students discern positive relationships with teachers who understand their learning styles and offer non-judgmental support. Scott, sitting in the same research conversation circle with Brad, commented on teachers who "help us right away" and are willing to assist students work through their difficulties without shouting, humiliating, or "yelling lots." Even in the higher-functioning schools, however, students distinguish that there are teachers who are "ready to yell" when they "close the door." Students perceive that these teachers are inclined to express their anger behind closed doors and feel that their temperament is volatile and unsteady. It is evident that for student-participants across all the research sites it is difficult to establish genuine relationships with teachers who demonstrate unpredictable behaviour.

In the other higher-functioning school, Grace and Fred expressed their appreciation of teachers who share their personal experiences during class so that students can, as Fred describes, "Get to know them." To some extent students are comforted by teachers who share their experiences and stories. In this manner, students like Grace described "feeling comfortable" in the classroom since they can better identify with their teachers who open a space for students to share their stories and in the process foster nurturing relationships. Students discern conducive and respectful environments in which they have relationships with their teachers and do not have to worry about being embarrassed if they offer an incorrect response.

Notably, Emma, Matt, Jack, and Julia (who all participated in the research conversations in the lower-functioning school) distinguished teachers in their school who also shared personal experiences and stories but, in these instances, the sharing often merely reinforced how little in common the non-Aboriginal teachers had with the Aboriginal students. Emma observed, "[Teacher is named] always goes on about how good his [own] kids are and how he compares us to them. He's always talking about how well off he is…and keeps on going. I don't care." Learning in a context of sharing, respectful, and accountable classroom contexts in which students, as Alice shared, can "really get to know" their teachers is critical for these students. Teachers who are perceived as nurturing and helpful stand most in contrast to the ones who make students like Alice and Billy "not want to work" and feel "uncomfortable" in their classrooms and schools. Scott, and many of the other students, know that they "got to earn [teachers'] trust first" if they want to establish mutually respectful relationships with teachers, and just as significantly, discern the importance of wanting to have positive relationships with their teachers in the first place.

The authentic care for Aboriginal learners demonstrated by some teachers in the higher-functioning schools is not always the same in the lower-functioning one. According to Jack, some teachers "favour the people who do their work or are smart." These Aboriginal students feel further isolated when the high-achieving non-Aboriginal students are regularly celebrated in classroom and school-wide events. Students discern that their relationship with the teachers is based and measured by the teacher's perception of students' intelligence. The non-Aboriginal and high-achieving students receive, in the eyes of the Aboriginal student participants, preferential treatment and are invited into those spaces where relationships can be nurtured with the teacher. Conversely, Emma felt "stupid…as if I am not smart enough." Again, the toll on students' esteem is drastic as the Aboriginal students internalize behaviour and thinking that is the result of an unhealthy classroom environment characteristic of unsustainable relationships.

For Jack, Emma, Victoria, Julia, Tanner, and the others around the research conversation circle, some teachers are considered "everyone's enemy" since they have established reputations in the school for isolating, "picking on," and "swearing at kids." Students readily distinguish such teachers' lack of professionalism and care. They describe these teachers as "intimidating" because of their aggressive and forceful behaviour.

These students, as well as all the others in the respective research conversation circles, have an understanding of their learning preferences but resign themselves to failure in the absence of teacher assistance and motivation. The learning environments seem to enable this sense of resignation in students. Matt's description of his interest in history and the teacher's pedagogy is particularly telling: 'History actually teaches me more about my rez and where my family comes from. But the way [teacher is named] teaches, it feels like a 5,000-hour story." Jack added, "[same teacher is named] does not make anything interesting. He just says, 'Well, so and so discovered Newfoundland.'" The students are not represented in the teacher's delivery of Canadian history since he does not account for the students' intrinsic interest in their own Native history. Emma's blunt conclusion is especially telling: "We are only learning about the Europeans," and Matt added that "We have only done two pages of work on First Nations." The teaching and learning of Aboriginal history is relegated to the margins. It silences the Aboriginal children even further and in their eyes undermines their historical identity. Most significantly, these practices are negatively internalized by the Aboriginal students and contribute to stifled and troubled relationships with their teachers.

Discerning Extracurriculars

The second phase of student discernment is highly related to the first. Emerging from the voices of students in both the higher- and lower-functioning schools was their perception of the culturally relevant extracurricular activities associated to their respective schools whereby they discern their social location as Aboriginal peoples. There were numerous references among the students attending the higher-functioning schools to pow wows hosted at the school and to opportunities for Aboriginal students, as Brad described, to participate in "drumming all the time." Drumming, smudging, and dancing were referred to as being instrumental activities that not only showcased students' cultural uniqueness but provided a means for Aboriginal students to meet on a social level within the public school environment. Drumming, for Aboriginal students like Brad, is self-described as being "good for me." Students perceive the positive influence of extracurricular cultural interventions and identify how the presence of the drum fulfills a self-described void in their lives. Scott, like Brad, observed that the extracurricular activities allow for "a bunch of people getting along" since these Aboriginal students describe taking comfort in common cultural activities that lend themselves to what the students perceive as social harmony in the school. Although students described the lack of a regular presence of Elders in the school, their presence is noticed during the school pow wow when, according to Scott, the Elders and other community role models "kind of teach us what to do." Students feel honored to learn through the example of such cultural role models within the public school environment and describe a reaffirming sense of identity as Aboriginal peoples.

The same feelings of belonging to the school community are shared by Alice, Grace, Billy, and the other students in the other higher-functioning school. Many of these students take pride in "sing[ing] and danc[ing]" and Billy described that the school regularly recognizes Aboriginal cultural traditions. Whether students sing or dance Fancy Shawl, Tradition, or Grass, they discern that all cultural activities have a place within the public school. The students who

attend the school that keeps a Grandfather Drum perceive the centrality of the drum to their sense of identity and to their unique traditions. Of equal importance are the Elders and role models who themselves have a presence in the school. Students identify with them as traditional knowledge-keepers and authority figures. Grace believed that "when you see people from where you live doing great things you can relate to them." For Fred, the outcome is to "get inspired." Aboriginal students see themselves reflected in positive endeavours that they associate to both their local and school communities.

The students from the lower-functioning school also discussed the extracurricular activities offered at the school; however, these events had a dubious discernment on their location as Aboriginal peoples. Jack and Matt referred to dancers at one assembly "that came to our school [but the students] forgot" why the dancers were even present. The students recollected feeling "pretty cool" during the singing and dancing performance, and Emma described the event as being "different" to the mainstream practices. Jack enjoys the pow wows at the school but regretted that they occur only "every once in a while." The extracurricular events, according to the student participants, are scheduled sporadically and seem to be offered as isolated activities. The students discern a genuine distinction between mainstream and Aboriginal socio-cultural representations in their classrooms and schools. The lack of Aboriginal representation, according to the students, embeds them in a location of difference and affirms the socio-cultural divide between traditions. For these students, having school-wide participation in a pow wow is an opportunity for their mainstream peers to experience Aboriginal traditions. As Jack stated, when the entire school population "experiences the history and some of the dances" it informs their current realities through historical tradition. Students are intrigued by their values and worldviews as Aboriginal peoples but discern how these interests are stifled in public school practices, curriculum, and teachers' pedagogy. Students lament the fact that there were no special events to honor their traditions over the course of an entire school year. They perceive the teachers as not wanting to be bothered to recognize their cultural uniqueness.

The lack of representation of their uniqueness as Aboriginal peoples is compounded by the fact that none of the students could remember a time when there was an Elder or Chief in the school. Conversely, several of them shared examples of students "saying something in Ojibway" and being told by their teachers to stop "being silly [and] be quiet." Grounded in the students' voices are perceptions of extracurricular activities that discern their social locations as Aboriginal peoples to the proverbial margins of their public school.

Discussion

The core categories that emerged from the voices of the participants point to two profound phases of Aboriginal student discernment. Grounded in the first category were student perceptions of the nature of the relationships they had with their teachers; the second category consisted of their perceptions regarding the extracurricular activities at their schools that contributed towards the discernment of their social location as Aboriginal peoples.

Students spoke candidly about how teachers' pedagogical underpinnings influenced their relationships with Aboriginal students. The non-Aboriginal teachers who demonstrated a willingness to learn about Aboriginal students' proficiencies, interests, and learning preferences were perceived as being dedicated to students' welfare. This is in line with the OME (2007) policy Framework that brings to light the significance of teachers demonstrating an awareness about Aboriginal learning styles, cultures, and perspectives. The Framework identifies the need for teachers to deliver programs that best facilitate Aboriginal student learning. These teachers,

according to the student-participants, not only accepted the epistemic differences between Aboriginal and non-Aboriginal students but also invited their unique socio-cultural worldviews into the public school classroom and hallways. The school, and especially the classroom, became spaces that teachers were willing to mobilize in order to support the dormant and often marginalized narratives of Aboriginal students.

In terms of Aboriginal peoples' educational traditions, such a nurturing context complements the same personal relationships between teachers and students that Hampton (1988) and others suggest is integral to student engagement. Students appreciated teachers who delivered mainstream curriculum that at certain times drew upon culturally relevant facts to highlight the local histories of Aboriginal peoples. Here too it seems that the teachers' response to the OME (2007) Framework is quite favourable. The provincial policy calls upon teachers to be sensitive to a curriculum that facilitates student learning while implementing pedagogical practices that increase Aboriginal student participation. In light of the Framework, some teachers are implementing meaningful Aboriginal cultural perspectives and activities into their pedagogical practice. By virtue of teachers' actions, as well as their efforts to share their own life experiences, the Aboriginal students discerned more fluid and personal relationships with teachers. As Bishop et al. (2009) suggest, learning contexts that are characteristic of shared power and non-dominating relationships contribute to Aboriginal student engagement. Students distinguished those teachers who adopted different ways to engage them in dialogue, knowledge-acquisition, and social constructions where they had a space to share their stories.

The student participants in the lower-functioning school perceived a much different understanding of relationship with their schooling and teachers. The standardized provincial curriculum, for these students, represented the Eurocentric Canadian narrative. In these contexts students perceived their teachers as unwilling to examine the limitations of such historical accounts and to embed Aboriginal cultural perspectives in the curriculum. Similarly, teachers' pedagogy was often perceived by students as rigid. The Aboriginal students perceived that their teachers were not tolerant of their differences, were often unsympathetic to their realities, and did not have the same high expectations related to achievement that they overtly demonstrated for some non-Aboriginal students.

One of the strategies of the OME (2007) Framework is for educators to adopt a holistic and integrated approach to bettering Aboriginal student success in public schools. According to the students in the lower-functioning schools, their teachers and schools did not hold them accountable to the same measures of achievement as their non-Aboriginal peers. Moreover, the teachers did not implement best practices to assist Aboriginal students, as the Framework recommends. Since the student-participants could not reconcile the tension they perceived in curriculum and pedagogy, they discerned troubled relationships that they had with some of their teachers. Their feelings of isolation and alienation as marginalized students were not consoled by enduring relationships with teachers; rather, they perceived that their difference was both very consequential and detrimental to their teachers.

In numerous testimonies Aboriginal students shared how they experienced an impoverished sense of self-esteem in the absence of nurturing relationships with their teachers. This seems to be a far cry from the principles and strategies of the Framework that includes "nurturing academic environments," "a sense of belonging to both Aboriginal and wider communities," and "the implementation of education programs and services designed to meet the specific needs of First Nation, Métis, and Inuit students" (OME, 2007, p. 8). In various instances the teachers and schools seem relatively unresponsive to the OME's goals for improving

Aboriginal students' outcomes and experiences in public schools. By discerning contentious relationships with their teachers and its effect on their sense of self-worth, the perceptions of these Aboriginal students are characteristic of resistance, struggle, and disengagement from formal education as opposed to the perceptions of those students in the higher-functioning schools whose discernment of their relationships with teachers embodied stories of agency, negotiation, and academic success.

Also grounded in the Aboriginal students' voices were perceptions about the extracurricular activities that contributed to their discernment of their social location in the public schools. Students in the higher functioning schools spoke readily about the culturally relevant activities offered as extensions of school programming that provided varied opportunities for them to honor and celebrate their traditions and worldviews. These opportunities provided a means for Aboriginal students to define their unique identities across the broader school community. These initiatives seem to be in line with the goals of the OME's (2007) Framework that call upon school boards to develop and include programs and services that support and reflect Aboriginal cultures and worldviews. Students discussed opportunities where they could shape their engagement in formal education in ways that transcend standardized provincial curriculum and western-based pedagogies. The students discussed how these opportunities contributed to their re-imagining of identity as Aboriginal peoples and students in the physical spaces of school that did not require them to sacrifice their traditional values in order to gain such recognition.

Identity development is a key concept in the OME Framework. According to the provincial policy, the OME (2007) is committed to supporting board and school programming that "promotes the development of a positive personal and cultural identity (p. 8). By doing so, the provincial policy suggests that Aboriginal students can reach a high level of achievement. Students discerned a degree of compatibility between publicly funded provincial school values and their own epistemologies and traditions. The cultural events were symbolic of opportunities that, according to the Aboriginal student participants, bridged these two spheres that historically have existed in a state of tension to the detriment of Aboriginal student learning and achievement. These observations are reminiscent of Lomawaima and McCarty's (2006) work that suggests that more than respect for cultural diversity is necessary in order to effectively incorporate complex understandings of difference across particular cultures (see also Ngai & Koehn, 2010).

In the case of the students attending the lower-functioning school, the sporadically scheduled culturally relevant events seemed to be at odds with the other practices of the provincial public schools. For these students, such events were far and few between. Their participation in the cultural celebrations evidently was not memorable, as students had difficulty remembering the details. In this way, the Aboriginal students discerned a fundamentally different social location than their peers attending the higher-functioning schools. Students discerned how the distinction of their socio-cultural traditions as Aboriginal peoples and learners has not taken hold on classroom and school practices. Despite the OME's call to heighten the capacity of school boards to collaborate with Aboriginal communities to integrate the Framework into school board planning, and despite the mandate on educators to create school-community projects and initiatives that include culturally appropriate components, such interventions are not readily apparent to these students.

Students also discern that matters of identity and difference do not coexist with the values and priorities of their public schools and hence the few cultural events hosted at the school do

more, according to the students, to embed a cultural divide that serves to further decentre Aboriginal students from their mainstream peers. Since the culturally relevant events are perceived as isolated occurrences, the Aboriginal students discern them as strengthening the socio-political boundaries that reflect a colonial hierarchy of priorities across the school culture. These perceptions are detrimental to Aboriginal students' sense of engagement and ignore the fact that schools are environments that have an essential role in student development (Miller et al., 2011).

Such observations are troubling because they evoke implications of practices in residential schools whereby education was the instrument that repressed and aimed to annihilate Aboriginal students' epistemologies and worldviews (Stewart-Harawira, 2005). The school and staff generally did not intend to create positive learning environments for Aboriginal students to facilitate their identity development either inside or outside the classroom. Rather, students perceived that their school culture was reluctant to recognize Aboriginal worldviews and to meaningfully include multiple perspectives in the socio-political culture of public education. For these students, therefore, neither they nor their communities have been supported through extracurricular activities offered at the school. For them, the opportunities to celebrate their traditions in an inclusive manner with the broader mainstream school community were not readily available or apparent. While the Aboriginal students at times distinguished a vibrant school culture, they were open and frank in identifying that their worldviews as Aboriginal peoples and learners were typically not embedded in the social fabric of the school. The students, in these unrecognized social and epistemic spaces, did not feel successful or valued in their school. Hence, they attested to feeling disengaged from formal education—a historical trend that has been dangerously predictive across the province, country, and elsewhere.

Conclusion

The two phases of Aboriginal student discernment grounded in the voices of participants contribute a significant response to the guiding question regarding the distinctions between high- and low-functioning elementary schools in northern Ontario in terms of their response to the principles and objectives of the OME (2007) policy Framework. Clearly, Aboriginal students discern that their educational experiences, relationships with teachers, and engagement in culturally relevant events are enhanced by school cultures that embrace their epistemic traditions and worldviews. These students are undoubtedly influenced by teachers who advocate for Aboriginal student interest and have high expectations for them. Schools that directly engage in policy implementation are distinguished by their attempt to build a cohesiveness between Aboriginal and non-Aboriginal students. Teachers at these schools are marked by their willingness to function in a relational context with Aboriginal and non-Aboriginal students and align components of their pedagogy to Aboriginal students' preferences. The school cultures, in turn, reflect a clear path to the alignment of these efforts by adopting good practices as described by the policy Framework.

Conversely, teacher behaviours more characteristic of the lower-functioning school seemed to simply reinforce existing social, epistemic, and political stratification across the school cultures. According to the Aboriginal students, these teachers were not responsive to their learning and social needs. Students attested not only to uncomfortable learning environments but also to relationships with teachers that were detrimental to their self-esteem. Relative to the goals of the OME (2007) Framework, these schools did not provide cultures that honored Aboriginal student worldviews, nor did they collaborate with Aboriginal parents and communities in terms

of culturally relevant programs. The result of a lack of policy response, thus, is the creation of an underclass of lower achieving and disengaged students—precisely the realities that the OME Framework intended to change.

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Just Google It?! But at What Price? Teaching Pro-Environmental Behaviour for Smart and Energy-Efficient Use of Information and Communication Technologies

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Abstract

Teaching young people about sustainable and environmentally friendly aspects of living is one of the many important challenges in the 21st Century. The title question "Google it?! But at what price?" should not be understood solely in terms of economics, but also with regard to the costs the environment 'pays' for the extensive use of information and communication technologies (ICT). ICT, and especially social media, play an important role in adolescents' lives. To 'google' something, or 'youtubing', for instance, have become a common leisure activity of young people, but how a search engine processes requests, and how much power is consumed by the data's travel through the net, are operations that remain hidden to the person in front of the monitor.

The transdisciplinary EU-funded project 'useITsmartly' addresses the issue of energy efficient ICT consumption via peer education. Adopting a participatory approach, its aims are capacity building and subsequent behavioural change. The paper will outline the background of the project, as well as present the results of focus group discussions and creativity workshops with young people, which have formed the methodological base for the development of a special didactical concept for 'Green IT Peers'. This concept will be implemented in five European countries during spring and summer 2015.

Keywords: Green ICT, Behavioral Change, Peer Education, Capacity Building

Introduction

In an endeavour of greater involvement in the discussion of complex real-world problems, such as widespread unemployment, global climate change, and escalating health care costs, policy makers have identified certain forms of engaged scientific research and disciplines to be motivators of change (Gibbons et al., 2001; Bammer, 2013). Scientists have increasingly taken on the task not merely of researching data, but also of applying methods in the production, transfer, exchange and dissemination of knowledge with the aim of generating a shift in practices and accordingly have an impact on those real-world problems.

This is where the EU-Project "useITsmartly"[1] connects in its objective of raising awareness and conveying the message of energy-efficient use of information and communication technology (ICT[2]) among and with youths of 16–20 years. Previous research by Kirsten Gram-Hanssen has found that "…teenagers in a household entailed a considerably higher rate of energy consumption than an average adult in any given household, and we know that this is primarily due to their washing and cleaning behavior, as well as their use of information and communication technology (ICT)" (p. 1246, 2005). The acknowledgement of young people as some kind of 'heavy users of ICT' makes them an ideal target group for the objectives of the useITsmartly project. Since the 16–20 age bracket will soon have their own households, it becomes even more important to inform them about of the ecological, ethical as well as financial consequences of ICT related energy consumption.

The project is currently funded within the Intelligent Energy Europe-Program (IEE), and its outcomes support EU energy efficiency and renewable energy policies aiming to achieve EU's 20-20-20 targets[3] (that is, a 20 % cut in greenhouse gas emissions, 20 % improvement in energy efficiency and 20 % of renewables in EU energy consumption). Participating project countries are Austria, Denmark, Germany, Norway, and The Netherlands, with the institutional guidance of the University of Wuppertal in Germany. The central motivation of the project is capacity building and subsequent behavioral change in young people via peer education.

Main objectives and approach of useITsmartly

In order to achieve a reduction in ICT-related energy consumption among adolescents it is not sufficient simply to present young people with information on the issues. It is equally important to deal with how this is done, in particular with how knowledge on the link between personal IT use and its consequences is presented. While young people currently learn about energy and energy consumption in school, the extent of its depth and coverage varies, depending on the curricula. A further challenge lies in how to encourage young people to become involved in the issue, since a lack of information on energy-saving ICT practices has been accepted as a major cause for energy-inefficient behavior in private users. Rickinson et al. (2009) refer to "two aspects of learners in relation to environmental education: their environmental characteristics (such as attitudes, knowledge, concerns, perceptions, etc.) and their educational perspectives (such as experiences, preferences, etc.)" (p. 29). Thus a central question to be addressed by the project is that of *how to sensitize pupils to the topic*, and to motivate interest in this specific field of information and *how levels of interest and knowledge at schools can self-sustain in the long term beyond completion of the project*. A methodology had to be established, which would keep

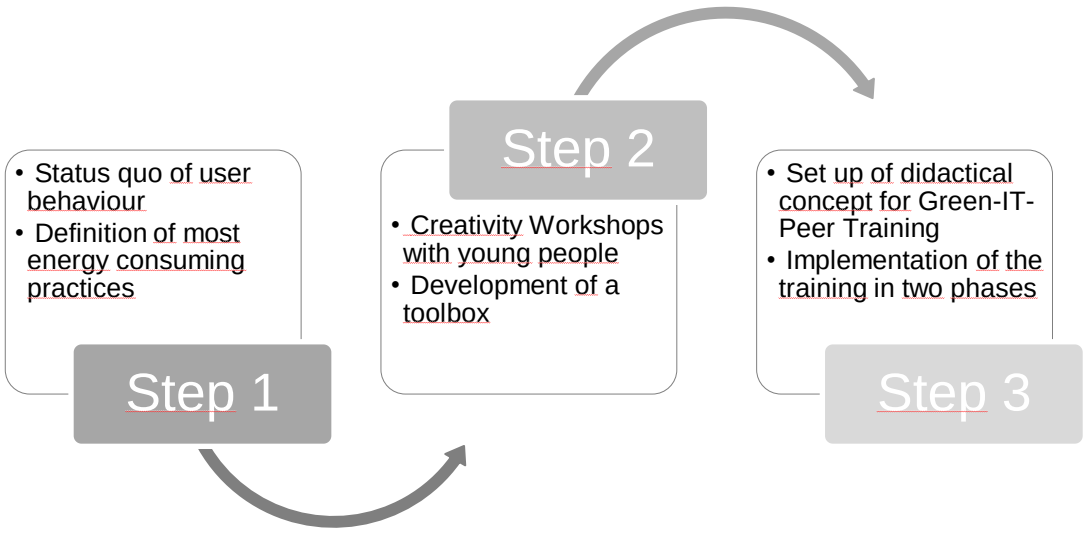
[1] useITsmartly is the abbreviation for Peer-to-peer education for youths on smart use of Information and Communication Technologies. For more information see www.useitsmartly.com.
[2] ICT = overall category including both IT and consumer electronics (including entertainment, music, video etc.)
[3] See: http://ec.europa.eu/clima/policies/package/index_en.htm [6.10.2014].

the young people involved and enable them to autonomously change their habits and further spread their knowledge.

The emphasis on a participatory approach, entailing the inclusion of young people in as many project steps as possible, was realized right from the outset. In a preliminary step, focus groups on adolescents' ICT user behavior were carried out to get a better understanding of how they had integrated information technology into their lifestyles and daily routines. The second step in the process was the organizing of creativity-workshops, during which the target group could propose their own ideas on strategies or solutions to reduce ICT-related energy consumption, guided by a certain set-up of workshop. The third and the main goal of the project is to educate "Green-IT-peers" who will be equipped with a toolbox as a support in communicating their knowledge to others, simultaneously educating other pupils to become IT-peers and further function as multipliers.

The program's fundamentally inclusive approach is grounded in the belief that individuals who have been actively involved in the development process of an idea or product will have more interest in becoming instrumental in its dissemination in contrast to those who are only informed about the results. On this basis, our thesis is that young people will a greater compulsion to implement new habits and energy-efficient practices if they and others of their cohort have been involved in the process of their development.

Figure 1 visualizes all project steps referred to here in a comprehensive way:



Focus group results: ICT user behavior of young people

The project's preliminary assessments were to find out about the target group's existing level of knowledge on saving energy, individual ICT-user behavior, and which kinds of energy-efficient user habits they applied.

For setting up the creativity workshops it would be important to determine the main fields of interest and the main sources of energy consumption of the young people. In order to obtain this kind of information focus groups were organized in schools, each averaging six participants and at least one interviewer. A questionnaire about their ICT-user habits was to be filled in, and being thus sensitized to the topic, the discussion was then initiated by the interviewers with questions for reflection. The aim was to encourage lively discussion, which

would take place mostly among the adolescents. The interviewers endeavoured to stay as much as possible in the background, and intervening in the conversation with a question or remark only in the event that it broke down or ceased altogether. The results of the focus groups were compared with those of other studies on youth and ICT-user behavior. In Germany, for example, the results were compared with the JIM-Study (Medienpädagogischer Forschungsverband Südwest 2013), a national survey that collects data on media usage among 12–19 year olds. The focus groups' main findings on ICT-user behavior were to be further matched with facts on the energy consumption of those habits.

The main ICT apparatus used as a source of entertainment, communication and information is, as was expected, the smart phone, being the constant companion during both school and leisure time. The device is least used for its original purpose – telephone calls – and mostly for written exchanges, such as with *What's App* (instant messenger application), or for the streaming of data such as *YouTube*-videos.

Results show that youths had to charge their mobile phone batteries at least once a day or on weekends; they even would keep their devices on the charging cable in order to keep them running.

Investigations into the energy consumption rate of smart phones revealed that their direct energy consumption is low in comparison to their indirect energy consumption, and their effect on overall energy consumption is significantly smaller than was expected.[4] (*Direct* energy consumption was defined as the energy consumption related directly to the use of the device; while *indirect* energy consumption is connected to all internet-related energy consumption and embodied energy consumption).[5] Therefore, even though the smart phone in its direct energy consumption has no substantial effect on energy efficiency, its indirect energy consumption has a marked impact and is becoming a growing area of interest. The streaming of music, video clips and the use of broadband connections are very energy intensive activities, and consumption of these is even increasing.

Interestingly, young people seemed to be aware of the socially limiting influences of IT. They cited a sense of isolation, or feeling stress as a result of being permanently available. Further, they indicated that they would "in principle" like the idea of acting in an environmentally friendly way, but would feel powerless and alone. Even though the question of "who's responsible" for reducing energy consumption came up in most focus groups in general, young people seem to allocate the responsibility to other actors than themselves. They said things such as: "the industry/politicians should" or "it doesn't make sense if I do it alone". One German focus group participant even compared saving energy via ICT to being on "slimming diet" while the rest of the household would just go on with their eating habits as usual.

It also emerged that tacit knowledge of energy saving strategies in order to keep phone batteries running proved to be high among this group of heavy users. Many would simply not give in to the fact that they have to charge their batteries daily. These users had little explicit

[4] "The energy consumption and the greenhouse gas emissions related to smart phones are in general higher than for mobile phones. The difference is mainly due to higher environmental costs related to the manufacturing of smart phones. Thus, a LCA study by Nokia shows that the climate change impact of a basic mobile phone (in this study a Nokia 105) equals 7 kg CO2e, whereas the impact of a smart phone (a Lumia 720) is three times higher (21 CO2e). For the smart phone, the GHG emission related to the usage phase only represents about 10 % of the total emissions, whereas the same figure for the basic mobile phone is about 20 %. (Santavaara & Paronen 2013) Similarly, Sony also finds that the GHG emissions of producing 'high-end phones' in general are higher than for 'low-end' phones (Sony 2013). Thus, for smart phones, the manufacturing is even more important for the overall energy consumption and climate impact than it is for mobile phones" (Christensen 2014, p.13).

[5] "Embodied energy consumption: Is the energy consumption related to all other life-cycle phases of ICT products; i.e. to the production of ICT devices (including energy consumption for extraction and manufacturing of raw materials/metals) and for the disposal and waste handling phase. Internet-related energy consumption: Is the energy consumption related to the provision of internet-based services accessed by ICT devices (e.g. video streaming, social media, e-mail etc.). This includes the energy consumption for internet data traffic (the infrastructure for transmission of data between users and data centers etc.) and for storing and processing data at data centres. This might (in some studies) also include the energy consumption related to access networks (providing the access to the internet; e.g. local area network (LAN) that the user is connected to at home or mobile broadband connections" (Christensen 2014, p.10).

knowledge about energy intensive activities, yet knew how to reduce energy consumption with minimal personal inconvenience. They would switch off the mobile broadband when there was no need for it because it is using lots of energy, for example. Such topics offered several starting points, which participants in the creativity workshops could connect to and build on in developing their ideas on saving energy through ICT. In the kind of approach we adopted, which does not intend to find some single, best solution to the problem but rather to generate several, perhaps unconventional or surprising ideas to tackling the problem, we consciously encouraged divergent thinking.

Creativity workshops: Using young people's knowledge and imagination

Following the focus group discussion of the project's second phase, creativity workshops in schools were arranged as sources of production and dissemination of knowledge. In innovation research and production of technology, creativity techniques are often applied as problem solving strategies. Such techniques encourage a creative dynamic and focus on a variety of aspects of creativity, including techniques for idea generation. Creativity in this context can be original, productive, and useful. In form of association richness and flexibility, creativity includes the ability to change and transform. According to Edward de Bono (1992) creativity is a major factor for change and moreover an ability which can be learned.

One objective of useITsmartly's creativity workshops was to gather as many ideas as possible from young people on reducing energy consumption of ICT production, usage and disposal. Ideas to be developed could include technological, behavioral or dispersive solutions. A desired side effect of the workshops was that an enhanced awareness of the need for change in energy consumption should lead to a raised awareness of the broader issue of climate change.

Set-up of creativity workshops

The procedure of the workshops was as follows: After an introduction to the topic and completion of a questionnaire on young people's ICT user behavior, designed to clarify the scope and aims of the project and workshop, a warm-up game was played to foster a relaxed mood and enable more creative thinking by breaking down any restrictive associations with a "classroom atmosphere", (Rommes et al., 2014). Next came the distribution of posters summarizing "problematic" ICT energy consuming practices[6], and pictures as visual support for the topics were distributed to groups of up to 6 pupils, followed by a free brainstorming phase to bring up many different viewpoints, including random perspectives. The workshop leaders would stay with the groups, answering questions and clarifying that there could be no "wrong" or silly ideas, since fault tolerance fosters creativity. Brainstorming rules (Osborn, 1948) include:

- Definition of the problem
- Articulation of spontaneous solutions
- All suggestions are written down
- No suggestion is evaluated, dismissed or prioritized
- Comments are prohibited
- Time limits are set
- Rules in conclusion
    - All associations have their right, "*no thinking, associating*"
    - No criticism, even "*wild, crazy, curious ideas*" are welcome

[6] The eight practices displayed a combination of energy consuming habits and fields of interest for young people (cf. section 2.1.): 1. Switch off/unplug, 2. Useful life/new acquisition, 3. E-Waste, 4. Simultaneous usage of devices, 5. W-LAN vs mobile broadband, 6. School, 7. Ways of spreading knowledge/information, 8. Saving energy through ICT.

- Provoke solutions "*out of the box*"
- Quantity instead of quality
- Your own expertise/perspective can inspire others
- No personal copyright on recited ideas

Proceeding to the next phase, a variant of the 6-3-5 Method (Rohrbach, 1969) was introduced as an evaluation tool of the ideas. The basic layout of this process is that six individuals sit around a table, each prepared with paper and pencil; given five minutes, everybody writes down three ideas in response to the stated problem; the papers are then handed around clockwise, each individual adding his or her ideas on the next sheet; the process is complete when everybody has written on every sheet. Finally, the group selects the most promising ideas and presents them to the others. For each workshop a duration of 2 hours was anticipated.

Sample

As a prior step to the project, four target groups for the creativity workshops were identified: Technologically and environmentally active youths; youths who are not interested in the environment nor very active in their ICT use; youths who are very environmentally interested but not very active with ICT; and finally, a group which is exactly opposite to the latter mentioned. The main purpose of making these distinctions was to be able to reach as diverse a sample as possible, since previous knowledge (either about environmental issues or ICT) might exercise an influence on the outcomes of the workshops and the resulting approaches to be defined for the toolbox. Our thesis was that "some, e.g. the environmentally interested, might need less motivation and attitude changes, as they are already motivated to change their practices, whereas changing attitudes is of more relevance to non environmentally interested youth" (cf. Rommes/Renkens, 2014: 6). It was almost impossible to find youths who see themselves as 'environmentally engaged'.

In every country, participants were recruited through schools. In many cases teachers were enthusiastic and organized their class of young people to participate. Participation thus became mandatory. Only in the case of a few workshops did the project partners manage to find participants on a voluntary basis.

Three to four creativity workshops were held in each participating country in the period from February to June 2014, with the aim of reaching 80 to 100 young people. In five countries, 19 workshops were held, 415 young people were reached and 232 ideas were gathered from these young people (Rommes/Renkens, 2014).

Results from the creativity workshops

The adolescents came up with a numerous ideas of a great variety. These were often connected to the pictures they had been given, or when enhancements, creative, new concepts nevertheless emerged. The most important fact was that exchanges on the topic had taken among participants place by activating and externalizing their own tacit knowledge. Nonaka and Takeuchi (1995) stated that tacit knowledge via externalization can become explicit knowledge and through combination and internalization a "new" knowledge can be produced, following a spiral form and so on in an open ended process. During the workshops pupils applied their tacit knowledge of energy consumption and environmentalism to the problem-solving task. By discussing and sharing their ideas with their peers they recombined these to finally create a new state of knowledge. On the meta-level they furthermore discussed the factors which would stimulate them to finally change their habits. Belonging to the group of addressees, additionally, they added their informal "expert-knowledge" to their ideas at times consciously at other times

unconsciously. From the perspetive of North's "stair of knowledge" (2005) the pupils would have then gained the fourth (and highest) degree of maturation, having passed through the stages of information, knowledge and ability to the stage of action and competence.

The results further showed that creative problem solving does not depend on the school degree; since various kinds of European schooling institutions participated in it, and any preconceptions such that higher degree-schools would obtain "better" results (in terms not of the quality of the ideas but of quantity or creativity in general) were not borne out. It seemed, at least with reference to the German workshops, that higher levels of interest and compliance it was were more in evidence the lower the schooling level was. Moreover, apparent that the younger pupils were very eager and open to participating and working creatively. How much of this knowledge will remain with the pupils, and might be transferred into action, however, cannot yet be evaluated.

Green-IT-Peer-Training

Most schools and pupils expressed an interested in participating in the project's next step – the education of "IT-peers" – and we can safely assume even at this early stage that, having at least extended their knowledge of ICT-related-energy consumption, the participants will be more inclined towards a behavioral change, so indicating a successful learning-process. As stated above, 232 ideas on how to save energy or promote energy efficient behavior among their peers were developed by 415 young people throughout Europe. An important component of the entire concept behind realizing creativity workshops and introducing the participants to the concept was that their ideas gathered from them would be further evaluated by experts and included in a project toolbox[7]. Furthermore, the resultant pool of ideas forms an important base for the IT-Peer training, which has been implemented in all project countries since spring 2015. By emphasizing these two points, young people should see that their knowledge and output were instrumental and appreciated.

Didactical concept for Green-IT-Peer-Education

The next step in the project outline foresees a workshop over several days for the IT-peer-training. Here the set-up draws on the theories of the Peer-Led Team-Learning (PLTL). "Peer leaders facilitate the workshops, clarify goals, ensure that the team members engage with the materials and with each other, and they provide guidance as needed in solving problems. The process encourages collaboration and builds confidence" (Varma-Nelson, 2008: 1). The workshops are planned to take place in a non-threatening environment without any performance pressure, and most preferably outside of schools. As in the PLTL-approach "the workshop leaders play an essential role because they are recent learners of the material. They relate to the students in the group as peers, understand how they learn, and explain material in ways that connect with them" (Varma-Nelson, 2008: 1). In the first run the "first generation" of IT-peers will be trained with the materials that have been collected by the consortium members. The peer education will have to work on various levels:

- Fact sheets with knowledge (and sources of information) on IT and energy consumption
- Soft-skills in how to speak in front of others or "teach" others have to be acquired.
- A variety of materials to choose from have to made available for setting up further workshops on their own

[7] The toolbox based on the ideas of young people can be retrieved under http://www.useitsmartly.com/toolbox/ [22.6.2015].

Figure 2 pictures the set-up of Day 1of the IT-peer training of the Austrian didactical concept which was adapted by the participating countries to their needs[8] (Pilz/Auer, 2014):

Austrian Didactical Concept - Green IT-Peer Training I, Day 1

TIME	WHAT?	WHY? HOW?	MATERIAL
10:00 - 10:30	welcome introduction project presentation	information about objectives and content, lecture	beamer, laptop. ppt
10:30 - 11:00	introduction game: meeting café	warm-up, team-building, teamwork	sheets for the „meeting café“
11:00 - 12:30	"I know, what you did last summer“	every day practice, chacing Paula Maroni, find the profile, count the clicks, pair-work	computer/internet, smartphones, work sheet
12:30 - 13:30	Lunch		
13:30 - 14:30	data protection, make your mobil safer, transparent costumer	capacity building: security measurements, own experience and/or pair work, discussion	input, working sheet, computer, smartphones
14:30 - 17:00	counting mouse clicks, energy consumption, serverfarms, search engines	evaluation mouse-clicks, own experience, lecture, discussion	ppt., laptop, beamer

In order to combine knowledge on saving energy as opposed to simply lecturing about it, the "vehicle-theory" was used. This consists in the idea that a topic many youths are generally interested in, regardless of social background, gender or prior knowledge, can be used as a vehicle to trigger young peoples' interest in science and technology related subjects (Thaler/Zorn, 2010). In the case of useITsmartly, energy and environmental issues are the focus, and it is important that the vehicle topics do not have to be associated primarily with ecology or IT by the youths at first glance. Subjects such as designing solar fashion articles or e-waste-sculptures, for example, can serve as vehicles to convey information on energy saving practices via artistic arrangement in practice. This practical and rather experimental approach responds to youths' statements that they would prefer experiments in science classes to the less creative and practical, standard of teacher-oriented methods (Dahmen/Thaler, 2009). Since "traditional, lecture oriented instruction stands in stark contrast to the process of scientific discovery, which builds on prior knowledge but requires vigorous debate and discussion, without slavish adherence to authority" (Gosser, 2012), the PLTL approach seemed of great value to us to work with. "Peer-Led Team Learning (PLTL) is a specific form of small group learning recognized by Project Kaleidoscope as best practice pedagogy (Varma-Nelson, 2004). PLTL was first developed by Woodward, Gosser, and Weiner (1993) as an integrated method that promoted discourse and creative problem solving in chemistry at the City College of New York" (Quitadamo et al., 2009: 29). Peer leaders do not have to be content experts or surrogate instructors, the approach being characterized rather by a "cohort-based social learning structure whereby trained undergraduates, or 'peer leaders', guide 4–8 less experienced peers toward

[8] The didactical concept underlying the useITsmartly peer trainings can be found in the download section of the project website under www.useitsmartly.com in various languages.

conceptual understanding" (Quitadamo et al., 2009:29). Drawing on the principles of optimal learning conditions, which are grounded in theories of cognitive science, the need for facilitated active engagement is given prominent attention in this set up. The optimal learning environment has been summarized (Norman, 1993) as having the following characteristics:

- Provide a high intensity of interaction and feedback
- Motivate
- Provide a continual feeling of challenge
- Provide a sense of direct engagement
- Provide appropriate tools that fit the task

Within useITsmartly these principles are implemented within the whole set up of the peer training approach: The concept combines the vehicle-approach, during which the peers will acquire the "by-product" environmental knowledge in practice sessions, with the rather fact-oriented sessions about background information on ICT and energy consumption. A closing session on soft-skills will enable the Green-IT-peers to pass that knowledge on to their friends and schoolmates.

Implementation of the IT-Peer-Training

All implemented training was adapted for transference according to the specific national situations and circumstances, e.g. possible time frames, group size, age of participants etc. Also pre-existing knowledge on environmental issues should be checked since "students are not neutral or 'blank slates' in relation to either the environmental or the educational aspects of environmental education" (Rickinson et al., 2009: 30). In all countries the approach is based on the above-mentioned didactical concept in a translated and adapted version.

An important point to clarify with the young participants right from the outset is that with the training the project makes no attempt to convince young people *not to use ICT anymore*; our aim is to inform and educate them on how to use it in a more responsible way. By emphasizing this we want to avoid attitudes of resistance in the earliest stages of the workshop, since not using ICT at all seems on first sight the easiest solution for reducing related energy consumption. With the workshop concept other suitable ideas and possibilities were introduced to the young people.

Sessions of reflection together with the written feedback of the participants on the last training day showed that the learning units most available for recall were those most closely connected to participants' personal user habits or which introduced them to practical opportunities of change. So for instance during the feedback-rounds and in the evaluation questionnaire it was often stressed that playing the "Google-Game"[9] in a fun way illustrated a very common habit that has a very high energy-consumption. Since this was followed up by calculating the energy costs of "clicking", the participants were highly surprised at their personal energy consumption in everyday activities which they hadn't previously perceived as at all very energy consuming.

Since finally changing behavior is the hardest task, it was appreciated when practical solutions were offered that would not result in a loss of convenience while using ICTs. Projects such as "Fairphone"[10] or refurbishing projects of ICT, presented to the youths found most appeal

[9] The Google Game is a competition of two groups trying to find a most (or least or quickest) entries for a compound of which one part of the word is already predefined.

[10] "Fairphone" is a social enterprise that is building a movement for fairer electronics. By making a phone, we're opening up the supply chain and creating new relationships between people and their products. We're making a positive impact across the value chain in mining, design, manufacturing and life cycle, while expanding the market for products that put ethical values first." (https://www.fairphone.com/about/) [26.06.2015].

among them. Being able to speak to specialists in various fields proved to have a sustainable effect on participants. One of the founders of the Austrian IT-refurbishing company "Compuritas"[11] joined the German training in a Skype-conversation, in which the youths enjoyed the chance to ask questions directly and which gave them a more concrete idea of projects of this kind.

It is too early at this stage of the training to make a prognosis about the long-term effects of participation in the training, but the second training phase is expected to yield more insight into the sustainability of the content learned. It is important for the project that pupils not only act accordingly but also further spread their knowledge. Here we also encounter a key problem of the project outline; that is, when the first and second generation of IT-peers is educated and has achieved the ability to actively use their knowledge, the project's funding will come to an end, with no extension foreseen and with the responsible persons no longer available. Thus, the difficulty we are facing is how to keep the IT-peer-education running without someone in a supervising role. It is possible that in some schools teachers will take over the responsibility of overseeing the project, but due to a strict curriculum and time deficit it is very unlikely that we will find a volunteer in every school. This can be compared to knowledge management in the private sector; in response to the departure of an experienced employee and a consequent loss of expertise and knowledge, enterprises have routinely established various structures for maintaining the knowledge pool of the corporate collective. There are web 2.0 based solutions, such as cloud systems and databases or WIKIS, but also "analogue" reactions like regular meetings with knowledge exchange etc.

So far we have identified two ways of targeting this problem. Two strong factors are intrinsic and extrinsic motivation, a further help being a possible a database of information that could be accessed as an ongoing resource. We will start with the "technical" solutions. There are several ways of establishing a database – there is the project-homepage, the project's Facebook page and the Instagram account. All these facilities could be taken over or supervised by a teacher, or alternatively be passed on to the next generation of IT-peers. A toolbox containing material for the peer-training will be handed to the IT-peers in all events, and which is supposed to be augmented and maintained by the IT-peers who have taken over the responsibility. We strongly hope that teachers or group leaders in non-schooling organizations or institutions will assist the students in that this. Teachers could also make use of the teaching material in class to re-initiate the program. The set-up of the creativity workshops will, for example, form a part those materials. Another approach could be to generate WIKIs that contain relevant information on ICT and energy-efficiency. Writing a school-blog on the project could be a further means to keeping the project's momentum beyond funding. A Wikipedia-entry for the whole project, outlining its targets and course, and encouraging contribution to it might be helpful. Alternatively, some endeavour to establish an internet-platform could be launched, where energy-efficiency in ICTs and related issues could be discussed and free expertise in environmental-energy-issues could be made available. Besides the intrinsic motivation, smaller skills can be acquired, such as hosting a webpage or writing a blog or speaking freely in front of groups, organizing events etc.

The extrinsic motivation could be provided by the vehicle-activity during which a skill is acquired and completion of peer-training workshop, which will be awarded with a certification.

Intrinsic motivation will in this case arise from environmental awareness which must be generated or intensified through the engagement with the topic. In accordance with the idea of the stair of knowledge (North, 2005), our thesis is that the IT-peers will feel a stronger impulse to proceed with the project because their own creative potential was addressed and because they

[11] Compuritas is a social and ecologically sustainable IT refurbishing company for more information see http://www.compuritas.at/ [26.06.2015].

have reached a level of competence. Additionally, intrinsic motivation accompanied by a sense of empowerment, along with a belief in making a meaningful change. If young people feel that their own creativity and ideas can really have an impact, then this can also become an intrinsic motivator and driving force. As a consequence, the process of knowledge production would restart, promoting the aim of achieving a significant influence in lowering ICT related energy consumption.

Conclusion

The idea of useITsmartly is based on a participatory approach of involving young people in as many projects steps as possible. The method serves as a quality assurance measure, in not losing track of the target groups' needs, on the one hand nor, on the other hand, their perceptions on environment related topics. Focus groups demonstrated the great extent to which ICT is integrated into young people's lives, and that changing user habits leads to an anxiety of being isolated from communication among peers and permanently available information. The creativity workshops structured within the use ITsmartly project formed an approach to engaging young people with the topic of smart and energy-efficient ICT usage. It showed that participants were easily able to perform the task of developing ideas for promoting green IT use even without explicit knowledge. Their tacit knowledge, when catalyzed by short visual and written introductions to the topic, enabled them to think creatively "outside the box". It was especially the tacit knowledge of the young people, even though such skills are not often perceived as valuable and real proficiency, that constituted an important, if not the most important, factor in the successful implementation of the workshops. The youngsters were able to relate their everyday knowledge to pre-defined topics, which resulted in well-deliberated concepts, the majority of which were positively evaluated by experts from various fields. Some of the ideas developed had a novel status. This underscores the value of making use of non-expert knowledge for gaining new perspectives for solutions to existing societal challenges, as in our case with environmental issues, and as industry has been doing for quite a while through market research into customer's needs and preferences. With the development and implementation of the didactical concept for Green-IT-Peer training, the project has reached its climax and shifted from the theoretical preparatory groundwork to its core operational part.

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Using iPads in a dialogic classroom: Mutually exclusive or naturally compatible?

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Abstract

This research study aimed to explore the impact of using iPads on the opportunities for dialogic teaching in an English for academic purposes (EAP) classroom at a English-medium university in the United Arab Emirates. The study found that the use of iPads in the EAP classroom both supported and limited opportunities for dialogic teaching. It was also found that often the institutional constraints were more limiting in promoting dialogic teaching than the use of the device itself.

Key words: dialogic teaching; iPads; teacher talk; student talk; English for academic purposes

Introduction

Classroom interaction has been well researched and documented in English for Academic Purposes (EAP) contexts especially since the adoption of communicative teaching practices. Such practices highlight the premise that interactive pair/group work activities are meaningful when students are genuinely interested in the topic at hand and are prepared to discuss it at length. Barnes (2010) coined the term "exploratory talk", which focuses on the language used in tasks such as group problem solving, where all students are involved and teacher's role shifts from being the provider of 'right answers' to working with the students towards the building up of "common knowledge" and offering guided and specific talk that encourages students to think critically (p. 7). In this type of interaction, teacher and students can negotiate what makes a good discussion and set the ground rules together. Tasks should be collaborative where the communication is not to 'interact' but also to 'inter-think' (Mercer, 2000).

Alexander (2008) identifies 5 criteria for any classroom talk to be dialogic:

- *collective:* teachers and children address learning tasks, whether as a group or as a class;
- *reciprocal:* teachers and children listen to each other, share ideas and consider alternative viewpoints;
- *supportive:* children articulate their ideas freely, without fear of embarrassment over 'wrong' answers; and they help each other to reach common understandings;
- *cumulative:* teachers and children build on their own and each other's ideas and chain them into coherent lines of thinking and enquiry;
- *purposeful:* teachers plan and steer classroom talk with specific educational goals in view (p.14).

Alexander (2003) describes dialogic teaching as "purposeful and productive dialogue where questions, answers, feedback (and feedforward) progressively build into coherent and expanding chains of enquiry and understanding" (cited in Jones, 2010, p.64). Dialogic teaching however, does not come with a magic formula, nor does it have a single method of teaching. It is an approach, not a set of rules and techniques and concerns such practices as reviewing the use of teaching techniques and the balancing of power relationships within a classroom (Alexander, 2010). It is based on evidence and principles and "draws on a broad repertoire of strategies and techniques" (p.1). Alexander (2008) identifies these repertoires to be talk for everyday life, learning talk, teaching talk and classroom organization (p.38-39).

Recent years have also witnessed the entry of an important contributor to classroom interaction: mobile devices. Mobile learning can be defined as the "processes (both personal and public) of coming to know through exploration and conversation across multiple contexts among people and interactive technologies" using hand-held devices (Sharples et al., cited in Hockly, 2013, p.80). Accordingly, research into the use of mobile devices in learning and how they have impacted interaction has emerged in recent years. One example of such research looked at the use of iPads in tertiary contexts in the UAE. Three government universities distributed iPads to first year students in 2012 as a result of a mobile learning initiative (Gitsaki, Robby, Priest, Hamdan & Ben-Chabane, 2013). Accordingly, all students and teachers were issued with an iPad and materials were converted into iBook or similar formats. At the end of the first year of trial, 80% of the students

involved as well as the teachers responded positively to the use of iPads as part of their learning and teaching experience (Gitsaki et al 2013).

The study thus aimed to explore to what extent the use of iPads in an EAP classroom impacted on the opportunities for dialogic teaching.

Methods of research

The study took place in an English-medium university in the United Arab Emirates. A total of 13 classes were involved. In each class there were approximately 18 Emirati students aged 18-22 years old. 12 classes were female, and one class was male. Each class was audio recorded by the researchers for a total of 30 minutes. The audio recording was carried out using an iPad application. From each recording, the researchers chose 5 minutes of lock-step interaction to transcribe. Following the class visit, the researchers sent the class teachers a copy of the audio recording and the transcript of the five minutes interaction. Researchers also took observation notes during the class visit. 7 teachers agreed to be interviewed following the class visits.

Ethical clearance was obtained from the university's Research Ethics Committee, and informed consent was granted by the students and teachers in the research study. Anonymity was ensured through the avoidance of names of teachers or students. All data was stored according to the date of the recording.

Data were analysed by using a the Dialogic Inquiry Tool (DIT) (Reznitskaya, 2012). The researchers listened to the class recordings and used the observation notes to plot the extent to which the teaching was monologic or dialogic. The notes from the DIT were then compared to Alexander's (2008) five features of dialogic teaching. The data was stored and retrieved using the software NVivo (2014). The researchers read their observation notes for major themes, and listened to the audio-recordings for a deeper understanding of the interaction. The researchers also took notes during the analysis of the audio-recordings and noted themes which related to Alexander's (2005, 2008) features of dialogic teaching: collective, reciprocal, supportive, cumulative, and purposeful. Themes which emerged from the analysis were classroom interaction, in particular types of questions asked, the level of challenge in the questions, teacher talk e.g technical language, student talk, and student activity. The transcriptions gave a deeper understanding of the specific language used by teachers and students in a short lock-step interaction, and provided insights into the language used around the iPad.

Findings

In this section we discuss the main themes which emerged from the data in terms of how iPads supported dialogic teaching, or inhibited opportunities for dialogic teaching.

Creativity

From the classroom observations, it was clear that students were engaged in many creative projects using different applications on the iPad. One particular application which was used in a variety of different classes was *Educreations*. A common theme of iPad classes was that students had both opportunity and tools to further practice academic English. During such project work, students worked individually, with the teacher monitoring the class and discussing progress with each student.

In terms of dialogic teaching, such projects allowed for teaching which was supportive and purposeful. Students had specific instructions to follow using

technological tools, and the teacher provided supportive feedback in the form of individual monitoring. Although there was little student-student interaction during these activities, there was student-teacher interaction which focused specifically on the project work. The teacher also gave technological support during this feedback.

Multimodal input and output

Due to the affordances of the iPad applications, students were able to interact with material through multimodal resources. From the observations, it was clear that students could listen to material, read material on the iPads, work on projects through different applications, and watch short videos. Students could also use different applications for competitive activities. From the observation notes, it was apparent that the different forms of input then lent themselves to group comparison of answers and information.

The relevance of such multimodal input is that the students are also involved in a variety of interaction patterns. Some of the multimodal input requires individual interaction, and others, such as competitions, involves class interaction. Dialogic teaching should encourage and promote a variety of different interaction patterns depending on the task. It was noted in the observation notes:

"Technology encourages discussion of the grammar point" (Observation notes).

Thus, a common theme was that the iPad created opportunities for a variety of input which then promoted class and group discussion. Thus the talk then builds on the material from the iPad and encourages cumulative discussion on the topic of the lesson, since students have gained their input in different ways.

Isolation

Although it has been pointed out above that there were many opportunities for students to work individually with teacher monitoring, a common theme from the observations and the interviews is that the iPad promotes a lot of individual work. It was felt that students were more isolated when working with the iPad. One teacher commented:

> *"… they are working independently, head down, with this technological tool. And some of the students who are not so serious about their learning kind of wander of it, they are visiting other sites, checking their email" (Interview).*

In this teacher comment we can see concerns not just about the way the iPad encourages individual work, but also how the students can get distracted when using the screen. This does not promote dialogic teaching in that the teaching is not purposeful, or collective. Students working alone with no follow-up interaction, or sharing, does not support classroom interaction and talk which develops learning. Students could be working alone outside the classroom. Similarly, if students are going off-task, the learning or teaching is no longer purposeful. From the observations, it could be seen that there is a lot of silence in the class due to the individual nature of the work:

> *A lot of silence in the class as students download and teacher walks around helping / monitoring (Observation notes).*

Although, as pointed out above, the teacher is often talking to the students during the monitoring, the exchanges are brief and are often related to the technical aspect of the activity, rather than the content of the activity.

Technical language

From the transcripts, it became clear that the language teachers and students used in iPad-mediated classrooms included a lot of technical language. Teachers had to give instructions which used technical-specific words such as 'download', 'application', and names of various applications. Teachers also asked a lot of questions using such vocabulary to check instructions and progress. One note from the observations pointed to this:

> *Lots of techno language – meta language – applications. Instructions dominate the lesson (Observation notes).*

As can be seen, it is also apparent that in order to carry out the various activities using the iPad, the instructions had to be long and complicated. As a result, a lot of teacher talk was in fact instructions, with little opportunity for dialogue. According to Alexander (2008), dialogue requires questions, cumulative understanding, prompts, and guided discussion (p. 30). In lessons in which instructions and directions take up a large part of the lesson time, such dialogue is not possible.

Institutional constraints

What became clear from the interviews with teachers was that the opportunity for dialogic teaching was compromised by other institutional constraints which were not related to the use of iPads in the classroom. It was felt that such constraints stem from an institutional culture which does not support dialogic teaching. For example, one teacher mentioned the classroom seating and the inflexibility of the seats. From the notes it was also clear that all classrooms had a fixed seating plan which was rows of tables all facing the teacher's desk at the front. One teacher commented:

> *Classroom seating does not encourage classroom interaction – students look at each others' head.*

A fundamental feature of the seating plan is that it represents the institutional culture and the institution's values as to what good teaching looks like. There are few classrooms in which there are circles, or semi- circles so that students can see each other. In all classes students were seated in rows, and when addressing each other, which was rare, students had to talk to the front, and students in front or behind were not encouraged to look at the speaker. Such a seating arrangement does not encourage students to talk to each other, ask questions, probe, prompt, or intervene in discussion to create dialogue.

A second institutional constraint was noted in an interview with a teacher. Materials and specific types of lesson dominated the classroom. The iPads had material on them in the form of ibooks, and there was a strict schedule of activities. All classes followed the material as they were in the ibook. There were some conversations, but little time for greater flexibility in using the materials and extending the discussion and thinking. One teacher commented that there was too much materials and curriculum control: Teachers were "*strangled by it" (Interview)*.

Discussion

The aim of this research was to explore the extent to which iPads promoted or limited opportunities for dialogic teaching in an EAP classroom. This discussion will examine and evaluate the impact of iPads on dialogic teaching by relating the data to Alexander's (2008) basic features of dialogic teaching.

Collective

The application and materials available on iPads encouraged creative projects which sometimes culminated in group learning tasks, but more often students were working in isolation on their iPads. This is not collective learning as students are working individually rather than carrying out learning tasks in groups or as a whole class. The principle of collectivity is fundamental to a group or class structuring of understanding through questions and responses which build on each other. This is particularly relevant in a language classroom where students need to practice their skills in justifying and questioning in English (Haneda & Wells, 2008).

Reciprocal

This feature relates to the extent to which students and teacher listen to each other and share ideas. There was sharing of ideas in some classes after using iPad material, and there were opportunities for students to share different perspectives, the majority of the time students worked alone. The iPad tended to funnel concentration onto the screen, thus eliminating opportunity for group work. When using technology, it is crucial that the software itself promotes dialogue (Mercer, Fernandez, Dawes, Wegerif & Sams, 2003). There were some teacher - student exchanges while students were working on their iPads, but these were brief exchanges, rather than long conversations with opportunity for an exchange of ideas. The exchanges were often focused on the technology or device, rather than the learning task.

Supportive

In a supportive dialogic classroom, students help each other to reach common understanding through exploratory talk (Mercer, 1995, 2000). This was not apparent in the observations, and students reached individual understanding through their interaction with the iPad. There were some discussions following individual work, but these were often teacher-led, with little opportunity for students to ask questions or challenge other students' responses.

Cumulative

Since much of the time spent in the iPad classroom was either long, complicated instructions, or students working individually on the iPad followed by short feedback sessions, there was little opportunity or time for long exchanges as a class or in groups to create and build on each others' understanding of the learning task or concept with the teacher intervening and guiding the discussion. Such dialogue is at the very heart of dialogic teaching (Barnes, 2010). For such an exchange, students need to be able to share ideas, ask questions freely, challenge each other, and justify ideas and opinions. This was not the case. The iPad promoted interaction with a screen with short opportunities for class exchanges following the task.

Purposeful

Teachers had clear educational goals, and the iPads also included clear goals in its materials and tasks. Students had a clear outcome in the lessons. The iPad classrooms were purposeful. However, the aim of the classroom was not to be dialogic. The aim of the lesson was related to the materials and the specific tasks. The iPad activities demanded long, complex instructions. Although instructions are part of the repertoire of teachers (Mercer, 1995, 2000), and are a necessary stage of the

lesson in dialogic teaching (Jones, 2010), the potential for students to be involved in dialogue needs to be maximised.

It is important to note, however, that the teaching in this research site did not purport to be dialogic. The institutional culture in terms of the role of technology in the classroom was an overriding theme in all classrooms. There was strong encouragement for teachers to use iPads and most of the material was in the form of ibooks. Thus, teachers and students were in an inflexible position in terms of curriculum control. Time was heavily managed by the curriculum goals, the specific aims of the lesson, and the instructions for the tasks. Similarly, the institutional culture was apparent through the promotion of teacher-fronted teaching and teacher control through the seating arrangement. Models of dialogue and dialogic teaching need to be appropriate to the culture of the learning context (Lefstein, 2009) and perhaps in this context a dialogic classroom according to Reznitskaya's (2012) terms is not possible. Similarly, attitudes of teachers and students to dialogic teaching (Boyd & Markarian, 2011) will also impact on the extent to which Alexander's (2008) features can exist in an iPad classroom.

Conclusion

The power of classroom talk cannot be underestimated. It is through talk and dialogue that students and teacher create understanding. Dialogic teaching is not just about the interaction patterns and the everyday conversation between teacher and students. Dialogic teaching challenges, questions, supports, and furthers understanding of the topic. Dialogic teaching calls for 'accountable talk' (Michaels, O'Connor & Resnick, 2007). Thus, in order to create an atmosphere for dialogic teaching and accountable, academic talk in an EAP classroom in which the students are operating in a second language, it is crucial that the teacher has an understanding of the role of talk. Talk in a second language classroom is both language input and a tool for learning. The use of technology is ubiquitous in today's language classroom, but it is crucial to evaluate the extent to which they support learning (Kirkwood & Price, 2013). iPads were introduced into the language classroom in this research context, and although the use of such devices can support dialogic teaching, it would seem that individual nature of work with iPads in the classroom actually inhibits dialogic teaching. Alexander (2008, 2014) points to the quality of the talk, and the quality of the interaction as being fundamental to dialogic teaching. The use of iPad demotes accountable and academic talk. Similarly, it is important to remember that the iPad is merely a device, not a teaching methodology (Coyle, Yanes & Verdu, 2010). Thus, the way it is used in the classroom does depend to a certain extent on the teacher and students' attitude to dialogic teaching (Boyd & Markarian, 2011). Furthermore, institutional constraints emerge as one of the most significant factors in the extent to which dialogic teaching can take place in the EAP classroom in this context. Further research could be carried out into the attitude of teachers and students (Highman, Brindley & Van de Pol, 2013) towards dialogic teaching. Similarly, it would be useful to research the influence of institutional culture on the opportunities for dialogic teaching, as we believe that these may have greater impact than the use of a technological device per se.

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Teaching and Learning in the Age of 'Just Google it'

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Abstract

The rapid increase in technological resources has a revolutionary impact on teaching English as a second or a foreign language (ESL/EFL). Although the majority of lecture-rooms at the Jordanian private universities are equipped with computers and Internet facilities, they are scarcely used in the teaching process. Moreover, faculty preparations and usage of IT in classrooms seem to be adjusting very slowly to the new educational revolution brought by the Internet at the age of "just Google it".

This paper describes some of the challenges that academic institutions in Jordan face with the widespread of uncontrolled E-learning. By analysing a Likert- scale questionnaire administered to tutors at Al-Zaytoonah, and Petra Universities, this paper demonstrates how teachers use e-resources in their classes. It also highlights the impact of using online resources on improving the educational research and teaching at the tertiary level in Jordan.

The findings of the data analysis indicated that teachers, in general, showed a positive attitude to implement computer assisted language learning in English classrooms. They agreed that Internet resources provide them with authentic material, yet they do not replace the textbook material. However, the majority agreed that they do not attend training courses to improve their IT ability or to acquaint themselves with the websites that include suitable teaching material. Based on the results, this paper presents some implications to EFL instructors to better embrace the educational changes imposed by the Internet technology.

Introduction

Tertiary education world has witnessed dramatic shifts in how we deliver our lectures, assess our students, and write our papers. Internet and communication technologies are changing education, taking it gradually out of the traditional classroom to a new world different in space and time, and making it open, dynamic, and affordable. Such a change imposes educational challenges on both teachers and learners. Today's students consider staying connected with the Internet as a central part of their lives which helps them find factual information needed at the moment instead of relying on their own personal knowledge. Priority of learning is shifting, and learning is accomplished through errors and trials rather than logical and rule-based methods.

This rapid increase in technological resources has also its impact on teaching English as a second or a foreign language (ESL/EFL). Although the majority of lecture rooms at the Jordanian private universities are equipped with computers and Internet facilities, they are scarcely used in the teaching process. Moreover, faculty preparations and teaching seem to be adjusting very slowly to this new educational revolution brought by the Internet at the age of "just Google it". This is due to a couple of factors related to the institute, the faculty themselves, and the students.

Firstly, university leaderships and decision-makers are risk adverse and traditional bound, which is why some of them overlook the advantages the Internet brings to the teaching and research process. In addition, the increased number of private universities and colleges has been accompanied by scarcity or lack of governmental financial support which has affected the availability of IT facilities in teaching classrooms.

Secondly, in response to the changes in the way we teach a foreign language imposed by the Internet, faculty members are put in a challenging situation on different levels. On the one hand, easy access to information in the age of 'just Google it' increases the expectations of university students of the information level of their tutors. Students can Google any piece of information, compare it, develop it, and may raise unexpected questions about it. So, faculty members have to accept the challenge, and broaden their knowledge about any topic in the syllabus to avoid unpleasant surprises. A big number of faculty members who belong to earlier generations are not very much skilled as net learners . Therefore, they must keep pace with, and actively develop their IT skills to embrace the new technology imposed by Google and E-learning.

Thirdly, students use the Internet resources most of the time inappropriately. On different occasions, they copy and paste sentences, or even entire articles when writing their assignments, projects, or translation tasks without acknowledging their sources or fearing academic penalty. They quite often seem to lack critical thinking skills, and adequate awareness of the issues of plagiarism, authenticity of information available on the Internet, or intellectual property rights, and this is another problem that faces the educational institutes and academicians.

In Jordan, and specifically at the Departments of English Language at Al-Zaytoonah and Petra Universities, the situation is somehow similar to what has been mentioned above. Although university teachers and students benefit from the instant access to the Internet, actual Internet usage takes place only in the computer labs. Digital libraries are available with limited access, and they could not replace the conventional ones. Online authentic teaching materials are enormously present, but tutors seldom use it them in teaching classes. Therefore, it can be said that some universities in Jordan must adapt to the educational challenges where technology

worldwide plays a bigger role than ever before. They have to cope with these changes as well as provide means for students and teachers to do that.

Despite this, the Internet rapid spread and easy access to all types of information has radically changed how we deliver our lectures, obtain our teaching material, or gain more insights about teaching methods. According to Park and Son (2009), the Internet "has become a useful tool for communication, a venue for experiencing different cultures and a mediator in diverse political, social and economical situations" (p. 80). The Internet technological tools such as discussion boards, chat rooms, audio and video material, have the potential to engage students at tertiary level in Internet process-based education. For example, it can help them access authentic information, understand different linguistic models, and read research papers samples (Linn, Davis & Bell, 2004; Songer, Lee & Kam, 2002; Krajcik, Blumenfeld, Marx & Soloway, 2000; Bransford, Brown & Cocking, 1999). Discussion boards and websites such as LinkedIn also provide tutors like me from all over the world with a rich platform to share ideas about different pedagogical issues in ESL/EFL classes instantly.

The Importance of using technology in second and foreign language learning has been accentuated in the literature written on that concern. According to Thomas, Reinders & Warschaer (2013), technologies have increased in popularity during the last two decays. They are considered as one of the most effective areas in second language learning with a variety of tools. Day after day, the number of teachers and students using computers and the Internet for educational purposes is increasing for couple of reasons. Firstly, computers and the Internet are useful teaching tools because they allow students to access a wide range of materials in the target language such as blogs, videos, audios, and chat rooms. Secondly, they increase the opportunity to interact with native speakers of English (Dickinson, Brew, & Meurers, 2012). Thirdly, they can be fun and motivating for students who will have the opportunity of using the vocabulary or grammar of the second or foreign language they learned. Confirming this, Warschauer (2010) indicates that the use of computer and the Internet motivates students, and helps them communicate effectively with others in a less threatening environment.

Similarly, Gitsaki and Taylor (2001) state that Internet learning can expose students to rich input of English used in everyday situation, allow them to communicate with native speakers most of the time, and expose them to different online activities. Confirming this, Suh (2005) states that online collaboration can enhance learners' understanding and help develop critical thinking skills by exposing them to different perceptions (Lock & Redmond, 2006). Additionally, the Internet is an important source of authentic materials (Brandl, 2002) such as online resources that are more likely to reflect the complexities of real-life language (Bell, 2005). Nonetheless, careful attention should be paid to the selection of internet materials to weed out those that are linguistically inappropriate and poor in quality (Murray, 2005). Many researches and teachers have expressed their anxiety towards copyright violations, and the serious consequences for their institution, or even for them personally (Oliver et al., 1998).

In the Arab world and in the EFL context, different studies have been conducted to investigate the English product of Arabic-speaking students (Ghazzoul, 2008) in traditional classrooms. The findings of these studies indicate that students' product suffers from many problems that relate to the four skills of the language. However, it is expected that applying computer and Internet technology in the same classroom might lead to different results.

Methodology

This paper attempts to elicit some information about the teachers' perceptions of applying Internet-assisted teaching at Al-Zaytoonah and Petra Universities. It also tries to explore the type of obstacles which face university teachers when using the Internet for educational purposes to enhance their future English teaching.

Qualitative research method was employed for data collection. A Likert-scale questionnaire (LSQ) was administered to participants to investigate the teachers' perceptions of the use of the Internet in teaching classes. The questionnaire consisted of three sections. The first a section aims to get the participants' background information; the second section is a four-point Likert scale ranging from 4 (Strongly Disagree) to 1 (Strongly Agree), and the third section is an open-ended questions to gather further data on the participants' willingness to use the Internet, or to add more points that were not mentioned in the questionnaire.

To validate the questionnaire, and get more reliable results, I asked six senior colleagues to try it, and provide their comments. I was given comments on three items which were restructured again. The average time it took them to complete the questionnaire was 10-15 minutes.

Profiling the Participants of the study

The participants of the study were 20 English language tutors working at the Departments of English Language and Translation at Al-Zaytoonah and Petra universities. The rationale for choosing these two places was because I teach English at Al-Zaytoonah University and other colleagues who teach at Petra University helped me collect responses. At Al-Zaytoonah University there are 440 students at the Department of English Language and Translation, and 25 faculty members: fourteen males and eleven females. Similarly, at Petra University there are almost 500 students, and 28 faculty members: 16 males and 5 females. The age range of the teachers who participated in the study is between 25 to 70 years. Their teaching experience has ranged from more than 5 to 35 years. Analysis of the first section of the questionnaire indicates that 90% of the participants have Internet access at work and at home, and 85% of them acknowledged that they use Internet daily with the average of more than two hours a day.

Results of the Data Analysis

The LSQ was divided into three main sections based on themes. The first section (items1 -8) provides information on the value of the Internet as a teaching tool in English classes, and also attempts to infer the tutors' perceptions of their familiarity with the Internet usage. The second section (items 9-11) sheds light on the use of the Internet in writing research papers, and section 3 (items 12-16) relates to the value of the Internet as an educational instrument for students. The results of the analysis of the LSQ indicate that the majority of the English teachers actually believe that the Internet is useful for teaching purposes. The summary of the data analysis is shown in table (1) below.

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Item	Strongly Disagree	Disagree	Agree	Strongly agree	Not sure	Total
1. The Internet provides non-native teachers of English with rich authentic teaching resources.	1 (5%)	1 (5%)	6 (30%)	9 (45%)	3 (15%)	20
2. Internet tools can be useful for teaching purposes.	0 (0%)	0 (0%)	7 (35%)	13 (65%)	0 (0%)	20
3. The Internet enhances our teaching practices, and facilitates difficult theories.	0 (0%)	1 (5%)	10 (50%)	8 (40%)	1 (5%)	20
4. Internet resources can be a rich base for preparing lectures.	1 (5%)	4 (20%)	5 (25%)	8 (40%)	2 (10%)	20
5. Internet resources can be used in classroom and replace textbooks for some courses.	3 (15%)	10 (50%)	6 (30%)	1 (5%)	0 (0%)	20
6. I use Google Translate and other translation websites in translation classes.	3 (15%)	11 (55%)	5 (25%)	1 (5%)	0 (0%)	20
7. I attend training courses for using computer and Internet and web resources.	1 (5%)	8 (40%)	10 (50%)	1 (5%)	0 (0%)	20
8. I am capable of using efficiently Internet-based materials in English classes.	0 (0%)	2 (10%)	9 (45%)	8 (40%)	1 (5%)	20
9. I use the Internet to write research papers instead of using hardcopy references.	3 (15%)	2 (10%)	9 (45%)	4 (20%)	2 (10%)	20
10. I am aware of the intellectual property rights and issues of plagiarism.	0 (0%)	2 (10%)	4 (20%)	14 (70%)	0 (0%)	20
11. I use social media websites such as Facebook as a discussion board with my students	1 (5%)	7 (35%)	6 (30%)	5 (25%)	1 (5%)	20
12. Students are encouraged to improve their oral skills by accessing authentic materials designed for teaching English as a foreign language.	1 (5%)	1 (5%)	12 (60%)	6 (30%)	0 (0%)	20
13. Students are encouraged to bridge their information gap by using Internet resources.	0 (0%)	2 (10%)	10 (50%)	7 (35%)	1 (5%)	20
14. I acquaint my students with important educational websites, and how to use them.	1 (5%)	2 (10%)	10 (50%)	6 (30%)	1 (5%)	20
15. Students are taught how to cite Websites to avoid plagiarism.	1 (5%)	4 (20%)	8 (40%)	6 (30%)	1 (5%)	20
16. Google has facilitated our educational tasks.	0 (0%)	1 (5%)	10 (50%)	6 (30%)	1 (5%)	20

Table (1) Summary of the Teachers' perceptions of the use of the Internet

The results of the LSQ indicate that participant with an average of 80% agreed that the Internet has provided non-native teachers of English with rich authentic teaching resources,

while only two persons disagreed on that. However, three teachers (15%) mentioned that they were not sure of the value of the Internet in the teaching process. Responses on items number two, three, and four indicated that the 70% of the participants considered Internet tools useful and helpful in the process of teaching English. However, 20% considered Internet resources not good enough to prepare for their lectures. This was related to the reliability of the websites, and to the fact that students feel safe when they deal with textbook materials rather than with Internet resources.

In response to item number 5, the results of the questionnaire analysis revealed that 65.% actually do not use the Internet in their classroom for teaching purposes, or as a replacement of the textbook, but 30% agreed that they could use it. 55% of the participants strongly disagreed and 15% disagreed that they use Google translate or any other translation tool in their classes. However, 30% of the participants agreed that they would use these tools in their translation classes. Of the 20 teachers, 10 (50%) agreed that they would attend training courses for using computer and web resources efficiently, but 8 others (40%) disagreed on attending such courses. In response to item number 8, 45% of the participants agreed and 40% strongly agreed that they are capable of using Internet material efficiently in their classrooms, however, 10% mentioned that they could not do that.

Most teachers (90%) agreed that they are aware of intellectual property right and issues of plagiarism, but 10% were not aware of that. In response to the third section of the questionnaire, the majority of the teachers (more than 80%) reported that they encourage their students to use the Internet to improve their skills and bridge the information gap. They also mentioned that they acquaint their students with important educational websites. In some cases, teachers' disagreement was found. 25% of the teachers mentioned that they do not teach their students how to avoid plagiarism, 5% reported that they are unsure of this, whereas 70% stated that they teach their students how to cite a website properly.

Furthermore, analysis of the open-ended questions indicated that teachers in general agreed that the advantages of using the Internet in the classroom are enormous. For example, they mentioned that it provides students with authentic and rich material. Nonetheless, some highlighted the disadvantages of using the Internet in the classroom and wrote about the obstacles and technical problems that may arise during in the lab or classroom. They also referred to the time wasted in finding appropriate or reliable materials. Finally, three teachers confirmed that nothing is better than textbook material and the traditional classroom interaction.

Discussion

Teachers at the Departments of English Language and Translation at Al-Zaytoonah and Petra Universities reported a positive overall attitude towards the use of the Internet in the classroom. The percentage of their agreement about the value of using the Internet was higher than that of their disagreement as shown in the following two figures. A total number of 80% of the teachers believed that Internet resources could be used for teaching purposes. They indicated that the Internet provides students with authentic resources, motivate them, and help them bridge the information gap.

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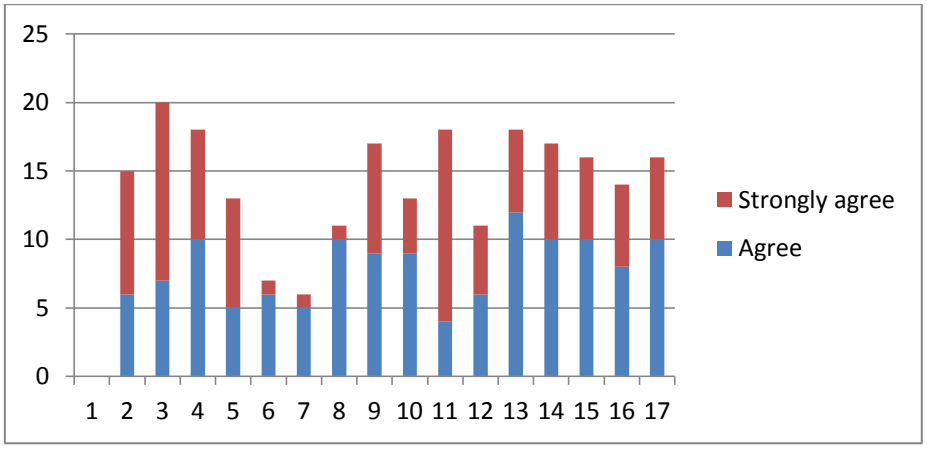

Figure (1) Teachers' agreement on the use of the Internet in the teaching process

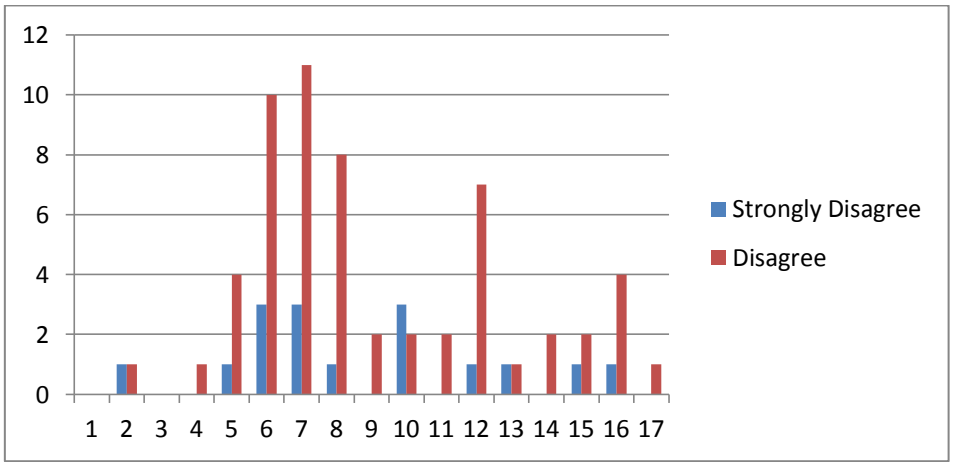

Figure (2) Teachers' disagreement on the use of the Internet in the teaching process

Most of the teachers in the study (90%) pointed out that Internet could improve the communicative and oral skills of the students through the use of chat rooms and social websites. Nonetheless, teachers seem to face some obstacles in using the Internet in the classrooms. Such obstacles include limited computer facilities in each classroom, Internet disconnections that can stop the lecture in most cases and limited technical support. Finding appropriate and well- designed Internet teaching materials can be also time consuming or difficult to the teachers who have limited time to cover the textbooks. Finally, more than 50% of the teachers showed enthusiasm for attending internet training courses, while 45% rejected that. This indicates that teachers need constant training to address the technical problems they might face whilst using the Internet; and this may possibly make them more confident and comfortable in using the Internet.

Conclusion and Implications

Technology has affected every aspect of modern life. In certain parts of the world the use of technology in teaching has bypass the classroom, but in other parts, it has not been fully integrated. As such, this paper has shed light on the teachers' perception on the use of Internet at tertiary level in Jordan. It has also shown how the use of computers and the Internet to meet the students' language needs is still a pending issue in the current context. Therefore, it

can be said that it is necessary for language teachers to examine how to integrate computer assisted language learning into the classroom.

Although the findings of the study cannot be generalized due to the small sample size, and particular teaching context, they still provide the field of teaching English with practical implications. First, in order to decrease the inconsistency between the existing curricula, and online teaching material, teachers should be trained carefully to pick and choose their teaching material. Second, it is suggested that teachers should be provided with on-going Internet training to provide them with sound pedagogy and practical skills. With proper training, teachers can use Internet teaching material, and make the necessary adaptations that will complement the teaching activities in and out of the classroom. Third, tutors should raise their students' awareness about the value of using the Internet resources for educational purposes. Fourth, all teaching classes should be equipped with computers and Internet access, so Intranet-based teaching can be actually delivered. Therefore, academic institutes and decision makers should make sure that such technology is present in every classroom.

Other suggestions for future research might include investigating the students' perception on the use of Internet resources for educational purposes. In addition, another research might like to investigate the impact of mobile technology on teaching in classroom.

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Appendix 1

Questionnaire

Dear Colleague,
The purpose of this questionnaire is to elicit the perceptions of teachers at Al-Zaytoonah and Petra Universities, Departments of English Language and Translation, about using Internet resources as educational tools. The responses will be used for research purposes only. Therefore, I would be grateful if you could respond to the following questionnaire which consists of three sections

SECTION 1
Please tick one of the choices:
1. Gender?
□ **Male** □ **Female**
2. Age?

□ 25– 35
□ 35 – 45
□ 45 – 55
□ 55 – 65
□ over 65

3.How many years of teaching experience do you have?

□ Less than 5
□ 5 – 10
□ 10 - 15
□ 15 - 20
□ 201 -25
□ more than 25

4. Do you have access to the Internet at home?

□ Yes □ No

5. How many hours do you use the internet per day?

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SECTION 2

Please tick next to the option that best represents your answer:

Item	Strongly Disagree	Disagree	Agree	Strongly Agree	Not sure
1. The Internet provides non-native teachers of English with rich authentic teaching resources.					
2. Internet tools can be useful for teaching purposes.					
3. The Internet enhances our teaching practices, and facilitates difficult theories.					
4. Internet resources can be a rich base for preparing lectures.					
5. Internet resources can be used in classroom and replace textbooks for some courses.					
6. I use Google Translate and other translation websites in translation classes.					
7. I attend training courses for using computer and Internet and web resources.					
8. I am capable of using efficiently Internet-based materials in English classes.					
9. I use the Internet to write research papers instead of using hardcopy references.					
10. I am aware of the intellectual property rights and issues of plagiarism.					
11. I use social media websites such as Facebook as a discussion board with my students					
12. Students are encouraged to improve their oral skills by accessing authentic materials designed for teaching English as a foreign language.					
13. Students are encouraged to bridge their information gap by using Internet resources.					
14. I acquaint my students with important educational websites, and how to use them.					
15. Students are taught how to cite Websites to avoid plagiarism.					
16. Google has facilitated our educational tasks.					

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SECTION 3

Please answer the following questions:

1. Briefly, what are the advantages and disadvantages of using the Internet in classrooms?

_____
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2. Do you have any other comments or suggestions you would like to add?

_____
_____
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_____

Thank you for your cooperation and for completing this questionnaire

Dr Nahed Ghazzoul

21st Century Academic Forum Conference Proceeding
2015 Conference at Harvard

Teaching Against Culture of Terrorism in the Middle East

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Abstract

This article focuses on the challenges of teaching under the threat of terrorism in the Middle East with Iraq as a model. It provides information about the recent situation of education in Iraq and activities of key Iraqi partners who oppose these threats. Absence of a comprehensive plan of development, regulation and rules to monitor working in laboratories is the major cause of chemical safety and security lacking in Iraq. Consequences are threatening the public; and the misuse is harmful or even lethal to a large number of people, and would certainly damage the institution, its programs, and reputation. The contribution of CRDF Global on behalf of the U.S. Department of State's Chemical Security Program (CSP) and Sandia National laboratory to build a productive relationship with academic, industrial, and government officials in Iraq was illustrated in terms of well-organized activities and actions with Iraqi faculty.

Keywords: Middle East, Teaching, Culture, Terrorism.

Introduction

Since the end of the 19th century, most profound and radical changes have come about in all aspects of life in the Middle East. The Arab literary renaissance that began over a hundred years ago, which was part of the general Arab awakening that was affecting various aspects of national life, is possibly the most momentous of these changes (Mikhail, 2004). Since September 11, 2001, it is imperative that students understand Islam, its multifarious religious and political manifestations, and the various perspectives on Middle East issues (Dunn, 2002). The world has witnessed a dramatic unfolding of events in the Middle East. Across the Arab world, people are raising their voices—and in some cases shaking off decades of dictatorship (Cortright and Reifenberg, 2012). Arab countries seem to be "richer than they are developed." The unfortunate state of social development in the region is coupled with poor political governance. Authoritarian regimes ranging from Iran, Iraq, Syria, Egypt, Jordan, and Morocco to the sheikhdoms of the Persian Gulf, and chiefly Saudi Arabia (incidentally, most with close ties to the West), continue to frustrate demands for democracy and the rule of law, prompting (religious) opposition movements that espouse equally undemocratic, exclusive, and oft violent measures. Not surprisingly, the current conditions have caused much fear in the West about the international destabilizing ramifications of this seeming social and political stagnation (Bayat, 2010).

There is no doubt that the circumstances surrounding today's terrorist movements and the emergence of violence in Islamic societies, in particular, creates an unhealthy and dangerous environment. Islamic society deplores violence, extremism, and terrorist acts. To deter or eliminate these phenomena calls for cooperation throughout the middle-eastern countries, and terrorism must be attacked at its roots. It is essential to understand the various causes of terrorism in order to eliminate its manifestations (Al-Thagafi, 2008). When manipulated by extremists and absorbed by impressionable youth, certain political, socioeconomic, cultural, geopolitical, religious, and external forces exist in the Middle East that aids extremists' in their recruiting and fundraising activities. At the same time, and without trying to justify the extremists' activities, these same forces provide, to a certain extent, some rationalization for extremist activity (Young, 2009).

In the fight against terrorism, the Middle East has had the benefit of significant help from numerous countries, centers and institutes. In this battle with the enemies of our way of life, however, the active participation of Middle Eastern universities is singularly lacking, and while valuable professors and programs can sometimes be found in law departments, or in history and political science, the sad fact remains that the universities are a weak link in the Middle East's chain of defense against terror.

Like all sectors, unfortunately, today, Iraq's scientific and educational capabilities are behind. In addition, Iraq is still facing extraordinary circumstances and hence, education and knowledge advancement are needed for Iraq's stability, development and sustainable growth. Higher education and scientific and technological research and development are the base for any nations' advancement, development and creating a civilized culture. Therefore, an essential part of Iraq's development and sustainable growth in all sectors will be rebuilding its capacity in higher education if this part is well considered and considered.

The faculty, facilities (laboratories, workshops and chemicals) and the students are the essential parameters of rebuilding a developing country and today, they are subjected to recruitments by terrors or serve as fighters against destruction of civilization by securing their places. This article focuses on the challenges of teaching in the Middle East under recent threating of terrorism and efforts to develop a positive research culture.

Literature Review

Violence is in part the result of misleading religious concepts. It is an ultra-aggressive violation of some authentic Muslims who are completely different from the versions of Muslim politicians, scholars and ordinary people. All of these people want to live peacefully and get on in a modern world without extremist activities. This demands recognition that Islam can be spread by the sword in the 21st century, just as much as it was in the 7th

The violence is also rooted in the political culture of Iraq and Syria, the countries from which ISIS has sprung. The extremes to which ISIS' "Caliph," Abu Bakr Al-Baghdadi, and his predecessors have gone with Westerners has brought this culture to an international public, but they merely reflect what these countries' leaders, and to some extent what their colonial predecessors have been doing for decades.

The foreign opposition to the multi-national forces in Iraq mainly comes from citizens of nearby Muslim countries with repressive regimes. Economic circumstances in the origin country of foreign fighters do not seem to be a particularly important predictor variable.
ISIL, which is the successor to Al-Qaida in Iraq (AQI), has undermined stability in Iraq, Syria and the broader Middle East through its terrorist acts and crimes against humanity, and poses an immediate threat to international peace and security (Evans, 2014). Prior to ISIL's expansion of territorial control in parts of Iraq and Syria, the group (and its predecessor, AQI) benefitted from a network of associates in Syria, which it used to facilitate travel to Iraq (Levitt, 2010). Currently, the well-recognized modus operandi of the group shows their followers that they have the strength and ruthlessness to lead. But as with everything ISIS does, there was a twist. The group launched a lightning advance through northern and central Iraq in June, 2014 declaring an Islamic caliphate (Salman and Holmes 2014). Most of the followers, who were recruited by ISIS in Iraq, are non-working young people, students or even faculty members from villages and countries. The number of followers is increasing under the current situation of Iraqi decaying economy, conflict of diverse authentic groups and a clannish communities in absence of conciliation efforts among cultures and certain actions to develop a unified culture of honesty and responsibility.

Linkages between higher education institutions and regional community are of paramount importance to sustain cultural development and build a modern country. These linkages are critical to the task of supporting broader societal goals, fueling the creation of knowledge, securing thoughts from extremists, advancing research, and educating a new generation of leaders able to engage in the global knowledge economy but also steeped in their own cultural and linguistic traditions. In the Middle East and North Africa, these linkages have been less developed and have not effectively served the broader goals of society. There is a growing recognition that Arab higher education systems should focus more on improving the "relevance" of their services in terms of knowledge and research and in linking them to the labor market and economic development (Mahmud, 2013).

With all these complex conditions, teaching in Middle Eastern countries is a challenging task. How can universities reflect the culture of being against terrorism and serve as a center of spreading the culture of being against violation, while some students and faculties are a serious threatening due to their extreme beliefs? Therefore, the university campus has become more security conscious, and that awareness extends to classes, where concepts of terrorism could be spread, and laboratories, where explosive and toxic material could be used or prepared for attack the safe zones even in the university.

Culture of terrorism in the classroom

Presently, threats to security on the civil community are considered in the context of cultural terrorism. Since September 11, 2001 a new approach to dealing with terrorism has

been introduced. In this approach, young people were instrumentalized for the new purpose of terrorism outside of their countries. Since global terrorism stems from the Middle East, exploring the correlation between regional issues and new terrorism is of great importance. If new terrorists are conceived in the region, one needs to consider the unique cultural and religious characteristics which frame it on the one hand; and the systemic approach for dealing with these issues on the other. Due to lack in youth centers, civil organizations and cultural societies, the university is the most important center of spreading cultures in Iraq, especially to students with extreme religious beliefs. There are a number of cases report of extreme faculty used their authority to spread fanaticism in the classroom or mosques in Iraq.

The current policies of the universities in the Middle East should be modified, because they tend to ignore the threat posed by new terrorism in which young students are enlisted as terrorist soldiers. Thus these institutions may serve as a threat too, or an opportunity for terrorism, in society. The people living in Salah Al-Din province serve as an example on ground: it is a complex of urban and peasant people. The history of this province, in terms of politics, is interesting as it is the birth place of the former president Sadam Hussain. Urban people suffered from persecution after 30 years of authoritarianism and prosperity and they are believe in the inevitability of change and living with the other people safely and equally. On contrary, the country or peasant people are seizing the opportunity to be against the urban and the tribe of the former president and earn a post with the government. They are trying all the time to compensate for their low values and lack of education and ethics by catching with high post and authority.

Though largely below the surface, this cultural and materialistic conflict were used by fanatic and uneducated groups in the province. They were always waiting and looking for a prominence chance. Their sons are highly abided by the mores of the fathers although they are learning different ethics and culture in the university. They are guided by their extreme tendency to control the province and find a post of power for each in spite of their low credentials. In this culture, many want to be a leader with power and money even if he turns into a murder, with a sword or a gun, enforces people to follow his way in life. The most challenging task is to change their way in thinking because they are hiding their convictions and thoughts about urban people and society. Professors are incapable of mending this hidden culture and deal with hidden believers. Besides, it is forbidden in Iraqi universities to discuss the conflicts of cultures and weakness of government to build a unified community. Thus, the professors have to convince themselves that they have no serious threat or even a challenges in their classes and they can continue in a routine way of teaching and learning life! The security officers are in a big challenge as well. They have a lot of uncertain information about extremist of students and teachers, but they are in capable of hindering them due to the power of their tribes or threatening by those extremists.

One of the 56 documented attacks on school and universities buildings during 2009-2012 is an attack on Iraqi police man studying at Tikrit University by a person wearing a student dress. The investigations resulted in a fact that the bombing materials were hided inside the university land and used to kill the police man. Many recorded fracases caused by ethics or categorical conflicts between students or groups of students resulted in bad injuries. The teachers are subjected to serious harassment on public or academic social networking. Their personal life, behaviors and style of teaching due to the lack of regulations and rules organized the relation between student and teacher in academia against such skinhead behaviors of country students.

According to all these observations, the academia needs an essential change toward a solid education environment starts with regulations and well organized plan to build a civilized forum inside classroom or on academic social networking.

Challenges with Chemical Security

The universities in Syria and Iraq have become more security conscious, and that awareness extends to laboratories. New guidelines and approaches, driven by legislation and regulation— to say nothing of common sense—are promulgated every year over the world to implement chemical security everywhere. A laboratory security system is put in place to mitigate a number of risks and is complementary to existing laboratory security policies. In very broad terms, laboratory security keeps people secure from chemicals violence, and keeps chemicals safe from people. We have to raise awareness of the issue. Risks to laboratory security include

- theft or diversion of chemicals, biologicals, and radioactive or proprietary materials (such materials could be stolen from the laboratory, diverted or intercepted in transit between supplier and laboratory, at a loading dock, or at a stockroom, and then sold or used, directly or as precursors, in weapons or manufacture of illicit substances);
- theft or diversion of mission-critical or high-value equipment;
- threats from activist groups;
- intentional release of, or exposure to, hazardous materials;
- sabotage or vandalism of chemicals or high-value equipment;
- loss or release of sensitive information; and
- rogue work or unauthorized laboratory experimentation.

The type and extent of the security system needed depends on several factors, including:

- known and recognized threats gleaned from the experience of other laboratories, institutions, or firms;
- history of theft, sabotage, vandalism, or violence directed at or near the laboratory, institution, or firm;
- presence of valuable or desirable materials, equipment, technology, or information;
- intelligence regarding groups or individuals who pose a general threat to the discipline or a specific threat to the institution;
- regulatory requirements or guidance.

The expertise behind the chemical security in Iraq owes much to some of U.S Department of State efforts called the Chemical Security Program (CSP), which enables many Iraqi scientists to participate in grants and fellowships in U.S where chemical safety and security (CSS) regulations are implemented. The U.S government is stepping up such effort, which aims to restore the intellectual capital that Iraq will need to rebuild and remain secure against different kinds of terrorism. This kind of engagement is powerful and effective. The potential universities to the north of Iraq, such as Tikrit University, have the chance to benefit from these supports. They sent many of the faculty members, which were under years of sectarian violence, to U.S and other countries to explore techniques and improve their skills. The grants and the fellowships of CSP attracted the best of the best and the results were extraordinary regarding the implementation of chemical safety and security concepts. The Iraqi participants in those opportunities have reflected their experience by leading series of workshops in their universities. These workshops offered essential insights into the challenges faced by Iraqi faculty courses to apply safety and security concepts in their universities.

Currently, the major issue is security. The Islamic state group advance in northern Iraq has crippled efforts to control all the chemical stores and mechanical workshops at the universities. This issue seemed to demand further efforts, as there is a significant lack in implementation of security concepts and the required resources. A practical example emerged

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during Tikrit city invasion in June 11th, 2014 was the unsuccessful attempt of ISIS to find the chemical stores in Tikrit University campus. Tikrit University, via the guidance and expertise of CSP fellows in the university, was able to reallocate chemicals to a secure stores and use secure cabinets with digital locks in these stores. After retaking Tikrit city in April, 2015 and till now the chemical stores remain secure and all chemicals are ready to use by the faculty and students in the University.

It became clear that the Iraqi faculty and researchers, after 2003, have a growing ability to learn and create. Figure 1 shows a dramatic increase of publications in Iraq. However, terrorist attacks increase in a parallel growth as shown in Figure 2. The credential of Iraqi scientists should reflect on their community and contribute in a social development. Into this correspondence, the initiatives of CSS in Iraqi universities have to identify effective strategies to support the critical task of securing Iraqi institutions of higher learning. Lack of protection, weakness in university administration and planning have dissuaded university initiatives from applying what they had learned from CSP. As anyone in the world must know, Iraq's once mighty universities are under siege by various forces of chaos - not just the scourge of ISIS, but also fear and apathy in modern society.

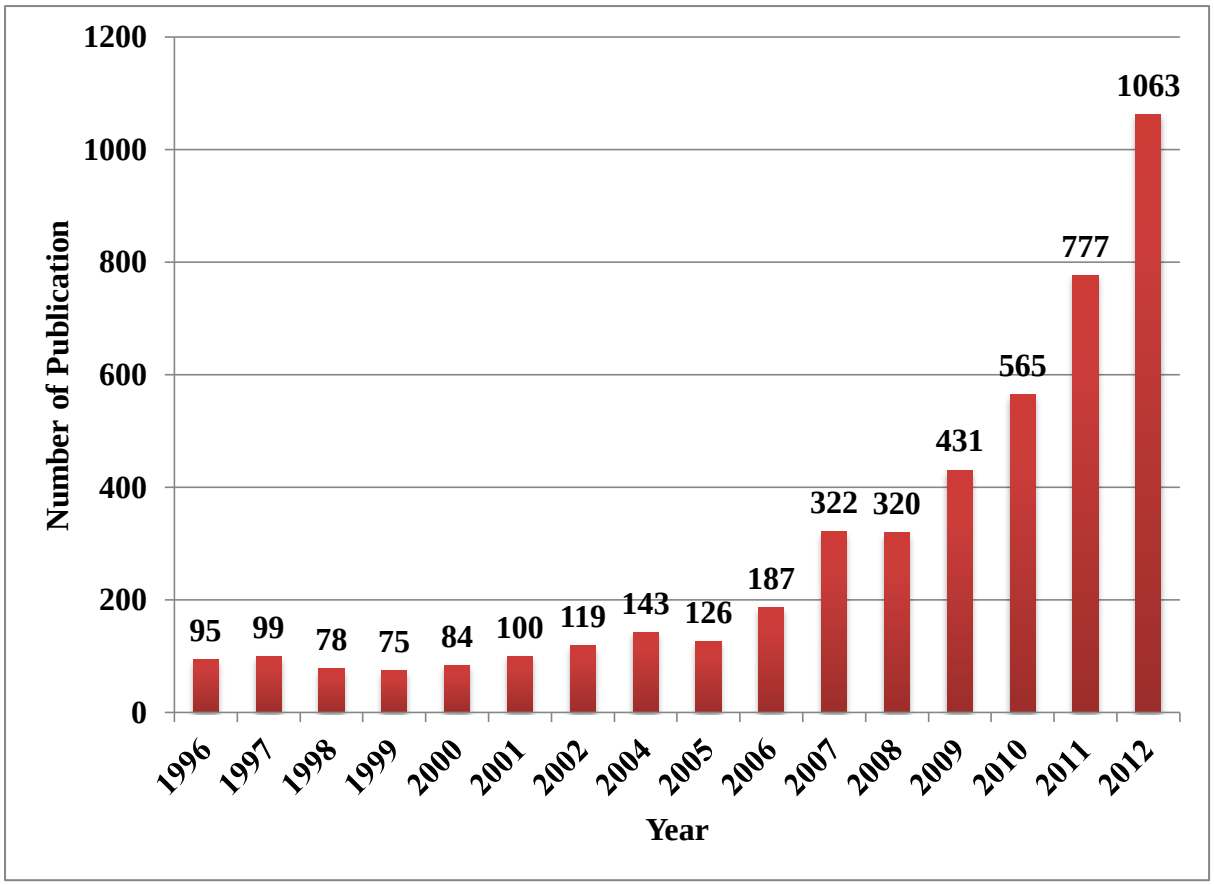

Figure 1. Development of publication in Iraqi academia after 2003

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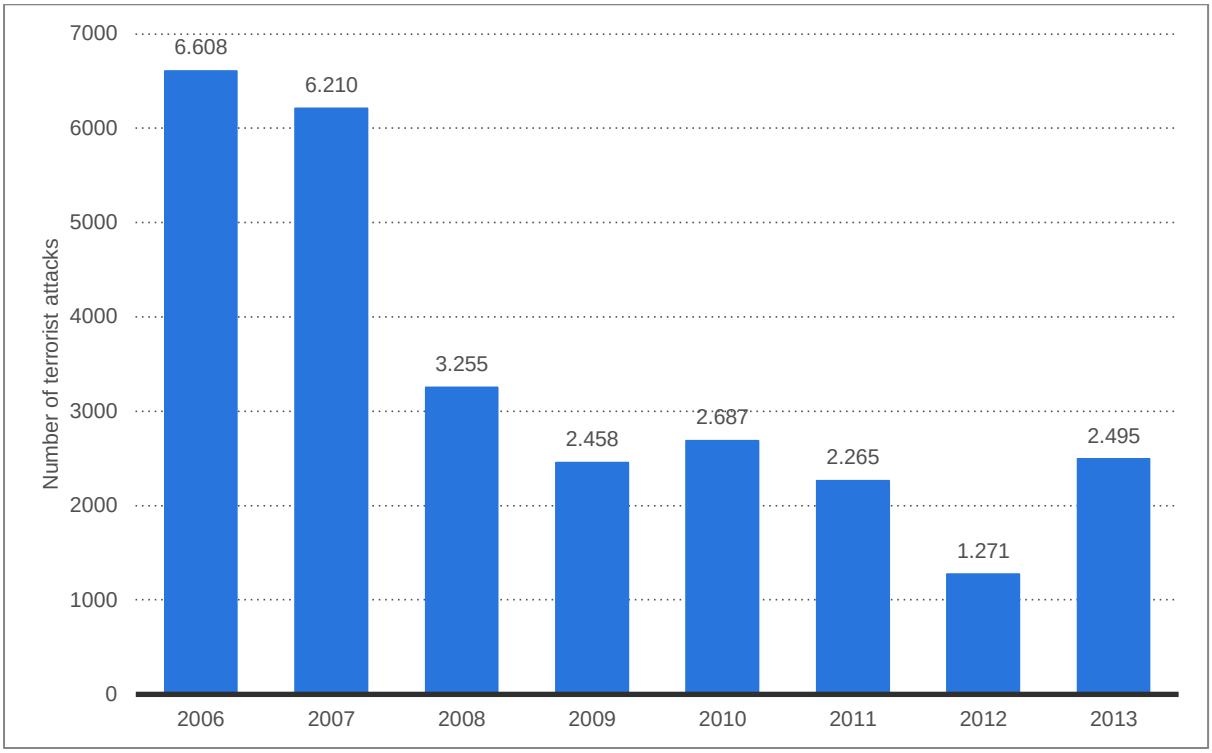

Figure 2. Increasing of terrorists attack after 2003 in Iraqi

Contribution of CSP, US Department of State

Promising efforts had started in 2011 to build a solid infrastructure of CSS in terms of developing skills of potential human resource in Iraqi universities. Numerous partners had contributed in preparation of successful workshops on CSS, Chemical Security Program (CSP), Sandia National Laboratories (SNL), Arab Science and Technology Foundation (ASTF), in conjunction with the Ministry of Higher Education and Scientific Research in Iraq (Picture 1). The workshops were combination of quantative and qualitative methods of handling chemicals in laboratories, stores and field. Various kinds of informations, cases studies and tutorials were presented by experts of CSS. Visits to local university laboratories focused on issues and real case studies with the purpose of finding solutions to improve future practices in chemical laboratories.

Now, after 4 years of spreading culture of CSS among Iraqi universities complex questions arise when discussing how to utilize the base and initiatives of CSS in Iraq to enhance practical application of CSS concepts in laboratories and stores. For example, are they authorized to apply what they had learned? How can they get approval from the administration of the university to monitor worker in laboratories? Is there any physical resources to apply CSS concepts?

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Picture .1. Participants from Iraqi universities in a CSP workshop. Malaysia. October 2014

Based on long history of working with the Iraq government, there is a bad experience about joint project with international organization after 2003. Although CSP has a very clear plan to build and improve capacity of faculty via series of workshops with a sequential topics, Iraqi universities have used to send different faculty member every time to participate in this series. They are handling this participation as an opportunity to learn general information and spend good time during traveling outside Iraq whereas this series requires participation of the same faculty member to build his capacity progressively. Thus, while building capacity of Iraqi faculty is a critical need, building capacity of university administrators is an issue. The key is working with a good administration of a university. This requirement supports the crucial need of integration in building of Iraqi universities, a systematic building of capacities is required for administration and staff along with classrooms, laboratories and offices. In other words, a comprehensive plan of building and development is required, which is missing in Iraqi universities.

The current situation of Iraqi laboratories reveals weakness of investment in financial and human resources. The consensus during CSP workshops that the informations they have learned are very helpful in applying CSS concepts in laboratories and chemical stores, and the universities are not lacking financial resources to supply safety and security instruments. However, they do not have an authority to start actions in their universities. The former president John F. Kennedy expound upon this complex situation, commenting "To make your place Secure you need Leadership and Power", leadership for planning and power for implantation. For example, Baghdad University- ranks first in Iraq- does not have even a unit for CSS, though many of the participants during the last four years were from Baghdad University. Those participants are lacking authority to start their actions and they found out that voluntary work will not change much in the laboratories. The administrative unit of CSS can help stitch up whatever resources and skills the university have earned. Thus, Iraqi CSS's initiatives, inside and outside Iraq, intuits the urgent need to establish a unit in each university to fill the gap of authority and give the participants an illegal access to the laboratories. Now,

after series of workshops focused on spreading culture of CSS and planning to start administrative actions 28 participants have succeeded in establishing units of CSS in their universities. Currently and in continuation of its support with its participants in Iraqi universities and academic institutions, and with the support of US Department of State, Sandia National laboratories and Pacific Northern National Laboratories, CSP plans to co-organize series of technical and assessment workshops focused on the operations of Iraqi university department's Chemical Safety and Security Units. The objectives of these workshops are to re-engage participants on the topics of CSS that were discussed during the last years with CSP, facilitate the development of department-specific academic laboratory CSS benchmarks that will be overseen by the department units and to work with participants to understand operational plans and roles and responsibilities, and develop appropriate standard operating procedures related to laboratory inspection and /or other Unit operations as well as responsibilities and actions to be completed by Unit members upon their return to their universities. These will be reinforced through laboratory demonstrations and excises as well as post exercise reports. A long term work is proceeding have been started to integrate each Unit into a national framework capable of recommending and implementing chemical safety and security measures for Iraq as a whole has yet to begin. Along with theseefforts of establishing the Unit, parallel efforts have been started to establish the first center of CSS in Iraq at Babylon University. This center will serve as a permanent regional training center of trainers for Iraqi universities and will facilitate the development of work to implement a national framework for chemical safety and security into which biological and radiological experts can integrate at a future date to be determined. Through this partnership with CSP, the Iraqi CSS initiatives seek to provide seed culture to a diverse range of academic activities and technical collaboration on CSS in Iraqi institutions. This culture is growing up all over the academic institutions and the initiatives are working on long term and well planned activities to promote successful models of authorized structures that are responsible of sustaining the growth of CSS culture. The pivotal role of the university in creation of CSS culture in Iraqi has been studied by Hussain (Hussain, 2015). He illustrated several considerations that made this issue of great importance:

1 A university is highly considered and trusted by the community in Iraq. Thus, they initiatives are relying on this consideration and trust to make the developed roles and responsibilities by the university prevailed over the community.

2- Universities are qualified, trustworthy and convincing centers that they can disseminate culture safety and chemical security in the community.

3 -At present, one can rarely find a city without a university; therefore, it is quite easy to disseminate all information related to the safety and security of chemicals across the world.

4- Within the community, they are large number of academic staff, administrative staff and students. Through those members, spreading of CSS culture will be easier than enrolling large number of citizens in CSS workshops.

5- University graduates are usually employed by institutions in different sectors and in the same city where the university is located. These sectors such as industry, agriculture, health and others often deal directly with chemicals.

6- Most universities deal with chemicals, biological and radioactive materials directly and even some of them prepare some of these materials. Thus, the university is the most reliable institution that can determine the risk of any of these materials and take all precautions for the safety and security from them.

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Conclusion

Chemical Safety and Security in Iraq after 2003 pose many challenges. It is concluded from the present study that a key partner is required from each university in Iraq, who should promote models of CSS activities on campuses in order to enhance tolerance and a peaceful learning environment. The models of activities will be focused on building scientific-based approaches to countering violent extremism and motivate the academic and social communities. These activities need support from the government in terms of approving the establishment of units, departments or centers and prompt support of the initiatives and their activities.

Although the Iraqi government is supporting different programs and projects such as offering a reasonable budget to hire faculty members, supplying materials and instrumentation, construction of new building, and sending thousands of students outside Iraq to earn bachelor, master and doctorate degrees, they are weak in the integration of these efforts to improve the outcomes. The key is the leader in the university, the owner of power and authority, who has no leadership and lacks vision of comprehensive development. Along with sending staff to earn degrees from the outside, they should start improving the current situation of the academic institutions inside the country. The professional investment of resources, human and financial, requires a well-integrated plan of development. Although, there is a remarkable limitation of independency of the Iraqi universities, the leaders can do a lot under their current authority. The positive outcomes of following a plan of development are able to inspire the community to join these efforts and improve their way of thinking and tackling with recent problems of violence and terrorism. Thus, safety and security will spread from Iraqi universities to Iraqi culture.

The mission should be a national endeavor because the threat of violence is not limited to a city or a university, but to all of Iraq. What happened in June 10t, 2014 will determine whether the Iraqi universities can maintain a culture of building and improving peace and influence in the community. At this critical juncture, the initiatives of safety and security should get support to develop their voluntary activities to an official daily work of improvement under the protection of government. Without power, they are unable to apply the concepts, and without the leadership the government will lose more people, because of uncontrolled actions of extremists, along with a lot of money due to a vague vision of leading. Currently, one of the most crucial tasks for the leader is to foster creative activities of initiatives and the relationships between the U.S. organization and Iraqi universities. Indeed, they are not lacking resources but the absence of a scientific plan to resolve problems and tackle with challenges is remarkable. Some promising outcomes are achieved in Iraqi universities via the partnership of Chemical Security Program with some active universities like Babylon and Tikrit. This partnership has merged and reorganized the local and international efforts to improve chemical safety and security in Iraqi universities. The mission is to extend the university resources and achievements to the Iraqi community.

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Integrating Digital Media into Multimodal Compositions: Five Trends in the Transfer of Rhetorical Skills

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Abstract

During the summer of 2014, six faculty members taught a cMOOC at Virginia Commonwealth University. The course, which was called Inquiry and the Craft of Argument, is a general education course focused on three skill areas: written communication, critical thinking, and information fluency. This study is an analysis of the students' final multimodal compositions, defined as projects that combine academic argument and research with a variety of multimedia, such as images, videos, animations, and internet links. Our findings indicate that there are five trends that are common to the students' work and that they struggled to transfer their knowledge of print composition to their digital multimodal projects.

Key Words: cMOOC, multimodal, multimedia, learning transfer

Introduction

During the summer of 2014, six faculty members taught Virginia Commonwealth University's first cMOOC. Unlike a traditional MOOC in which students work in isolation, a cMOOC is an online course in which students learn together in a purposely connected way. Two types of participants were invited to participate in the course: the public, who could enroll for free, and VCU students, who could register for academic credit. The course, called UNIV 200: Inquiry and the Craft of Argument, is a general education class that all VCU students are required to take. The course takes the place of freshmen composition and focuses on three skill areas: writing, critical thinking and information fluency.

During the summer, we adapted the course to the online environment and ran a pilot with six teachers, each teaching one section which was capped at 20 students. We also reframed the course content to explore the early American history of new media--including works by Douglas Engelbart, Ted Nelson, and Alan Kay--and we renamed the course, *Thought Vectors*, which was reminiscent of work by Engelbart.

The ThoughtVectors website (thoughtvectors.net) was designed to break down the traditional "silos" in which online courses typically exist. The six sections were aggregated through a central hub which functioned as the course home page. Here, students could navigate the entire course, including visiting all classroom sites, reading their professor's and peers' blogs, and accessing the twitter feed for the class. In addition, the Thoughtvectors site was designed so student blog posts were constantly aggregated and updated on the home page. On any given day, a visitor might encounter posts by over 120 students, instructors, and/or outside participants.

Throughout the 8-week course, students in all six sections shared readings and similar daily assignments that asked them to think critically about the texts and the digital world around them. Instead of analyzing texts in isolation, the blog platform gave students the opportunity to share their reading experiences on their blog sites. Ultimately, students created a final multimodal composition to support an argument about a topic of their choice.

In order to study multimedia texts, a general understanding of the term "multimodal composition" is necessary. The term is used primarily in composition theory and teaching practice to describe a work that integrates both text and other forms of media--such as images, video, music, etc. As such, the term "multimodal composition" is used to describe a wide variety of types of projects--from an advertisement that contains both image and text, to an academic poster or a video documentary. Throughout the cMOOC course, students produced numerous multimodal texts in their blogs. However this study focuses only on the students' final multimodal compositions, which we defined as a project that combines academic argument and research with a variety of multimedia, such as visual images, videos, animations, links, and sounds.

The cMOOC provided the opportunity for a close analysis of the multimodal compositions that students produced as their final projects in six online sections of the course. In this paper we identify consistent problematic trends in students' use of media in these compositions, many of which indicate their struggle to transfer knowledge and skills from print to the online environment.

Research Methods

This is a qualitative analysis of student multimodal compositions produced in a cMOOC at Virginia Commonwealth University. As teachers of composition, our research was propelled by our initial assumption that students would transfer rhetorical knowledge from print to multimodal compositions. When our assumptions were not met, we questioned why students struggled with this basic learning transfer.

Using components of grounded theory, we developed a qualitative approach to analyze student compositions by identifying commonalities in students' integration of multimedia in their final projects. These commonalities were coded and categorized and yielded five specific trends that explain the students' struggle to transfer rhetorical knowledge from print to multimodal compositions.

Findings and Discussion

First, students struggled to transfer their knowledge about the rhetorical situation in writing to their work with multimedia. Since our course was focused on argument, we provided instruction in rhetoric and the rhetorical situation. Rhetoric is the art of persuasive communication, and the rhetorical situation refers to an awareness of audience, purpose and context. Rhetorical strategies help a writer tailor communication to a particular audience and purpose.

Early rhetoricians, such as Plato and Aristotle, focused their discussions of rhetoric on oral, and later, written discourses. More recently, Joan Leach (2000), Associate Professor of Rhetoric and Science Communication at the University of Queensland, explains that semiotic theory "opened the door to images" and other forms of "non-verbal communication" as objects for rhetorical analysis (p.209). Likewise, Jason Palmeri (2012), in *Remixing Composition: A History of Multimodal Composition*, states that even in the 1960's, compositionists such as Edward Corbitt were already suggesting that "the classical rhetorical techniques for analyzing an audience of a speech are not necessarily substantially different than the techniques required for analyzing the audience of a print or electronic composition" (p.93).

Students in the United States study the rhetorical situation through the analysis of writing, advertisements and other media throughout their academic careers. By the time they enter our course, which is the final one in a series of three writing classes, most students know how to tailor their print texts to meet the expectations of an academic audience. As a result, we assumed that the students would transfer this basic knowledge about the rhetorical situation into the new medium they were using when creating multimodal compositions online, but students failed to transfer this vital concept. For example, a student who wrote an argument about the harmful effects of binge watching Netflix, features an animated image of a man being hit in the head with a boombox and a sexualized cartoon dancer amidst falling hotdogs. While his text articulated serious concerns about this addictive practice, his images do not reflect this same tone. When questioned about his choice of images, the student explained that he was trying to "lighten the mood." What is interesting is that the student understood the need to maintain an academic voice throughout his paper, but he did not transfer this knowledge of audience and purpose to his selection of media. Indeed, his rhetorical choices

regarding media indicate a failure to understand the rhetorical situation and actually undermine the serious message he is making in his argument.

Second, students struggled with the rhetorical situation by making design choices that were not appropriate to the audience. In contrast to their print papers that conform to specific requirements as defined by the teacher, students who compose multimodal compositions in the online environment must make important rhetorical choices regarding design principles such as color of text, choice of font, background colors, and selection and customization of theme. While the inability to transfer knowledge and skills accounts for some of the struggle to define and employ these design principles, it is important to note that a lack of training in design figures prominently into the problem. Because most teachers have traditionally required students to submit work according to distinct specifications--in print, using a black Times New Roman or Arial font, double spaced with one inch margins--students are not taught to make decisions about the medium in which they write or the media that they will use.

For example, while students know that printing an academic paper in bright colored Comic Sans would send a more unprofessional and less academic message than using black Times New Roman, they did not transfer this basic knowledge about font appropriateness to their multimodal projects. One of our students, who was studying female beauty standards, placed a white curly font atop multiple, alternating boxes of bright colors. Additionally, in an attempt to choose a sci-fi Wordpress theme and wallpaper, a student who wrote about artificial intelligence produced a multimodal composition in which the flashy and distracting background image makes the text nearly unreadable. These are clearly inappropriate rhetorical choices in terms of design, and yet enough a significant number of students made these kinds of errors, causing us to suspect that we began to suspect that transfer of skills from print to multimodal texts was not happening. These examples are representative of our student's design choices as a whole, and they clearly illustrate the inability to transfer knowledge; however, significantly, they also illustrate their lack of education and training regarding design.

According to Cynthia Selfe (2004), professor of English at Ohio State University and well-known scholar in the field of multimodal composition, "It is not unusual for faculty raised on alphabetic literacy and educated to teach composition before the advent of image-capturing software, multimedia texts and the World Wide Web to feel inadequate to the task of teaching students about new media texts and the emerging literacies surrounding these texts" (p.67). Sonya Borton (2008), whose dissertation examines how students transfer skills from print to other mediums, echoes Selfe's assertion and argues that both students and instructors "need an effective way to discuss issues of design and presentation" in multimodal compositions because "a grammar based solely on design becomes problematic when dealing with new media's place in composition studies" (p.6). Borton aptly suggests Lev Manovich's well-known cinematic approach to new media texts, which denotes five principles of new media as numerical representation, modularity, automation, variability, and transcoding. Borton also references Daniel Keller, who argues for "terms to help students engage in multimodal texts, which primarily focus on the language of photography such as "camera angle," "voiceover," and "soundmark." However, if these approaches are to be used in

the composition classroom, instructors of composition and rhetoric must be trained in complex theory related to visual studies

Because it is not feasible to require composition instructors to learn and subsequently teach these complex and discipline-specific terms and theories to students, Borton argues that "Scholars need to build a specific rhetorical vocabulary necessary to connect the context of multimodality to print" (10). Unfortunately, if we don't build this vocabulary, most writing teachers will either "continue to favor the written text" (Borton, p. 6) or continue to receive multimodal compositions that disregard the rhetorical situation in terms of design.

Third, not only did students struggle in their multimodal compositions to adapt their work to a particular audience, they often chose media that did not support their arguments. Research in composition theory is not needed to establish that evidence should always support the claim in question. Granted, some students struggle with selecting the best evidence to support their claims in print texts as well; however, rarely do students choose evidence that is so digressive or tangential to the argument that it confuses the reader. Unfortunately, all too often students inserted videos or images that failed to support their claims. For example, a student who was writing about the Affordable Care Act questioned the impact it would have on research funding for university medical centers, such as the one on our campus at VCU. As evidence, she inserted a promotional video for the university's medical center and basketball team, featuring doctors in lab coats playfully performing medical tests on basketballs interspersed with live clips from basketball games. This promotional video does not support the argument the writer makes about potential funding cuts. Given her intention as a writer to incite concern in the reader about the loss of research funding due to the Affordable Care Act, the video actually undermines her own writerly intentions. In a second example, a writer argues that employees must use discretion when posting on social media, and he uses an image of a political button that says "Every Tweet Counts." The only connection the reader can establish between the image and his argument is that Twitter is an example of social media. However, the source for the original image is a political blog that advocates using Twitter for political campaigns, which is completely unrelated to her argument about using discretion on social media. In this example, as in the previous one, students did not choose media that supported their arguments.

When students did choose appropriate media that supported their claims, they often failed to introduce or provide context for the media. In our sequence of courses, we use MLA and APA citation rules to teach students to introduce quoted material from studies and unpack data in tables; however, we do not provide this same instruction with images. Often, writing handbooks for undergraduates that contain instruction in citation do not provide clear directions for how to integrate images in online multimodal compositions. Indeed, the official publication manuals for MLA and APA have not been updated in 7 years and 5 years respectively, and both remain ambiguous about how images should be used in academic writing. In fact, MLA continues to encourage tables and charts (and presumably images) to be indexed in an appendix at the end of the essay, a practice that is not conducive to multimodal composition.

By the time students take our second-year composition course, they have been taught that a chart or table must be referenced and explained in the body of their

essay. We assumed they would transfer this knowledge when they inserted images and videos in their multimodal compositions. However, often this transfer did not occur. Instead, students simply inserted images or videos without any introduction or reference to them in their written text; and without this necessary explanation, the media failed to function as useful evidence or example in their argument. For example, a student who studied high incarceration rates for African Americans argued that many judges were racist. The student inserted an image of a judge to supplement his argument. However, because the image was not introduced or captioned, the reader could not identify the judge. Another student who wrote about NASA's use of social media created a section of his multimodal composition devoted to "Computer Innovation." In this section, the student inserted images that were unrecognizable and unidentifiable. In both of these cases, students did not provide captions that contextualized their images; hence, these images did not serve as reliable support for their arguments. Instead, their chosen images functioned as random visual digressions and obstacles for the reader, instead of useful evidence.

Although most students view hypertexts daily as they read online, our students struggled to effectively mimic the use of links in their multimodal compositions. According to George P. Landow (2006), Professor of English and Art History at Brown University and editor-in-chief of the Victorian web, hypertext "denotes text composed of blocks of text--what [Roland] Barthes termed a *lexia*--and the electronic links that join them" (p.3). However, Landow notes that hypertext includes more than text and links; it "denotes an information medium that links verbal and non-verbal information" such as images, diagrams, maps, video or sound (p.3). Landow explains that when links are used in hypertexts, they are often used as a replacement for traditional footnotes. When a reader encounters a footnote, s/he "leaves the main text to read that note," which can contain passages that "support the argument in question" or provide further information about the source (p.3). Like a footnote, links serve a twofold purpose: to provide the reader with additional information about the word(s) in which the link is embedded and to establish credibility by pointing to other sources which support the claim. In sum, an effective link anticipates the needs of the intended reader.

Rather than supporting the point in question or establishing credibility, students often identified phrases for linking that did not need additional information, or chose the wrong words in which to embed the links. Instead of embedding a link to the title or author of a source article, a student chose instead to embed a link to the word "intentions" in his sentence, a word that did not signify where the link would take the reader. *What further information might a reader need about the word "intentions"?* That is the question the reader is left considering. Likewise, a student who introduced a direct quote did not link to the actual source of the quote, but instead opted to include a link to the Siena College Marketing Department because the professor she quoted worked there. Conversely, students frequently identified useful words for linking but linked to pages that were not the most illustrative of their point. For example, a student who mentioned the *Huffington Pos*t chose to use the name of the newspaper as a link. However, rather than link to the newspaper's own "about page," she linked to a tertiary source that very briefly described the newspaper in a way that could not possibly be as accurate as the newspaper's own account of itself.

While we expected students to use too many links in their final projects that would distract the reader, we were surprised to find that most students tended to use too few or even no hyperlinks at all. This finding was especially surprising because we required students to use links in all of their blog posts during the course. While we believed we had taught students to use links in their writing, many final projects included no hyperlinks at all, even when they were often needed. In one particularly illustrative example, a student who argued that viewers should be wary of online health information included no links to the dubious online health information that she referenced in her project. In this case, she failed to anticipate the reader's need for visual examples of the health information which she criticized

Conclusion

While we pointed out some of the challenges students faced in integrating hyperlinks in their multimodal compositions, we found students who used links demonstrated a consistent trend in providing links to the original sources from which they were quoting or paraphrasing. Interestingly, students seemed to transfer their understanding about how in-text citations function in academic writing to the hyperlinking of sources in multimodal compositions. The ease at which they transferred this knowledge is notable, given their struggle to transfer other rhetorical conventions related to anticipating audience needs.

Traditional rhetorical language used in Composition did not help us provide instruction to students for how an animated image may function in an argument, or how a playful meme may suggest implications that impact or undermine their rhetorical appeals. To address these concerns, we needed a language of design that went beyond the scope of traditional rhetoric. Because composition scholars have not yet established this "bridge language" (Borton, 2008), we lack a vocabulary to offer effective instruction in rhetorical practices related multimodal composition.

While students faced challenges with design and audience in creating multimodal compositions, most of those who submitted final projects were successful in meeting the writing and research expectations of the course. Students transferred knowledge about elements of argument and rhetorical appeals within the body of their written texts. However, their struggle to consider audience as they integrated visual media in their multimodal compositions leads us to realize that as instructors we must develop best practices for this gap in digital composition instruction. Our hope is to further analyze some of the trends we have observed, as well as a trend we did not address in this paper regarding considerations of intellectual property and copyright, and move toward developing best practices.

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Public Opinion on Health Care Policies in the 21st Century

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Abstract

Since the advent of the Patient Protection and Affordable Care Act, health care and public opinion on health care policies became important subjects of study in the 21st century. Broad literature examining the relationship between public opinion on redistributive policies and the level of income inequality exists, but not with a focus on health care policies. A debate between two contrasting views appears in previous literature on how the public reacts to rising income inequality. This study empirically tests where health care policies reside in this debate. Using the General Social Survey and Census reports, I examine how both the actual level of income inequality and perceptions of income inequality impact respondents' preferences towards governmental health care provisions. I include other factors as control variables that the previous literature has found to be relevant predictors of public opinion. Running ordinary least squares regressions, I find a positive relationship between the actual level of income inequality and public opposition to health care policies. In contrast, there exists a negative relationship between the perception of income inequality and respondents' opposition to health care policies. Based on previous literature, I gather from these outcomes that a rise in income inequality, along with less concern for inequality, makes people less supportive of health care provisions. This interpretation suggests that the social fragmentation theory holds in the case of health care policies; growing inequality causes more fragmentation between the insured and the uninsured.

Key Words: Public Opinion, Income Inequality, Health Care Policies

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Introduction

Before the advent of The Patient Protection and Affordable Care Act, popularly known as "Obamacare," the United States had been unique among wealthy industrialized nations for not providing centralized health insurance plans to all of its citizens (Biedenbach, 2008). Obamacare, despite its enactment in March 23, 2010, still faces intense public opposition from many Americans (Blackman, 2013; Hoff, 2010). As a result, topics related to governmental provision of health care have become an important subject in the social sciences.

Obamacare is not the first governmental effort to reform the health care system in the US. Before the 21st century, there had been a number of centralized attempts to increase governmental involvement in health care, including those of the Clinton administration in 1994 (Anderson, Reinhardt, Hussey, & Petrosyan, 2003). Expansion in the health care system from the public sector, as opposed to the private sector, is often initiated to assure access across all socioeconomic groups (Alexander, 2009; van Doorslaer, Wagstaff, van der Burg, Christiansen, & et al, 1999). In other words, recent governmental health care interventions in the US, including Obamacare and the Clinton Administration's plan that preceded it, align in their redistributive objectives to minimize the inequality in health care access among citizens.

A large body of literature has studied public opinion on redistributive policies, but not necessarily with a focus on health care (Alexander, 2009). Since health care policies in the US can be put under the category of redistributive policies, some fundamental approaches can be borrowed. This paper adopts an approach that explains how the level of income inequality in a society affects its people's opinion on redistribution. Growing income inequality among Americans has been a national concern, culminating in the 21st century (Kenworthy & McCall, 2008; MacRae, 2004; Oxendine, 2007). Conflicting views explain how the public reacts to this rising trend of income inequality: whether they support or oppose governmental intervention. Determining where health care policy preference stands in this debate may help guide the U.S. health care system in the 21st century.

While this debate also applies to health care policies, one cannot directly assume that the public will react to health care policies in the same way they do to redistributive policies in general. Thus, it is necessary to focus exclusively on governmental health care provisions and inquire more deeply into how public opinion responds to the state of income inequality. Taking the inquiry a step further than examining an underexplored area of redistributive policies, this work includes an analysis of the opinions of a particular socioeconomic cohort—insured Americans—within U.S. communities.

To summarize, this study quantitatively examines how Americans react to income inequality in terms of their preferences toward health care policies. I empirically test the impacts that the actual level and the perceived level of income inequality have on public opinion about health care policies by surveying the relevant literature and identifying possible factors that shape public opinion on redistributive policies. These factors, including the level of income inequality, serve as a basis for my regression models. Estimates from ordered logistic regressions suggest that rising income inequality in the US and Americans' lack of concern about inequality altogether heighten public opposition to governmental health care policies. This analysis provides some important policy implications for the U.S. health care system, as public opinion

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may be a key factor in shaping the future of Obamacare and other health care reform movements (Anderson, Reinhardt, Hussey, & Petrosyan, 2003; Panayotova, 2001).

Literature Review

Social Fragmentation Theory

Researchers have found a general trend of increasing income inequality in the US from the early 1900s to the present (Kenworthy & McCall, 2008; MacRae, 2004; Oxendine, 2007); however, there are conflicting interpretations of how Americans react to this rise in income inequality. One of the most dominant views is that perceived apathy among Americans regarding the problem of income inequality is increasing (McCall & Kenworthy, 2009). This can be explained through the "social distance" model suggested by MacRae (2004), which argues that a growing income gap between people encourages social fragmentation instead of egalitarian sympathy in U.S. communities (MacRae, 2004; Oxendine, 2007). With fragmentation, taxpayers with higher incomes become less concerned about the transfer recipients and less supportive of redistributive policies in the US.

The view that rising inequality engenders social fragmentation and therefore less support for redistributive policies is validated by looking at other empirical studies. Kenworthy and McCall (2008) empirically tested the survey responses of Americans in the late 1980s and the early 1990s regarding their opinions on inequality and redistributive policies, finding that a rise in inequality shows no heightened support for redistribution. Furthermore, Rehm, Hacker, and Schlesinger (2012) argued that social fragmentation is accelerated when people with economic disadvantages (low income) also face economic insecurity (high risk employment status). Their study concludes that the two groups—the disadvantaged and the insecure—are not distinct but becoming highly correlated as income gap grows in the US (Western, Bloome, Sosnaud, & Tach, 2012). The trend and the characteristics of U.S. income inequality altogether create and accelerate social fragmentation among Americans, making them less interested in the need for redistribution.

Alternative Explanations

The social fragmentation theory depicts Americans as ethically unconcerned and having policy preferences largely dependent on personal economic benefits. The other side of the literature disagrees. Through empirical analyses, Panayotova (2001) suggested that an individual's perceived level of social status and rank has no significant effect on redistributive policy preferences. More recently, Brooks and Manza (2013) supported this view by arguing that economic incentives do not affect individuals' policy preferences.

As seen in section 2.1, Kenworthy and McCall (2008) acknowledged that a rise in inequality heightens opposition to redistributive policies; however, their more recent study (2009) offers alternative explanations. They first propose that Americans may be uninformed about the state of income inequality and may be swayed by contemporaneous debates on redistributive policies. They also propose the possibility that Americans are concerned about inequality, but do not express their concerns through support for redistributive policies; people do not want income redistribution, but demand other avenues to solve the problem of inequality such as pursuing equal opportunity through government spending on education. These explanations will be further discussed in the context of health care provisions in the US.

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Application to Health Care Policy Preferences in the US

This paper borrows a common approach taken from the literature of redistributive policies, seeking how rising inequality affects public opinion on policies, because there is little research focusing on health care policies in particular. Research on redistributive policies reveals two conflicting views: the social fragmentation theory suggests public opposition to redistributive policies in response to rising inequality, while others explain that such policy preferences are unrelated to the economic motivations embedded in the social fragmentation theory. This paper expands the discussion to an underexplored, but extremely important policy domain; I examine whether or not public opinion on health care policies can rest on social fragmentation theory.

Before discussing the validity of the social fragmentation theory for health care policies, it is important to distinguish between the taxpayers and the transfer recipients of the program—the two groups that fragment as income inequality rises. Reports on health care policies make a distinction between the insured and the uninsured under the U.S. health care system (Curtis, 2005; DeNavas-Walt, Proctor, & Smith, 2013; Jecklin, 2007; Kaplan & Inguanzo, 2011). The cost of care for the uninsured is disproportionately imposed on individuals with higher income, who are more likely to be already insured and thus uncompensated for what they pay (Curtis, 2005). Exploiting this distinction between the insured and the uninsured, this research explores whether or not rising income inequality will cause fragmentation between the two populations. If the insured feel unconcerned about the uninsured and prefer not to pay for their benefits, then the social fragmentation theory will hold, and vice versa.

In the US, the profile of the insured can be explained in four socioeconomic categories: income level, employment status, marital status, and race. The uninsured rate was significantly lower among people with higher income and full-time year-round working status when compared to low-income individuals working less than full-time (DeNavas-Walt, Proctor, & Smith, 2013). This is due to the fact that a majority of the U.S. population generally relies on employers to gain access to health insurance (Savage, 2012). Under employer-provided insurance, it is likely that family members of the employees also gain health insurance coverage; thus, people's marital status, apart from their own employment status, also plays a big role in their insurance coverage (Jecklin, 2007). In terms of race and ethnicity, Hispanic and Latino communities face a considerably higher uninsured rate compared to that of non-Hispanic whites (Kaplan & Inguanzo, 2011). Based on these reports, the analysis specifies four shared socioeconomic characteristics of the insured Americans: high-income, full-time employed, married, and racially white.

Other Socioeconomic Factors

In accordance with previous literature, this study focuses on the level of income inequality and the four characteristics of the insured (income, working status, marital status, and race) when analyzing public opinion on health care policies. In addition to these factors, it is important to identify other possible predictors of public opinion to isolate the impact of rising inequality. Consulting previous empirical studies on redistributive policies, I detect relevant predictors of public opinion that serve as control variables in my analysis.

First, political party identification strongly influences an individual's policy preference (Alexander, 2009; Anderson, Reinhardt, Hussey, & Petrosyan, 2003; Barany, 2009; Lee, 2006).

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Obamacare, for instance, is associated with the Democratic Party as suggested by its nickname. Americans who strongly identify as Republican may disapprove of redistributive policies in general. Barany (2009) finds that individuals with political inclination to the Right become more hostile to redistribution.

Previous literature also included additional demographic and personal information in their analysis of redistributive policies, such as age, sex, and educational degree (Alexander, 2009; McCall & Kenworthy, 2009; Kenworthy & McCall, 2008; Panayotova, 2001). Older generations tend to be more health conscious and vulnerable to health problems (Yamada, 2005), implying differing degrees of concern for health care policies across age groups. In terms of education, Panayotova (2001) finds that Americans with a higher degree of education tend to be less favorable toward redistributive policies. Therefore, other factors—political identification, age, health status, sex, and educational degree—are included in order to eliminate noise in observing the relationship between income inequality and public opinion on health care policies.

Research Design and Methods

This study employs quantitative methods in order to investigate the relationship between the degree of income inequality and public opinion on health care policies. The research question asks how rising income inequality in the US affects people's preference for governmental health care provisions. To explore this relationship, data are drawn from the General Social Survey (GSS), which contains a nationally representative sample of Americans, and from the Census. The GSS provides a useful dataset to perform the regressions in this study, because it contains survey responses regarding Americans' social policy preferences and their perceptions of income inequality, as well as other demographic and socioeconomic information about the respondents that are used as controls. Due to data availability for one of the independent variables (see INCGAP below), only data collected in years between 1987 and 2008 are used.

Dependent Variable

The dependent variable for my regression models is public opposition to redistributive health care policies, coded as "NOGOVHLTH." This public opinion data comes from the GSS. The survey question I use to gauge public opposition is:

> "In general, some people think it is the responsibility of the government in Washington to see to it that people have help in paying for doctors and hospital bills. Others think that these matters are not the responsibility of the federal government and that people should take care of these things themselves. Where would you place yourself on this scale?" (Smith, Marsden, Hout, & Kim, 2013).

The response choices are on an ordinal scale of 1 to 5, where 1 corresponds to "government should help," 3 to "agree with both," and 5 to "people should help themselves." A higher score in NOGOVHLTH indicates a stronger opposition to government provision for health care. This question was asked on a biyearly basis, but data are used only from a limited number of years due to the data availability of other variables.

Previous research (Kenworthy & McCall, 2008; McCall & Kenworthy, 2009) that applies a similar empirical method use a different survey question from the GSS to capture public opinion on health care policies. This survey question asks the following: "We are faced with

many problems in this country, none of which can be solved easily or inexpensively. Are we spending too much, too little, or about the right amount on improving and protecting the nation's health?" (Smith, Marsden, Hout, & Kim, 2013). However, by addressing the improvement of health in the abstract, this survey question only gives partial insight into the level of public support for health care policies. Improving and protecting the "nation's health" does not coincide with redistributing health care benefits. Instead, the survey question may include governmental efforts in advancing the country's health in general, such as funding medical research and investing in the medical industry. For this reason, compared to other survey questions, NOGOVHLTH best captures the public opinion on the redistributive nature of health care policies and is used in this study.

Independent Variables

This study operationalizes two main independent variables to examine the effect of income inequality on public opinion about health care policies over time: the actual level of income inequality and the respondents' perception of income inequality. The first independent variable, coded as "GINI," comes from Gini coefficients and indicates the actual degree of income inequality in the US. The Gini coefficients, which I extract from the Census (2011), measure the degree of inequality in the distribution of family income in a country (Central Intelligence Agency, 2013). GINI ranges from 0 to 1 (rounded up to the thousandth), where a higher GINI indicates a more unequal distribution of income in the US. GINI is calculated on a yearly basis, and has only one value for any given year. Thus, all the other GSS survey responses from the same year are assigned the same value of GINI.

The second independent variable is the respondents' perceptions of income inequality. The GSS asks respondents: "Do you agree or disagree? Differences in income in America are too large" (Smith, Marsden, Hout, & Kim, 2013). Responses to this question will be coded as "INCGAP," on an ordinal scale of 1 to 5, where 1 corresponds to "strongly disagree," 3 to "neither agree nor disagree," and 5 to "strongly agree." A higher score in INCGAP indicates the perception of a greater income inequality in the US. This question was asked and collected in years 1987, 1996, 2000, and 2008.

The inclusion of INCGAP to the regression models is important for two reasons. First, changes in the actual level of inequality are not immediately translated into changes in American's perception of inequality. In other words, individuals may have imperfect information about the true level of inequality. Although some research (Kenworthy & McCall, 2008) confirms that Americans have a good understanding of the actual trend of inequality taking place in the US, it is more statistically accurate to utilize the perceived level of inequality provided by the survey respondents.

The second reason to include INGAP is to capture the respondents' opinion about the level of income inequality. Even individuals who observe the same degree of inequality may express different opinions. In other words, INCGAP can represent individuals' opinions about income inequality depending on their tolerance or justification for income inequality. In this case, responding with a 5 for INCGAP may denote a stronger concern for income inequality when compared to a response of 1, regardless of the income gap they observe.

The figures below illustrate how the mean values of the dependent and independent variables change over the years between 1987 and 2008. Opposition to health care policies, NOGOVHLTH, is fluctuating over the years. The actual level of income inequality, GINI, is

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steadily increasing at a relatively consistent pace. The perception of income inequality, INCGAP, also follows a generally increasing trend. Accordingly, in Table 1,the correlation between GINI and INCGAP is positive and statistically significant; in other words, at least on the superficial level, respondents' perception corresponds to the actual level of income inequality.

Table 1 Correlation between the Dependent and Independent Variables

	Variables	Y	X_1	X_2	Mean	SD	Min	Max
Y	NOGOVHLTH	1.0000			2.4210	1.2061	1	5
X_1	GINI	0.0108 (0.1360)	1.0000		0.4536	0.0152	0.426	0.47
X_2	INCGAP	-0.2348* (0.0000)	0.0747* (0.0000)	1.0000	3.6656	1.1181	1	5

Note: significance levels in parentheses, indicated by * p<0.001.

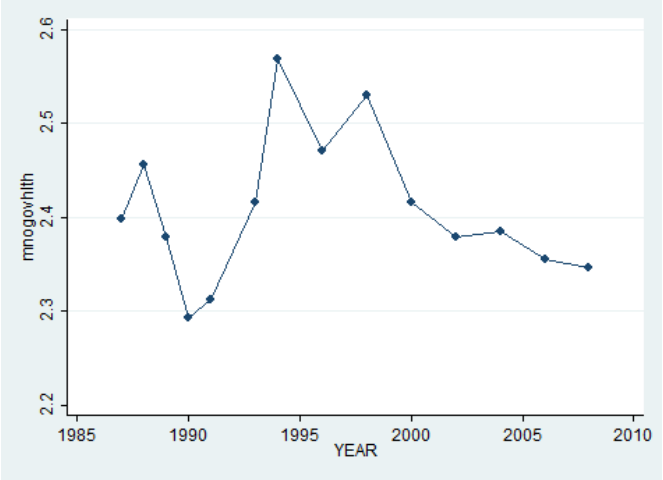

Figure 1 trend of the dependent variable (NOGOVHLTH) between 1987 and 2008

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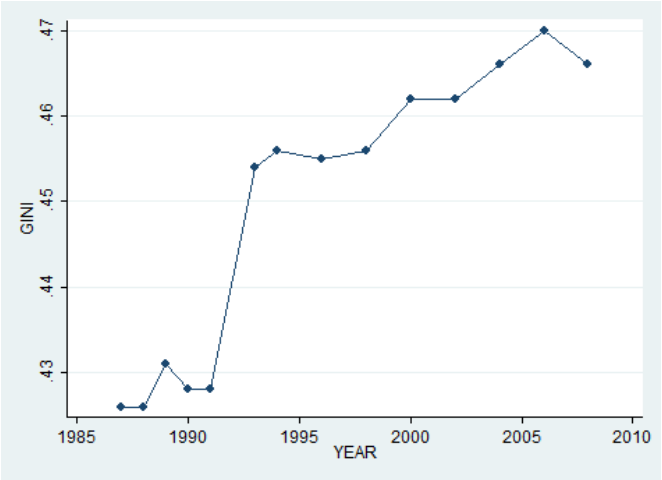

Figure 2 trend of the first independent variable (GINI) between 1987 and 2008

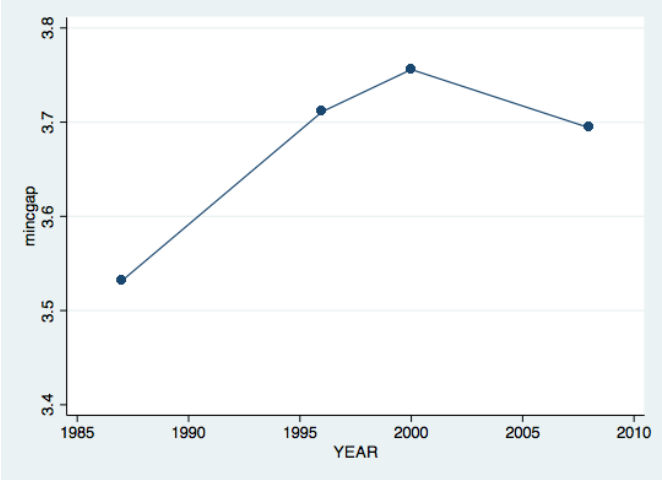

Figure 3 trend of second independent variable (INCGAP) between 1987 and 2008

Control Variables

The regressions include a list of controls for individual characteristics as detected by other empirical studies. Respondents' age ("AGE"), sex ("SEX"), race ("RACE"), family income ("INCOME"), highest degree of education ("DEGREE"), marital status ("MARITAL"), political identification ("PARTYID"), and employment status ("WRKSTAT") are all included. In addition to these commonly used control variables, my regression also includes the condition of the individual's health ("HEALTH"). Individuals' health condition may determine their demand for health care access and therefore their opinion about health care policies. Finally, the year when variables were collected is included ("YEAR") because of its high correlation with GINI: 0.9138 with p-value smaller than 0.001. The effect of the steadily increasing GINI over time should not be mistaken with any other trends that also draw a steady increase over time. All of these control variables were collected from the GSS.

Regression Models

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I use ordinary least squares regression models to estimate the relationships between the dependent variable and the independent variables. Correlations between the variables found in Table 1 cannot capture the true relationship due to complex interventions of other factors. Ordinary least squares regressions isolate the effect of independent variables on the dependent variable by controlling for these other factors. All outcomes are coded so that positive coefficients on independent variables indicate greater opposition to health care provided by the government. A total of three sets of regression models are used in the study.

The first set of regression models utilizes the first independent variable, GINI. I estimate the relationship between public opinion on health care policies and the actual level of income inequality (Model 1.1). In addition to this simple model, YEAR is used to control the constant and steady increment of GINI, allowing for a more accurate estimation of the impact of GINI on public opinion (Model 1.2). Again, the sample years for all models are restricted between 1987 and 2008 to render regression outcomes comparable to models using INCGAP.

$$NOGOVHLTH_i = \beta_1 GINI_y + \beta_2 controls_i + \alpha_0 + u_i \quad (1.1)$$

$$NOGOVHLTH_i = \beta_1 GINI_y + \beta_2 controls_i + \beta_3 YEAR_y + \alpha_0 + u_i \quad (1.2)$$

The second set runs similar models using the second independent variable, INCGAP. First, I regress the perception of inequality on public opinion, the same method earlier applied to GINI.

$$NOGOVHLTH_i = \beta_1 INCGAP_i + \beta_2 controls_i + \alpha_0 + u_i \quad (2.1)$$

However, there is a big difference between GINI and INCGAP, because respondents from the same sample year are assigned the same GINI whereas each respondent give his or her own INCGAP independent of the sample year. The value of GINI is thus interrelated with the time trend. On the other hand, INCGAP alone cannot capture the time trend, as responses from different sample years can share the same INCGAP value. As a result, to capture the time trend for INCGAP, I rerun Model 2.1 for each separate year sample. By comparing the coefficients over the sample years, I can estimate how the impact of the perception of income inequality on public opinion changed over time. Due to the data availability of INCGAP, data from years 1987, 1996, 2000, and 2008 are used.

$$NOGOVHLTH_{i,y} = \beta_1 INCGAP_{i,y} + \beta_2 controls_{i,y} + \alpha_0 + u_{i,y} \quad (2.2)$$

The final set of regressions restricts the sample to survey respondents who represent the demographic and socioeconomic characteristics of the insured population in the US. The profile of the insured is identified to have four common characteristics: high-income, full-time employed, married, and racially white. This research defines the listed characteristics as “family

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income of $25,000 or over" (the highest income level category provided by the GSS) for INCOME, "working full time" for WRKSTAT, "married" for MARITAL, and "white" for RACE. The restricted sample will either have all four characteristics or have any of the four characteristics listed above. By examining the restricted samples' regression outcomes, these models can explain whether a fragmented society with groups of different health care policy preferences exists or not in the US.

$$NOGOVHLTH = \beta_1 GINI + \beta_2 YEAR + \beta_3 controls + \alpha_0 + u \quad (3.1)$$

$$NOGOVHLTH_i = \beta_1 INCGAP_i + \beta_2 controls_i + \alpha_0 + u_i \quad (3.2)$$

Data Analysis

Actual Level of Income Inequality

The estimates for the first set of the regression models (see Table 2 below), which use the actual level of income inequality as the independent variable, indicate a positive relationship between income inequality and opposition to governmental health care provision. Model 1.1 shows a lack of robustness in the relationship. However, controlling for the constantly and steadily increasing GINI with the YEAR variable, Model 1.2 alternatively yields statistically significant outcomes; even when control variables are included, the coefficient stays positive and significant. I can therefore conclude that rising income inequality taking place in the US, measured by Gini coefficients, heightens public opposition to health care policies.

All control variables, except for DEGREE, in Model 1.2 are statistically significant. Among them are INCOME, WRKSTAT, MARITAL, and RACE, all displaying positive coefficients. This is especially noteworthy considering the profile of the insured in the US. Respondents' income, working status, marital status, and race were all coded so that a higher value would imply that respondents are closer to the profile of the insured: high-income, full-time employed, married, and white. The positive and statistically significant relationship between the listed control variables and respondent opinion on health care policies suggests that people possessing the characteristics of an insured individual tend to be less supportive of health care provision.

Table 2 Estimated Effects of GINI on Public Opinion about Health Care Policies—Model 1

	Model 1.1		Model 1.2	
Independent Variables	Without controls	With controls	Without controls	With controls
GINI	1.707* (0.7316)	0.033 (0.7158)	8.110*** (1.9072)	6.360*** (1.8253)
YEAR			-0.017*** (0.0047)	-0.017*** (0.0040)
AGE		0.007*** (0.0008)		0.007*** (0.0008)
SEX		-0.080*** (0.0224)		-0.079*** (0.0224)
RACE		0.099*** (0.0208)		0.095*** (0.0208)

INCOME		0.023*** (0.0051)		0.024*** (0.0051)
DEGREE		0.003 (0.0104)		-0.004 (0.0103)
PARTYID		0.1323*** (0.0055)		0.133*** (0.0055)
HEALTH		0.097*** (0.0145)		0.095*** (0.0145)
MARITAL		0.105*** (0.0242)		0.103*** (0.0242)
WRKSTAT		0.041* (0.0179)		0.039* (0.0179)
Observations	11484	10955	10955	10955

Note: standard errors in parentheses; p-value indicated by *** p<0.001, ** p<0.01, * p<0.05.

Perceived Level of Income Inequality

In the second set of the regression models, the perceived level of income inequality also shows a statistically significant relationship with the respondents' health care policy opinions, but in an opposite direction. In Model 2.1 in Table 3, we see that the perceived level of income inequality gives a statistically significant and negative coefficient. Even when controlling for other spurious factors, the coefficient does not significantly change, p-value remaining the same (0.000); robustness of the regression outcomes is assured. The greater a respondent perceives the level of income inequality in the US, the more he or she will support health care policies. Other control variables—RACE, INCOME, PARTYID, HEALTH, and MARITAL—were statistically significant as well. The positive relationship between the listed control variables and respondent opinion on health care policies suggests a stronger opposition among insured people.

Moving on to the yearly trend of the impact of INCGAP, Model 2.2 in Table 4 shows that the impact of perception of income inequality does not follow a consistent trend, with a noticeable anomaly in 2000. Furthermore, the coefficient for the year 2000 loses statistical robustness when including control variables in the regression; however, estimates for all other years remain significant and robust. Excluding 2000 and taking only statistically significant outcomes into account, the impact that perceived level of income inequality has on public opinion is generally growing stronger over time. To summarize, negative coefficients in Model 2.1 and 2.2 suggest that respondents who perceived greater level of income inequality tend to pose less opposition to health care provision. This negative relationship between INCGAP and NOGOVHLTH is strengthening over time.

Table 3 Estimated Effects of INCGAP on Public Opinion about Health Care Policies—Model 2.1

	Model 2.1	
Independent Variables	Without controls	With controls
INCGAP	-0.249*** (0.0205)	-0.201*** (0.0202)
AGE		0.007*** (0.0016)
SEX		0.023 (0.0443)
RACE		0.096* (0.0422)
INCOME		0.030** (0.0095)
DEGREE		-0.032 (0.0201)
PARTYID		0.114*** (0.0108)
HEALTH		0.093*** (0.0281)
MARITAL		0.144** (0.0480)
WRKSTAT		0.012 (0.0351)
Observations	2699	2699

Note: standard errors in parentheses; p-value indicated by *** p<0.001, ** p<0.01, * p<0.05.

Table 4 Estimated Effects of INCGAP on Public Opinion about Health Care Policies—Model 2.2

	Model 2.2							
	Year 1987		Year 1996		Year 2000		Year 2008	
Independent Variables	Without controls	With controls	Without controls	With controls	Without controls	With controls	Without controls	With controls
INCGAP	-0.235*** (0.0297)	-0.200*** (0.0293)	-0.276*** (0.0447)	-0.212*** (0.0446)	-0.147* (0.0662)	-0.045 (0.0675)	-0.313*** (0.0441)	-0.247*** (0.0443)
AGE		0.009*** (0.0023)		0.005 (0.0042)		0.008 (0.0049)		0.004 (0.0034)
SEX		0.096 (0.0616)		-0.017 (0.1105)		-0.244 (0.1310)		0.045 (0.0992)
RACE		0.050 (0.0622)		0.087 (0.1036)		0.046 (0.1278)		0.191* (0.0847)
INCOME		0.030* (0.0128)		-0.021 (0.0288)		0.044 (0.0311)		0.050* (0.0219)
DEGREE		-0.051 (0.0301)		0.058 (0.0502)		-0.104 (0.0585)		0.001 (0.0416)
PARTYID		0.103*** (0.0152)		0.149*** (0.0286)		0.127*** (0.0328)		0.120*** (0.0238)
HEALTH		0.072 (0.0393)		0.194** (0.0734)		0.128 (0.0881)		0.074 (0.0601)
MARITAL		0.167* (0.0684)		0.104 (0.1176)		0.334* (0.1449)		0.058 (0.1054)
WRKSTAT		0.068 (0.0505)		0.012 (0.0945)		-0.082 (0.1065)		-0.051 (0.0701)
Observations	1368	1368	406	406	327	327	598	598

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Note: standard errors in parentheses; p-value indicated by *** p<0.001, ** p<0.01, * p<0.05.

Restricted Sample

Finally, I look at the regression outcomes using samples that are restricted to survey respondents who display either all or at least one of the four representative characteristics of the insured in the US. The regressions using GINI as the independent variable, Model 3.1 in Table 5, indicate that the effect of GINI is positively stronger for the restricted sample. The coefficient for GINI is 6.360 in the entire sample for Model 1.1 in Table 2, whereas samples that have all or any of the insured characteristics have greater coefficients, respectively 8.015 and 6.996 (Table 7). These coefficients are both statistically significant. Compared to the entire sample, the restricted group of respondents tends to oppose more (higher NOGOVHLTH) to health care provisions when GINI is higher. This positive relationship only gets stronger for the groups with people having all the characteristics of the insured.

The restricted sample model that examines the effect of INCGAP shows the opposite. In the model using the whole sample, the coefficient for INCGAP is -0.201 in the entire sample for Model 2.1 in Table 3. This is a bigger coefficient compared to those of the restricted sample: -0.254 and -0.210 for Model 3.2 in Table 5. These outcomes are also statistically significant. In other words, in comparison to the entire sample, the restricted sample shows less opposition to health care policies when the perception of income inequality is higher.

Table 5 Estimated Effects of GINI/INCGAP on Restricted Sample's Opinion about Health Care Policies—Model 3

	Model 3.1		Model 3.2	
Independent Variables	All four characteristics	Any of the four characteristics	All four characteristics	Any of the four characteristics
GINI	8.015* (3.9001)	6.996*** (1.8083)		
INCGAP			-0.254*** (0.0074)	-0.210*** (0.0205)
YEAR	-0.241* (0.0097)	-0.018*** (0.0044)		
AGE	0.008*** (0.0024)	0.008*** (0.0007)	0.007 (0.0048)	0.007*** (0.0014)
SEX	--0.077 (0.0490)	-0.094*** (0.0219)	0.087 (0.0960)	-0.010 (0.044)
DEGREE	-0.015 (0.0203)	-0.018 (0.0098)	0.005 (0.0411)	-0.013 (0.0193)
PARTYID	0.165*** (0.0119)	0.140*** (0.0053)	0.135*** (0.0242)	0.115*** (0.0106)
HEALTH	-0.110** (0.0358)	0.111*** (0.0142)	0.124 (0.0677)	0.094*** (0.0283)
Observations	1368	406	327	598

Note: standard errors in parentheses; p-value indicated by *** p<0.001, ** p<0.01, * p<0.05.

Conclusion and Discussion

Conclusion

My regression analysis reveals opposite outcomes for the two independent variables: while the actual level of income inequality (GINI) has a positive relationship with respondents' opposition to health care provision, the perceived level of inequality (INCGAP) has a negative

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relationship. Both relationships remain statistically significant and robust throughout different years. Considering the positive correlation between INCGAP and GINI (Table 1), it is unexpected that INCGAP and GINI would have different effects on respondents' preferences toward health care policies. The positive correlation implies that as GINI increases, the average value of INCGAP for a given year moves in the same direction at least on the superficial level. However, the estimated coefficients that account for the effects of other control variables show that they impact the outcome variable in different directions.

Revisiting the reasons for including the perceived level of inequality, it is plausible to conclude that such mixed results support the social fragmentation theory. INCGAP can be interpreted in two ways, the first being the respondents' information about income inequality and the second being the subjective opinion about income inequality (higher value of responses indicating higher levels of concerns). The second interpretation of the variable can translate the results as: less concerned people are also inclined to oppose governmental health care policies more. This interpretation is more compatible with how the measured income inequality in the US is rising, and the rise in income inequality negatively affects public opinion on health care policies. As seen in Model 2.2 in Table 4, respondents with less concern for income inequality have increasingly negative opinions on health care policies over time.

In Model 1 and 2, the effect of having the characteristics of the insured is straightforward. Positive coefficients for GINI, RACE, INCOME, MARITAL, and WRKSTAT in the regression models suggest that being high-income, full-time employed, married, white individuals—representative characteristics of the insured—make people more likely to oppose to health care provisions. Model 3, the restricted sample of those displaying the characteristics of the insured has stronger opposition to health care policies in relation to rising GINI, while stronger support for health care policies in relation to increase in INCGAP. This further supports the social fragmentation theory of how the insured population has stronger opposition to health care policies as income inequality rises.

Limitations

A number of statistical limitations exist in the analysis. First, the reason this study relied on the four key characteristics to define the insured in the US is because of the missing information regarding the respondents' health care coverage. If available, the coefficients for the health care coverage variable would have more definitively shown whether or not the insured more strongly oppose health care policies. In such a case, a more clear-cut judgment of the validity of the social fragmentation theory could have been made. While GSS started collecting information on health care coverage in 2008, it is impossible to conduct a time trend analysis with data for only one year. In addition to the impossibility of tracking time trends, the number of responses was too small to retrieve a robust regression outcome even for the 2008 cohort. The problem related to the small sample size is also a problem for the 2000 cohort in Model 2.2; the sample size is not big enough to return statistically significant estimates for the independent variable. However, these problems could not be avoided, as panel data containing responses for health care coverage along with opinion on both income inequality and health care policies do not exist. The GSS is the best option available.

Another limitation of the regression model is the categorization of INCOME in the GSS. The highest income category for the GSS is "$25,000 or over," containing 61.65% of the entire sample. However, reports on health care coverage reveal further variations among individuals

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over the income level of $25,000. In 2012, the uninsured rate was 21.4% for people with family income ranging from $25,000 to $49,999, 15.0% for people with family income ranging from $50,000 to $74,999, and 7.9% for people with family income of $75,000 or more (DeNavas-Walt, Proctor, & Smith, 2013). In the GSS, a large portion of the respondents with varying income levels and insurance coverage rates are aggregated in the same income category, thus giving less accurate outcomes.

Implications

The debate on how taxpayers of redistributive policies respond to rising inequality extends to the discussion on governmental health care provision in the 21st century. The government cannot ignore public opinion when assessing and reforming the national health care system. Studies that analyze public opinion provide important guides for the government in its policy formation (Panayotova, 2001). The regression outcomes of my study therefore provide meaningful figures to understand how different socioeconomic groups react to health care policies in the face of rising inequality. Despite a restrictive sample, over-categorization, and inevitable limitations of quantitative studies, no other surveys offer more comprehensive data than the GSS. Thus, this study provides the best estimate of the public opinion on health care policies to date and sheds light on how income inequality works in the context of health care policy preferences of the American public.

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Home Environment, Peer Group Influence and Aggressive Behavior Among Secondary School Students in Abia State, Nigeria

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Abstract

The main purpose of this study was to investigate home environment and aggressive behaviour among secondary school students in Abia State, Nigeria. Aggression is a pervasive problem for Nigerian youths. It is at times expressed in the most unlikely places under unexpected and unsettling conditions. It is usually expressed at home, in school, in the neighbourhood or in community settings. To achieve the purpose of this study, three hypotheses were formulated. A survey research design was adopted. A sample of six hundred students was randomly selected using the simple random sampling technique. This was to give equal and independent opportunities to all the respondents to be selected for the study. The questionnaire used for data collection was subjected to face validation by experts in measurement and evaluation. The reliability estimate of the instrument was established through the split-half reliability method and its associate Spearman Brown Proficiency formula. The hypotheses were tested using independent t-test analysis. The results of the analysis reveal that family size, family structure and family type significantly influence students' aggressive behaviour. Based on the findings, it was recommended among others that parents should be encouraged to live together as partners and show love and concerned to their children.

Introduction

Aggression is a pervasive problem for Nigerian youths. It is at times expressed in the most unlikely places under unexpected and unsettling conditions. It is usually expressed at home, school, in the neighbourhood or in the community. In the secondary school system the expression of aggressive behaviour is evidenced in the numerous and untold cruelties that some children inflict on their fellow learners. Over the years, a lot of blood lettings, massacre, maiming's and killings have been observed in secondary schools (Kingsley, 2005). At different-occasions students have been observed damaging school property, harassing their fellow students, threatening teachers who try stop them, especially in cases of examination supervision Ukoha (2002).

Ukoha (2002) considered the actions explained above as confrontational and distractive. He further stated that, they could hinder individuals in a group from meeting up with the demands of their goals. Again such actions could potentially make the learning environment threatening and unconducive to learning, which, according to Denga and Denga (1998), could limit the learning performance of students. It could be argued that when students perceive threat arising from one form of aggression or the other, they may become destabilized as they would tend to spend the time meant for studying in finding ways to cope with the perceived threats. Clearly, any form of distraction within a learning setting is counter-productive. It is the researcher's belief that such distractions could constitute a hindrance to Nigeria's ability to achieve the national goal of self-reliance over the years. Students' violence has occasionally caused some secondary schools in Abia State and in the nation as a whole to be shut down spontaneously thereby stalling academic activities.

Adolescence is the period of psychological, social and physical transition from childhood to adulthood (Adewode, 2003). According to Smart and Smart (1970), this period lasts from ages of 11 to 18 years. It is recognized as both a cultural/social phenomenon and a standardized human development phase.

Nigeria as a nation understands and appreciates the fact that education is a precursor to nation building (National Policy on Education, 2004), and therefore considers education to be a catalyst for all aspects of development. In view of this, and in acknowledgment of the fact that the youth of today are the leaders of tomorrow, a great deal of resources has been directed toward providing education at the secondary school level much as it is done at the primary school levels. But rather than students of secondary schools devoting their times to learning, there is a tendency for many to spend their energy on the perpetuation of violence. This reduces the amount of time and level of concentration they put into their studies. It has been noted that students who experience stressful conditions are susceptible to go through unstable lives. This condition is not only experienced when aggression such as violence breaks out on campus, but also within the periods of calmness. Students also feel distressed in times of calmness; as such times are used in reminiscing and thinking about the next occurrence of aggression. This indeed is an unhealthy development because it reduces study time. Hence, the conditions under which students study are considered as threatening. Apparently, not much can be achieved under such circumstances. Government, parents, religious groups and other stakeholders in education have made some effort at curbing the menace of aggression among secondary school students. Disciplinary measures, which include rustication in some cases, have been used to check the use of aggression by students as a means of achieving their goals. In spite of such steps, aggression in campuses has continued unabated. This research has become imperative as an effort at helping particularly the school system.

The family is an important unit in any society for children's upbringing. The family background has a great influence on students' behavioural tendencies; this can be either

positive or negative. In recent times in Nigeria, the use of aggression in achieving ones goals has become much more rampant among secondary schools students than was the case decades ago. Nwokoroku (2001), noted that the nation's institutions of learning have been turned into battle fields by students. She reported that in the campuses students engage in aggressive acts towards one another and even towards teachers and non-teaching staff.

Students have been observed to engage in such acts of aggression as violence, rape, extortion, burglary, killing, maiming and sexual harassment. They are also frequently associated with vulgarities, abduction and insults at one time or another. In 2010, students in Afara Technical Secondary School, Umuahia of Abia State were reported to have beaten up a teacher for carrying out his legitimate duty (supervision of examination). According to Haggai (2003), aggression in school intrudes not only on the rights of others, it alsoimpairs the normal operation of classroom interaction, school communal life (hostel living) as well as other social settings; such as sports and other extra curricula activities. This in effect militates against development. Obasanjo (2006) identifies cultism (an aggressive act) as one of the factors that have compromised the integrity of the education system in Nigeria. Obviously, aggression works against governments desire to inculcate in students and the citizenry, the right types of values and attitudes through education for the survival of the individual and nation at large.

Over time, the Nigerian government, parents, religious groups and other concerned education stakeholders have made some efforts at curbing the menace of aggression among students. Disciplinary measures based on laws of the land have been applied in checking students' aggressiveness to no avail. There have been cases where students were rusticated to serve as deterrent to others, all in a bid to control students use of aggression as a way of self-expression. In spite of the efforts made to curb aggression, this situation has persisted. This is what provided the impetus for the researcher to carry out this study for the objective of determining the factors that push students into displaying aggressive behaviours.

The study seeks to determine if home environment and peer group has any impact on aggressive behaviour among secondary school students in Abia State.

Literature Review

Family Size and Students Aggressive Behaviour

A family with too many children may not be able to adequately monitor the behaviour patterns of its children, especially during their teenage years when youngsters begin to forge their own ways in life. One child may be involved in premarital sex without the parents taking note of his or her activities for eventual correction. Family size studies have shown that size may exert influence on children and adolescent behavior Hurlock (2002).

Hurlock (2002) observed that a large family size reduces parental care given to the children in the family. Again, in a large family particularly if the children are not well spaced in age, sufficient time and attentioncould not be given to all the children by their parents. The above situation most often results in unguided development which in turn may lead to misguided ‘positive’ attitude towards life and events including a tendency to engage in premarital sex.

Petertomode (1999) posited that a large family is negatively related to a child’s behavioural tendencies. In comparison, an only child receives a great deal of parental attention, and he/she is spared sibling rivalry. He further states that there is some evidence that the first born child appears to mature in behaviour, speech and attitude faster than children born later within the same family. This was appears to be due to the amount of time and care devoted to guiding and instructing the child on social mores and normsl.

Douglas (2004) believes that the prospects of healthy attitudes progressively degenerate as the family increases in size. He remarked that given the same circumstance only families with four and above members are potentially in danger of losing control of their children's behaviour.

Gidlens (1996) posited that family size has a corresponding influence on child and adolescent attitudes, which may be positive or negative towards particular events,objects or activity. Moreover, Gidlens argues that as family size increases, the level of individual parental attention to the offspring tends to decline. This may cause the children to depend on and emulate peers and other adults around whose attitude, with the added danger that these may be considered antisocial.

Kellaghan's (2001) study of the family factor affecting verbal behaviour development of children, discovered that birth order contributed significantly to adolescent sexual behaviour. He also noted thatthe first born tend to have more socially desirable attitudes than children born later; and that attitude of children toward socially accepted norms tend to deteriorate rather than improve as the size of the family increases.

Family structure and students' aggressive behaviour

The family institution is as old as man on earth; little wonder that its role in man's general existence is taken for granted. The family is the basic unit of the society. It provides for union of male and female to produce offspring and to ensure their nurturing and training. The neutral family life, the psychological unity of the family is continuously molded by its natural organization and conditions external to it.

Landis (2006) asserts that the structure of the family and the relationship between its members (intact and broken homes) have positive or negative impact on the sexual life of their children.

Children living in the shadows of a divorced home are often bewildered by the comings and goings and by the mere fact that essential relationships and emotions are not promoted or are broken off and lead to deviant behaviours which are a manifestation of insecurity stemming from an unstable family. Parson (2004) emphasized the fact that socially accepted human behaviour is not inherently innate at birth, but are learned through early childhood socializing process. Hence, the family is an essential institution for the production or building of attitudes and personalities.

Johnson (2006) observed that divorce causes children to concentrate their attention on the remaining parent. If this attention is not reciprocated the child feels rebuffed and unwanted. The parent who may be pre-occupied with the grief of divorce, especially if he or she did not initiate in it may not notice the problem and this may further compound the issue. The child may be forced to look outward and may fall into the wrong hands, and develop a deviant attitude towards people, events and norms.The child in a divorced family unit according to Jurich (1998) may turn to drugs and unpleasant behaviours such as premarital sex as a means to cope with low self-esteem, personal stress, and external locus of control and feelings of disillusion.

Gidlens (1999) observed that children from an exceptionally caring family, and especially a monogamous family, are likely to be well taken care of by their parents more than children from divorced or patchwork families. He also noticed that only children from monogamous families receive care from both parents (fathers and mothers) as such are hardly misled into antisocial activities such as drug abuse, premarital sex.

Douglas (2004) noticed that children from divorced families especially, those living with female parents tend to be involved heavily in premarital sex. The reason he suggested is that mothers tend to be more liberal than fathers thus allowing much more freedom and

autonomy. Conversely, Denga (1983 reports that premarital sex is more frequentl with children who are raised by fathers. Giving reasons for such behaviour, he agreed that such children school progress is never monitored by the parents, as much as their school attendance and other out of school activities. Children, who are aware that their movements and activities are not being monitored, appear to engage in anti-social behaviours such as alcoholic and drug abuse more frequently than those who are monitored.

Family type and students' aggressive behaviour

The type of family and the relationship between its members varies depending on whether the family type was monogamous or polygamous. It could be argued that the emotional stability of the home and parental style of child rearing could greatly influence a child's psychological adjustment and attitude to life (Bohannom, 1999).

In his study of the relationship between family type and adolescent attitude towards drug abuse and premarital sex, Bardis (2002) discovered that most of the adolescent children who were involved in drug abuse and premarital sex were from polygamous families. He also discovered that many of the children from polygamous homes were not given the same care as children from monogamous families.

Travers (1997) believes that emotions within the polygamous family unit are likely to be tense and the relationship between husband, wife and children may be intrinsically unstable depending on the parental mode of discipline. This usually affects children's psychological and social adjustment to life and their attitudes in general, especially as it relates to deviant behaviour such as premarital sex and drug abuse. Smath (2006) observed that a monogamous family survives only as long as its two focal members (the husband and wife) live together as husband and wife, simply because the conjugal relationship is what binds the group. However, if the family is not broken either by death, divorce or separation, a well bounded family endures because mutual understanding and planning are dominant attitudinal virtues. Such a monogamous family will enhance good interaction, co-operation and ensures that their children are not involved in bad activities such as drug abuse and premarital sex.

Hurlock (2002) noticed that children from polygamous homes are much more frequently involved in premarital sex as a means to earn their living. He discovered that this was because most polygamous parents (especially fathers) were hardly able to cater for all the needs demanded by their children. As such, these children resort to other means to provide for these needs, which can be essential for their general well-being.

Methodology

An ex-post facto research design was adopted for the study. This was because the researcher has no control over the independent variables. A sample of two hundred students was randomly selected for the study through the simple random sampling technique. The instrument used for data collection was a questionnaire titled "Home environment and aggressive behaviour". Before using the instrument the items developed were given to experts in research and statistics for screening which ascertained the face validity. To determine the reliability of the instrument, a trial testing was done using twenty (20) students. A split half reliability method was used to determine the internal consistency of the instrument.

Results and Discussion

In this section each hypothesis is re-stated in the null form. The variables are identified and the result of the statistical analysis carried out to test the hypotheses are

presented and interpreted. The .05 level of significance was used for the statistical testing of each hypothesis.

Hypothesis one

Family size influences students' aggressive behaviour. The independent variable in this hypothesis is family size (small and large); while the dependent variable is students' aggressive behaviour. To test this hypothesis, students' aggressive behaviour from small and large family sizes was compared using Independent t-test analysis. The result of the analysis is presented in Table 1.

TABLE 1:Independent t-test analysis of the influence of family size on students' Aggressive behaviour (N=200)

Family	N	X	SD	t-value
Small	80	19.56	2.31	
				6.92*
Large	120	17.36	2.03	

* Significant at .05 level, critical t-1.96, df = 198

The result of the analysis as presented in Table 1 revealed that the calculated t-value of 6.92 is higher than the critical t-value of 1.96 at .05 level of significance with 198 degree of freedom. With this result and this analysis, the null hypothesis, which stated that there is no significant influence of family size on students aggressive behaviour is rejected. This result implies that family size has a significant influence on aggressive behavior among students.

Hypothesis two

Family structure influences the aggressive behavior of students.

The independent variable in this hypothesis is family structure (intact & broken); while the dependent variable is students' aggressive behaviour. To test this hypothesis, students' aggressive behaviour from intact and broken family structure was compared using Independent t-test analysis. The result of the analysis is presented in Table 2.

TABLE 2:Independent t-test analysis of the influence of family structure onstudents' aggressive behavior (N=200)

Family structure	N	X	SD	t-value
Intact	101	19.14	2.33	
				8.06*
Broken	91	16.56	2.09	

* Significant at .05 level, critical t-1.96, df = 198

The result of the analysis as presented in Table 2 revealed that the calculated t-value of 8.06 is higher than the critical t-value of 1.96 at .05 level of significance with 198 degree of freedom. With this result and this analysis, the null hypothesis which stated that there is no significant influence of family structure on students' aggressive behaviour is rejected. This result implies that, family structure has a significant influence on students' aggressive behaviour.

Hypothesis three

Family type influences aggressive behavior of students.

The independent variable in this hypothesis is family type (polygamous and monogamous); while the dependent variable is students' aggressive behaviour. To test this hypothesis, students' aggressive behaviour from intact and broken family type was compared using Independent t-test analysis. The result of the analysis is presented in Table 3.

TABLE 3Independent t-test analysis of the influence of family type onstudents' aggressive behaviour (N=200)

Family type	N	X	SD	t-value
Monogamous family	100	19.71	2.09	
				8.67*
Polygamous family	100	17.13	2.12	

* Significant at .05 level, critical t-1.96, df = 198

The result of the analysis as presented in Table 3 revealed that the calculated t-value of 8.67 is higher than the critical t-value of 1.96 at .05 level of significance with 198 degree of freedom. With this result and this analysis, the null hypothesis which stated that there is no significant influence of family type on students' aggressive behaviour is rejected. This result implies that, family type has a significant influence on students' aggressive behaviour.

Discussion of Findings

The result of the study revealed that family size, family structure and family type have significant influences on students' aggressive behaviour. The finding is in line with the view of Hurlock (2002) who observed that large family size reduces parental care given to the children in the family. Again, in a large family particularly if the children are not well spaced in age, sufficient time and attention would not be given to the children by their parents. The above situation most often results in unguided development which in turn leads to misguided 'positive' attitude towards life and events including tendency towards premarital sex. Petertomode (1999) also asserted that a large family is negatively related to the child's behavioural tendencies. To him an only child gets a great deal of parental attention and he/she is spared of siblings' rivalry. He further states that there is some evidence that the first born child appears to mature in behaviour, speech and attitude faster than children born later from the same family. This he stated was due to the amount of time and care devoted to guiding and morally instructing the child.

Landis (2006) also asserted that the structure of the family and the relationship between its members (intact and broken homes) have positive or negative impact on the sexual lives of their children. Children living in the shadows of a divorced home are often bewildered by the comings and goings and by the mere fact that essential relationships and emotions are not promoted or are broken off and lead to deviant behaviours which are a manifestation of insecurity stemming from an unstable family. Parson (2004) also opined that socially accepted human behaviour is not inherently innate, but is learned through early childhood socializing processes. Hence, the family is an essential institution for the production or building of attitudes and personalities. Johnson (2006) also observed that divorce causes children to concentrate their attention on the remaining parent. If the attention is not reciprocated the child feels rebuffed and unwanted. The parent who may be pre-occupied with the grief of divorce, especially if he or she did not initiate in it may not notice

the problem and this may further compound the issue. The child may be forced to look outward and may fall into the wrong hands, and develop deviant attitude towards people, events and norms.

Similarly, the finding also proved that family type has a significant influence on students' aggressive behaviour. The finding is in line with the view of Bohannom (1999) who observed that the type of family and the relationship between its members changes depending on whether the family type was as monogamous or polygamous. It could be argued that the emotional stability of the home and parental style of child rearing greatly influence children's psychological adjustment and attitude to life. Bardis (2002) also observed that the relationship between family type and adolescent attitude towards drug abuse and premarital sex, discovered that most of the adolescent children they found involved in drug abuse and premarital sex were from polygamous family. He discovered that, most of the children from polygamous homes were not given proper care like children from a monogamous home/family.

Conclusion and Recommendations

Based on the result of the study it was conclude that; family size, family structure and family type significantly influence students' aggressive behaviour. Based on the findings of the study, the following recommendations were made.

1) Parents should be encouraged to maintain small family size that they are more likely to be able to cater for.
2) Government and non-governmental organizations should embark on public enlightenment campaign on the need for parents to adopt family planning practices.
3) Parents should be encouraged to live together as partners and show love and concerned to their children.
4) Parents should always ensure that they maintain a very good atmosphere of cordiality in their homes.
5) Parents should be encouraged to avoid the old practice of polygamy in order to help reduce students' aggressive behaviour tendencies.

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Factors Influencing the Education Decision Making Process

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Abstract

Education is considered an investment in human capital which in turn contributes to knowledge economy and development of a nation. Education is a diverse and dynamic sector and has been ever changing as per the needs of society. Such diverse, dynamic and unpredictable environments make the process of decision making increasingly complex. This study presents a conceptual framework of decision making process undertaken at various levels of education. It further provides an overview of decision behaviors of the expatriate community in the United Arab Emirates (UAE) pertaining to the education and integrating psychological, social, and economic perspectives. On the basis of review of literature related to decision making process for education, this research also aims to contribute to the field of decision making process by proposing models for different levels of education in the UAE.

Key Words: Education, decision-making, factors, influence.

Introduction

Education is a form of learning in which the knowledge, skills, values, beliefs, and habits of a group of people are transferred from one generation to the next through teaching, training, research, or simply through auto didacticism (Dewey, 1916). In today's times it forms one of the pillars of Knowledge Economy and hence assumes great significance as most countries today are transiting into Knowledge Economy. The twenty-first century is regarded to be a century of globalization (Bottery, 1999). Through compression of space and time the whole world is akin to a small village, global village. While globalization can take different forms, namely, political, economic, managerial, cultural and environmental, it has a significant effect on developing education for the knowledge-based economies.

United Arab Emirates (UAE) is one such country which is speedily progressing towards Knowledge Economy with simultaneous development of its Education sector. The UAE has become a growing regional hub for education, attracting billions of dollars in investment and witnessing a phenomenal number of enrolment growths across its K-12 and higher education institutions. Educational institutions from all over the world have set up their international campuses with adequate facilities and a wide range of programs to cater to the needs of the residents. One important consideration for all educational institutions while developing their marketing communications as well as course offerings is the uniqueness of the demographic mix of the UAE. The population of the UAE comprises more than 80% of expatriates and approximately 18% of Emiratis. Several reports indicate an increasing influx of students into UAE from other Gulf and Asian countries to gain education, paradoxically though, students from UAE are enrolling for higher studies in other countries. The most popular university programs within UAE are engineering, business, and health sciences (National Qualifications Authority, 2013).

The educational institutions in the UAE are regulated by the Ministry of Education in conjunction with the local authorities of respective Emirates. The Ministry plays a nodal role in regulating, monitoring, and developing systems, quality assurance, and overall growth of the education sector.

Theoretical Framework

The theory of educational decision-making is linked to that of career decision-making which in turn is derived from the models designed for general decision-making. A typical decision-making situation will involve an individual willing to implement a decision to achieve goal or goals. Further, alternatives available to the individual are selected on the basis of certain factors required to compare alternatives. It is essential for the individual to collect and process information while making a decision (Gati and Tal, 2008).

The number of alternatives available to an individual in an educational or a career decision-making situation is not only very large but also equal to the number of information sources used. Additionally, a number of factors are to be considered and an equal number of criteria are to be evaluated, that also includes the significant others such as parents or friends' influence on the final decision (Gati, Asher, 2001).

It is important to note here that the career indecision is caused by the factors on which the career decision is based. Any problem with the elements of decision making process might lead to indecision. According to Gati and Saka (2001), there are three types of problems affecting the

career decision-making process. Firstly and most significantly, it can be an individual's unwillingness to implement the decision, as a result of irrational expectations or lack of motivation. Secondly, the problems can occur due to insufficient or lack of information about the decision-making process, possible alternatives or the sources of information. Thirdly, the problems also occur if there is no consistency in the obtained information.

Several studies related to career decision-making process focus on the influence of individual factors or that of other people individually or rather examine the way the decisions are made (Pappas and Kounenou, 2011; Gati et al., 2010; Germeijs et al., 2012; Galotti et al., 2006).

The current study on the career decision-making process is based on the theory of planned behaviour. The theory of planned behaviour was proposed by Icek Ajzen (2012) to understand, anticipate and simulate the human behaviour in different situations. Unlike its base model theory of reasoned action, the planned behaviour uses three variables instead of two. That is, the new theory by Ajzen (2008) also uses a new variable such as the concept of perceived behavioural control in addition to earlier ones like the attitudes toward the behaviour and subjective norm. All these variables have a resultant impact on an individual's behaviour intention reflecting the actual behaviour. It is possible to measure these variables directly by asking about them. They can also be measured indirectly through examination of individual elements of these factors and the intensity or extent of their influence. This is followed by the evaluation of the corresponding expectations as shown in Figure 1. Even indirect measuring of these variables can be used to examine the influence of these expectations and thus enhance the predicative ability of the tested construct.

The three variables of planned behaviour theory can further be described as:

Behavioural beliefs refer to the chances of possible behavioural consequences and an evaluation of the positive or negative impact of these consequences on the decision maker.

Normative beliefs indicate the expectations of reference groups such as family, friend and peer relating to a particular behaviour, the significance of such expectations and the extent of an individual's willingness to fulfil these expectations.

Control beliefs were included in the theory of planned behaviour to explain the influence of external factors on the behaviour of decision maker. In some situations, an individual's behaviour depends on factors not fully under his control. In these situations, the individual having an intention, may or may not be able to implement certain behaviour due to the factors that restrain or facilitate the implementation of that behaviour. The proposed models of decision making highlight the existence of such factors and control that the individual subjectively assigns them.

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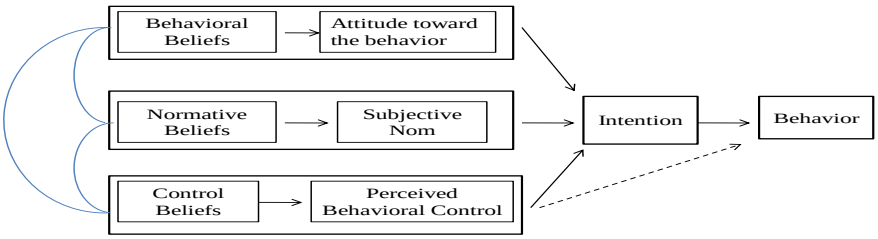

Figure 1 Theory of planned behaviour.

Theoretical Model

Decision making is a cognitive process of making choices by setting goals, identifying and assessing alternatives based on the values and preferences of the decision maker. However, there are several factors that influence a decision. The current study examines the factors influencing the decisions on education at K-12 and higher levels within the expatriate population living across the United Arab Emirates. Based on extensive literature review in context of the expatriate community in the UAE, five factors, namely, Socio Economic Status, Reference Groups, Academic Factors, Environment and Facilities, and Personal Attributes with 17 independent variables for K-12 and 24 independent variables for higher level were identified as most determining while deciding on most suitable education plan. The models for K-12 and higher level have been constructed separately as presented in Figure 2 and Figure 3.

Socio-Economic Status

Socio-economic status (SES) emerges as one of the most significant factors influencing the choices of the individuals with regard to their education. Socio-economic Status is defined as a relative standing in society based on an individual's income, power, occupation, education, and prestige (Agulanna and Nwachukwu, 2001; Guntla, et al, 2013). Most of the studies link

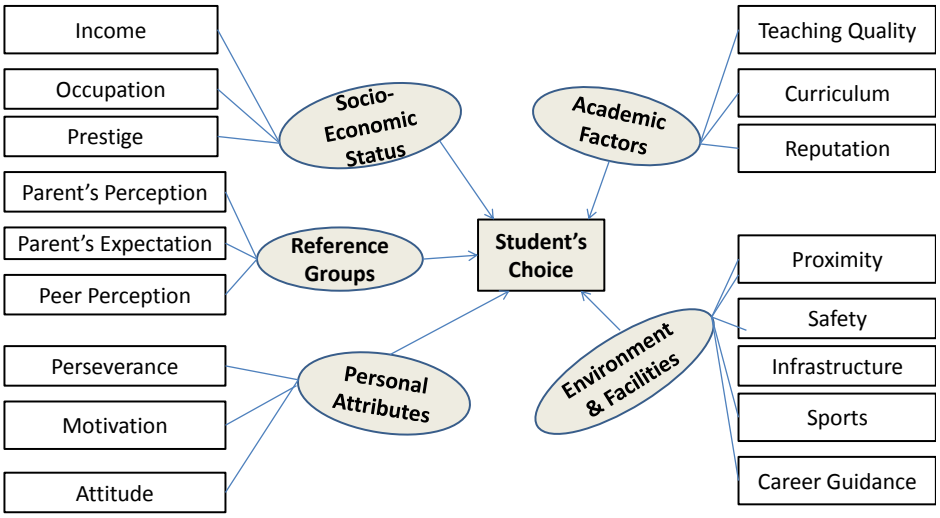

Figure 2 A Model of Students' Choice of K-12 Education in the UAE
(developed for this research)

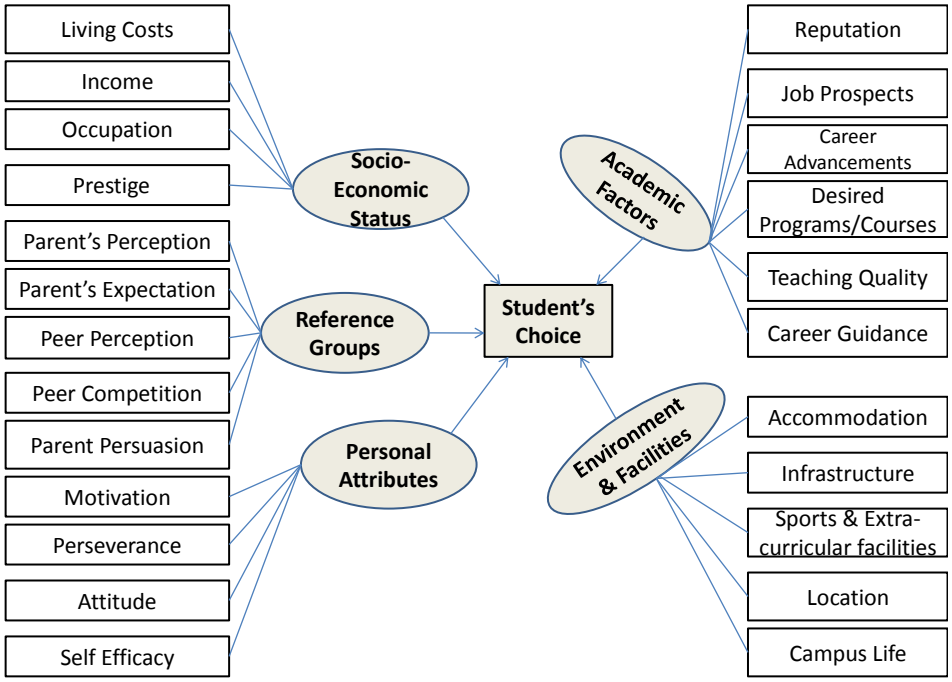

Figure 3 A Model of Students' Choice of Higher Education in the UAE

educational choices with career choices. Hence, educational decisions are seen as steps toward implementing career decisions (Leppel, Williams and Waldauer, 2001). Research also finds SES as 'a significant predictor of educational expectations' that is, their beliefs about their likely educational attainment (Owens, 1992; Rojewski& Kim, 2003; Rojewski & Yang, 1997; St-Hilaire, 2002; Trusty, 1998). Rojewski and Kim (2003) in their study mention SES as 'a defining factor of college-bound, work-bound, and unemployed youth, with two-thirds of all work-bound and unemployed youth being in the lowest two SES quartiles and two-thirds of all college-bound youth being in the highest two SES quartiles.'

Although there are several studies pertaining to the influence of SES on the education attainment and students' performance, very few studies have examined the impact of SES on the choice of education (Davies & Guppy, 1997; Dawson-Threat & Huba, 1996; Green, 1992, pp. 25–27, 45–48; Hackett, Esposito, & O'Halloran, 1989; Polachek, 1978; Trusty, Robinson, Plata, & Ng, 2000; Ware & Lee, 1988; Ware, Steckler, & Leserman, 1985). In these studies, socioeconomic status has been one of the significant factors impacting the decision making related to education with interesting results. Davies and Guppy (1997) found that students from households with lower socioeconomic status were more likely to choose more lucrative fields of study. Moreover, research also indicates the importance of parents' occupational status. According to Rehman, Khan, Triq, and Tasleem, (2010), the higher status of parents' occupational prestige involves the higher choice of selecting their children's education. The family's cultural and economic capital influence not only the probability of entering higher education, but also students' choices of programme and type of institution (Kusumawati, 2013).

Reference Groups

Reference groups such as parents, siblings, friends, peers, relatives, teachers and other influential people influence a student's choice of education (Kusumawati, 2013). As the literature review shows, these reference groups can exert a strong influence on students' decision-making in Thailand (Pimpa, and Suwannapirom, 2008), in Malaysia (Wagner and Fard, 2009), in Turkey (Yamamoto, 2006), in Portugal (Raposo and Alves, 2007), and also in California, (Ceja, 2006). These studies highlight the important role of parents, siblings, relatives, friends and peers during the educational institution choice process.

Survey of various reports and concerted observation indicate that family plays a significantly influential role in the students' educational and career choices. Numerous studies have found that college students and young adults cite parents as an important influence on the choices that they make (Guerra and Braungart-Rieker, 1999; Otto, 1989).

Research suggests that family variables such as parents' education, income, parents' occupation, and family size influence education and career aspirations. According to Papanis, Giavrimis, and Vicky (2011), 'a plethora of family factors determine educational decision: social-financial position and parent's education, culture, mentality etc'. Several researchers have found evidence that mostly students are influenced in their choice of profession by their parents' education level (Wood, 2010; Papanis, Giavrimis, and Vicky, 2011). The studies suggest that parents who have, or are, pursuing a higher level of education or a more prestigious career act as role models for their children. Also, the professional direction and professional ambitions of children are generally influenced by the cultural level of the parents (Papanis, Giavrimis, and

Vicky, 2011). Moreover, the income level of the family also influences the professional choices of the individuals to a great extent. Pimpa (2002) has identified four family variables, namely, finance, expectation, competition, persuasion and information as the source of influence on the choice of international education. The financial factors include tuition fees, living costs in a foreign country, and other related expenses whose affordability indicates the financial capacity of the family. Family expectation stems from the perceived benefits of students obtaining an overseas academic qualification, fluency in a foreign language and life experience. Competition among family members is a catalyst in their decision-making process. Persuasion in the form of 'opinion' and 'comparison' is used to convince the children to study abroad. Information regarding family members' own experience of studying abroad is yet another factor used to influence the prospective students (Pimpa, 2002). Although mainly cited in reference of choice made for international education, these factors do play a significant role in decision making process of youth today.

A range of research strongly discusses the effect parents have on a student's choice of school or college. However, research also indicates that the parental influence on the children is more in their pre-teenage and it slowly wanes as they grow older. Moogan and Baron's (2003) study found parental impact during the initial stages was greatest for non-mature pupils rather than mature pupils in the UK. Wood (2010) states that 'the goals of children and pre-teens are complicated by the fact that their cognitive maturation is still incomplete'. Therefore, individuals at this stage seek parental support and reassurance to shape their career goals. Berger (2005) suggests that adolescents value their peer relationships more highly at this stage of life span development because their friends provide them the freedom to experiment with different possible selves in a way that parents often do not (In Wood, 2010). Some studies also found that family conflict was negatively associated with career decision-making self-efficacy among family members. Family conflict seems to be internalized in a way that inhibits the family member's ability and confidence to make career decisions (Hargrove, Creagh, and Burgess, 2002, Wood, 2010).

Academic Factors

Academic elements such as teaching quality, teachers' qualification, quality of the curricula, scientific research quality, medium of instruction, reputation, prestige and image appear as significant factors in teaching and learning quality (Padlee, Kamaruddin, and Baharun, 2010). Students and their parents get influenced by these factors as they are significant in teaching and learning. However, the reputation of the institution has been found to be the most important factor in a student's decision related to education (Kusumawati, 2013). Researchers identify recognition and reputation of the institutions as the strongest evaluative criteria used by students in their selection of higher education (Ancheh et al, 207; Briggs, 2006, Moogan and Baron, 2003; Veloutsou, Lewis and Paton, 2004; Afful-Broni and Noi-Okwei, 2010). A range of studies also highlight the importance of academic factors like variable courses and campus, availability of desired program, quality of teaching, etc. in influencing the student's educational decisions. Teachers' efficacy requires knowledge, interpersonal skills and technical skills which is an important factor in attracting prospective students. Performance of the institution is yet another important factor likely to influence selection decision.

A very important aspect of any academic qualification is the desire to acquire a specific job or career. Education in general and higher education in particular is viewed by the students as a necessary vehicle to secure and lucrative job prospects (Kusumawati, 2013).

Environment and Facilities

Environment surrounding students such as campus life, safety, campus design, social life and people surrounding the campus compounds, are the first set of variables whereas sports facilities, infrastructure, accommodation, library, laboratory, cafeterias, students' union, exchange programmes with foreign universities are the second set of variables. Medical, part-time jobs, banks, financial support, etc. are yet another set of variables. These variables offered by institutions are the elements of convenience and desirability and, therefore, influence the students' selection of an institution. An institution needs to focus on curricular, co-curricular and extra- curricular activities in order to provide holistic education to the students. The education quality depends greatly on the environment of the educational institution itself (Rehman et al., 2010).

Two other factors considered important in decision making of an institution are location and proximity. The strategic location of an institution makes it popular among the students (Yaacob, et al., 2014). The location of an institution in a country or city perceived with high image and bright future prospects make it strategically significant. In addition, the location of the institution needs to be convenient with transport facility available for the students (Goldring and Rowley, 2006). Research studies suggest that proximity to home is one of the strong influences in the choice process of selecting an institution (Raposo and Alves, 2007; Dawes and Brown, 2002; Paulsen, 1990; Veloutsou, Lewis and Paton, 2004, Wagner and Fard, 2004). However, Bernal (2005) stated that 'there are particular groups from the middle class families who do not bother to send their children to the nearest school. They have considered that the nearest school in their neighbourhood may not be the best education institution for their children' (in Yaacob, et al., 2014).

Personal Attributes

Perceptions, preferences, beliefs, values, learning, memory, motives, personality, emotions and attitudes are the various attributes of an individual. Previous studies on choosing an institution have also explored the influence of these personal attributes (Raposo and Alves, 2007; Yamamoto 2006; Dawes and Brown, 2002) and found that 'personal preference was the most influential factor in university selection'. Dawes and Brown (2002) detected that 'before choosing university, students went through three decision sets namely the students' awareness set, consideration set, and choice set'. Dietrich (2010) states that an influence on decision making is the belief in personal relevance. When people believe what they decide matters, they are more likely to make a decision. Self-perception, self-assessment, and self-motivation affect students' decision to attend an institution. Freeman (1999) grouped 'the factors affecting educational decision process into three main categories: family or self-influences, psychological or social barriers, and cultural influences'. According to Haris (2012), 'cognitive biases and belief in personal relevance' could also be an influencing factor for decision-making (Bruin, Parker, & Fischoff 2007; Sanz de Acedo & Cardelle-Elawar et al. 2007; Juliusson, Karlsson, & Gärling 2005; Stanovich & West 2008; Acevedo & Krueger 2004). Haris further states that the individual or personal factor is considered as the most difficult to control or to predict in the decision-

making process. Factor of individual or person mostly corresponds to psychological aspect of decision-maker.

Research Propositions

The above theoretical framework allows us to set forth the following research propositions:

Hypothesis 1:The academic factors teaching quality, curriculum and reputation has direct positive correlation on students' choice of K-12 study.

Hypothesis 2: The job prospects, desired programmes and reputation influence the decision to join an institution for higher education.

Hypothesis 3: The level of students' perception on socio-economic status positively correlates their choice in choosing an educational institution and a program.

Hypothesis 4: The students' interpretation of their personal ability in coping with the perceived demands imposed in study is positively correlated to their eventual choice.

Hypothesis 5: Environment and facilities have correlation with the choice of institution.

Hypothesis 6: Peer perception and competition and parents' perception and expectation influence the educational decision of the students.

Hypothesis 5: Country image positively affects institution image.

Conclusion

Until now, there is no recorded research study conducted in the UAE that specifically explores the factors that influence youths in their choice of the K-12 study. The literature review shows the focus on the performance of the various institutions with respect to the standards stipulated by the regulatory authorities. As for the higher education, the studies are mainly targeted towards international education. Furthermore, there is no study which includes the choices of students at both K-12 and higher levels or there is no amalgamated point of view; which is the central focus of this paper.

The main challenge faced by the policymakers is to promote education in not only the completion of the courses but also the relevance of the curriculum to prepare for the competition, future development, improve the capabilities with additional skills and knowledge for the attainment of the suitable jobs in the dynamic environment. This study would help the education providers and policy makers to understand the needs and preferences of the learners. For all the levels of education to function properly, there is a need to align each course or program as operating with the harmony of the other levels along with learning outcomes. A theoretical model is suggested that integrates different factors that influence the enrolment choice of entering the schools, colleges and universities. The model presented in this paper demonstrates how enrolment choice is dependent on five factors: socio economic status, reference groups, academic factors, environment and facilities, and personal attributes. These factors provide an explanation on the interplay in the decision making process and as a predictor of enrolment choice made by the student.

Education is based on the outcomes and satisfaction at all levels while the input variables are different at each level. Access to the information acquired through this study may assist in the creation of specific marketing strategies and profession-friendly work practices by education industry of the UAE; which may help arrest or reverse the current trend by enticing school-leavers to join the higher education here.

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The Art of Deception: Best "Academic" Techniques in Lie Detection

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Abstract

Deception has nowadays become an intrinsic aspect of many people`s lives. Many studies have been so far conducted by various institutions and independent researchers to shed light on the process, motives, and especially indicators of deception introducing the field of Deception Analysis (Ekman, 2001; DePaulo & Morris, 2004; Vrij, 2008). However, many findings of these studies regarding deception indicators have been in contradiction with each other (Picornell, 2013). In this study, the researcher made an attempt to review major works on this issue and develop a comprehensive checklist of deception indicators, including linguistic and paralinguistic signals. This proposed checklist includes the deception indicators that are reported or suggested by experts. Later, the researcher conducted a series of interviews with a group of participants and asked them to tell a number of statements that some of them were lies. The researcher, using the deception indicators and deception detection techniques, tried to identify participants` deceptive statements; in other words, detect their lies. Results showed that some of deception indicators in the proposed checklist were spotted during the interviews but many of the others did not show up which cannot be good news for those who have long taken them seriously. Findings further showed that techniques that challenge memory like repeating; writing or specific questions can be helpful in catching liars with a lie. Finally, post-interview questions revealed precious insights about the level of stress, cognitive loads, and deceptive strategies of participants during the interviews.

Key Words: Deception, Lie, Deception Indicators, Deception Detection Techniques

Introduction

The relationship between language and crime has been intense enough to urge researchers from every corner of the world to take their best shots in solving legal issues through their language expertise. Their attempts led to the emergence of forensic linguistics; an area of academic research which has proved to be highly effective with regard to criminal investigations and has made real contributions in numerous aspects including author identification, caller identification, plagiarism, asylum interviews, and in general crimes of language. Analyses of this line of work show that these activities which are involved with language have one common problem which is deception detection. In other words, it is safe to assume that deception detection is a key concept in all branches of forensic linguistics and in a broader spectrum, forensic science. In every criminal investigation, criminals do their best to deceive others and expunge their traces; and investigators on the other side try to neutralize their deception and catch them culprit. But detection of deception is beyond being simple. For years experts and law enforcement agencies dedicated time and resources to see through different aspects of this natural ability of human beings and find ways to detect it in the most efficient way possible.

The role of language in crime solving activities has long been appreciated by researchers and law enforcement agencies. Language, more or less is considered as an identification tool by which people can be distinguished from one another. This property has motivated researchers throughout ages to examine different aspects of language and see if they can be helpful in the process of investigations.

Efforts finally made it through the development of a new field of study, namely forensic linguistics. Forensic linguistics was introduced when Jan Svartvik published a seminal work on a murder case which later became known as "The Evans Statements: A Case for forensic linguistics". This work was a turning point in the history of research and analysis with regard to the intersection of language and crime. In *The Evans Statements,* Svartvik coined the term "forensic linguistics" to describe his application of analytical and quantitative methods in linguistics to a forensic issue; in this case, the authorship of statements. His analysis serves as a model for work in forensic linguistics, as he demonstrates careful syntactic and quantitative analysis in authorship identification (Svartvik, 1968).

This work established a platform for linguists to delve into other aspects of language and its use in criminal investigations and they left no stone untouched in the recent decades of its official inception.

Research in forensic linguistics was never limited to analyses of statements but it further covered many other areas including analyses of interviews or emergency calls, voice analysis, author identification, accent or dialect analysis, handwriting analysis, suicide notes, threat letters, plagiarism, etc. (Zimmerman, 1984; Shuy, 1993; Dines, 1994; Fitzgerald & Schilling, 2011; Hollien, 2002; Coulthard, 2004; Leonard, 2004; Olsson, 2008).

Critical to studies on language and crime is the ability to detect deception. In other words, in almost all cases of forensic linguistics researchers try to find out about the hidden truth underneath events. In this regard, deception detection becomes highly essential and rewarding (Shuy, 1998). It is highly unlikely to investigate a criminal case without being able to discern truth against lie which is in fact a call for progress in deception detection.

Although deception has always been part of human nature, academic investigation on deception detection analysis does not have a very long history. It was in the 19th century that researchers realized that deception can be detected by the involuntary behavior of deceptive

individuals. The identification of truth against deception became a hot business with the development of new scientific techniques which worked on the assumption that deception affects physiological states of human beings like heart rate, blood pressure, muscular activity, breathing rates, etc. (Picornell, 2012).

In general, we can say that two major trends where employed with respect to deception detection; human detection vs. machine detection. In one hand, investigators employed techniques which aimed to analyze the behavior of subjects using linguistic clues like story consistencies, choice of words or body language or leakage of emotions which could be detected by naked eyes. On the other hand, they also used technologies like plethysmograph, sphygmograph, polygraph, eye tracking systems, MRI brain scanning, etc. to further their knowledge about deception detection (Sacks, 1975; Ekman, 2001; Depaolo & Morris, 2004). In a fierce competition, both methods have pros and cons and in many cases they have been used together with the hope of achieving more accurate results. However, results have not been promising enough as men learned to fool interrogators along with their machines.

As defined earlier, forensic linguistics is the application of language in a forensic context; a context that a crime is committed and a linguist tries to help to shed light on the case and identify a culprit. This process, similar to any other forensic case, requires a potential ability on linguist`s side which is deception detection (Svartvik, 1968; Shuy, 1998; Solan & Tiersma, 2005; Olsson, 2008). Therefore, we can assume that deception detection analysis is an intrinsic element in forensic linguistics and knowing more about various aspects of deception and techniques in detecting them seems to be fundamental to solving cases in the interdisciplinary field of forensic linguistics.

Although many studies and experiments have been conducted with regard to deception analysis, there is no consensus on the best techniques or processes by which deception can be detected in human beings. This field of study is imbued with contradictory and unverified telltale signs of deception that in some cases can be true and in some cases can false. In other words, it can be assumed that deception indicators are not considered as deception indicators by all deception experts (Picornell, 2012; Zhou & Sung, 2008). On the other hand, no official comprehensive checklist of deception indicators has been introduced by the researchers which can cover all purported indicators of deception. In this state of chaos of uncertainty in the world of deception analysis, a plethora of studies seem to be necessary for confirming each of the purported deception indicators. The reason being, deception is one of the inborn natural properties of human beings and it never ceases to amaze how people use this property to gain advantage.

Methodology

In this study, the researcher tried to identify a number of deception indicators reported by experts in an effort to develop a preliminary checklist of indicator. Categorizing the deception indicators into linguistic and paralinguistic subcategories the researcher aimed to run an experimental study to see if the indicators in the checklist show up during the interviews. The experimental phase of the research included 10 individuals who volunteered to participate in the study. The procedure required each participant to make 10 statements about themselves that some of those statements were lies. Meanwhile, the researcher could interrupt participants or ask follow up questions. Participants were asked to share which of their statements were false and which were true. After each interview, some questions were asked with regard to stress, memory, mathematics, composition and storytelling, genetics, difficulty of lying, education, reasons of

lying, feeling at the time of lying, time for preparation, and strategies of lying. Each interview was voice or video recorded, depending on the preference of participants, and were analyzed by the researcher to see if any indicators of the developed checklist appear during the interviews.

Data Analysis and Findings

Reviewing the literature the researcher identified a number of indicators that were suggested by experts of deception detection. The researcher categorized the indicators into linguistic and paralinguistic indicators. While linguistic indicators mainly language use, paralinguistic indicators addressed body language.

The linguistic indicators that were identified by the researcher as signals of deception were the followings:

- Word quantity
- Inconsistency and contradiction
- Generalization
- Contraction of negative sentences
- Emphatic use of language
- Vagueness of statements
- Use of negative emotion words
- Deflection
- Past to present tense shift
- Use of specific words which can reveal opinions (e.g. whatever: contempt or if: self doubt)
- High pitch voice
- Grammatical errors, pauses, and disfluencies
- Excessive use of hedges and modifiers
- Group references vs. self-references
- Repetition to buy time
- Excessive use of gap fillers (e.g. actually, etc.)

The paralinguistic indicators that were identified by the researcher as signals of deception were the followings:

- Swallowing
- Fingers in front of the mouth
- Biting lips
- Looking down (guilt)
- Raising eyebrows
- Touching hair, watch, earrings, etc.
- Hand illustration
- Shrug
- Folding arms
- Clearing the throat
- Sweating
- Averting or blocking eyesight
- Middle finger
- Touching forehead
- Eye contact

- Blinking
- Raised eyebrows pulled together (fear)
- Tight lips + flap nostrils (anger)
- Eye movements
- Fake emotions

One note which should be taken into account is that none of the abovementioned signals indicate deception; they merely indicate a call for further investigation. However, clusters of these indicators can be of great significance as the more indicators show up the higher the possibility of deception will be.

Having identified the indicators, the researcher aimed to run an experimental study to see if they show up in a laboratory situation with 10 participants. Analysis of the findings of interviews can be categorized in three dimensions:

Indicators:

Analysis of the indicators requires perception and attention as it is quite likely to miss them in fractions of second or due to preoccupations. The indicators that were identified by the researcher when participants lied were inconsistency and contradiction of statements, abundance of short statements, negative emotion words, repetitions to buy time, swallowing, aversion of eyes, smiles, and clearing the throat.

Interpretation of Indicators:

With regard to the interpretation of indicators this remains constant that although these indicators were spotted when lying and can corroborate the previous research, they should not be considered as a definite sign of deception. Furthermore, indicators of deception can be manipulated if liars are professional. For instance, when it comes to hand illustrations analysis of the interviews showed that those who lied more also used hand illustration. Analysis also showed that those who were not very good at lying tend to break the eye contact.

Post Interview Questions:

After each interview, a number of questions were asked to attain more information about the potential variables in the context of deception. Answers can be summarized in the following perspectives:

- The level of stress was to a normal amount according to the participants; in other words, stress and anxiety did not play a significant role in the process. Preparation time for the interview was about five minutes for each participant.
- Results of the interviews showed that participants believe that their memory and storytelling capabilities as well as education are important in delivering a deception; however, they cast doubts on the impact of mathematics and genetics on the deceptive powers.
- Almost all participants confirmed that lying is not easy and requires different levels of mental ability on the basis of each individual and they usually do not leave a pleasant taste in liars` mouths and this will leave victims of deception some clue or indicator to detect deception.

- With regard to reasons of lies various motives can be mentioned; however, in one superordinate category "gaining advantage" can be considered as the main reason people attempt to lie.
- Strategies of deception are also dependent on each individual and this is an aspect which is intertwined with creative thoughts. Creativity plays a great role in delivery of deception as it needs theorizing victim`s moves. One of the most important strategies that could be inferred from participants` answer was to analyze the victim`s state of awareness to make a move.

Conclusion

Language plays a significant role in deception as it is a major medium of its delivery. Studies have shown that a good command of language can help deceitful people get away with it. Therefore, it seems necessary to investigate deception from linguistic perspectives. One of the most challenging issues in deception analysis are the indicators that are attributed to deceptive people as there has never been a solid consensus on them. In this study, the researcher identified a number of deception indicators that were suggested by researchers and experts, and categorized them under linguistic and paralinguistic indicators. Later, a number of interviews were conducted to assess the visibility of the so-called indicators. Post-interview questions also revealed precious individual-based information regarding deception. This study tried to touch some of the key issues in deception analysis that each of which calls for further research and explorations.

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Non-cognitive Skills and the Role of College Activities: an Empirical Study in Hong Kong

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Abstract

Increasing studies demonstrated the power of non-cognitive skills. However, the methods to improve students' non-cognitive skills are still not clear. The present paper was trying to investigate the correlations among different factors that related with non-cognitive skills, and to examine the contributions of teaching and extra-curricular activities in higher education on students' non-cognitive skills. Grit as one of the important non-cognitive skills was studied. An empirical study was conducted in a college located in Hong Kong by a questionnaire survey. 116 undergraduate students in different majors and in their 1st, 2nd, 3rd or 4th study year were randomly chosen. The Grit Scale developed by Duckworth et al (2007) was adapted, which subdivided grit into two factors assessing perseverance of effort and consistency of interests. The results indicated that the students with higher GPAs were not grittier than other students. The students who more believed in the power of grit were grittier. Well-designed teaching activities positively contributed to students' grit. However, extra-curricular activities indicated different patterns of contributions to grit, perseverance of effort and consistency of interests.

Key Words: non-cognitive skills, grit, college activities, undergraduates

Introduction

What are the important skills for students' whole life? In the past, cognitive skills were the focus. With the coming of the Information Age, it calls for comprehensive skills other than cognitive skills. So far, a plenty of studies have demonstrated the importance of non-cognitive skills in predicting academic achievements (Jacob, 2002; DiPrete & Jennings, 2012; Mendez, 2015), social outcome (Cutler, Huang & Lleras-Muney, 2015) and students' successes in the labour market (Duncan & Dunifon, 1998; Heckman, Rubinstein, 2001; Heckman & Kautz, 2012; Heineck, 2011; Fletcher, 2013). Farkas has an excellent review about the role of non-cognitive skills in social stratification (Farkas, 2003). Many studies also indicate that non-cognitive skills are critical for college enrolments, student retention and study behaviours in college (Brown, 2012; Delaney, Harmon, & Ryan, 2013).

The definition of non-cognitive skills has not been clearly identified so far. Heckman & Kautz (2012:451-464) defined non-cognitive skills as "personality traits, goals, motivations, and preferences that were valued in the labour market, in school, and in many other domains". OECD identified a conceptual framework of non-cognitive skills with three domains and nine sets of non-cognitive skills, including pursuing goals(perseverance, self-control, passion for goals), working with others (friendliness, respect, caring) and managing emotions(calm, optimism and confidence) (OECD, 2015:34).

Grit

Non-cognitive skills refer to many kinds of skills, but not only one universal skill. Grit is an important non-cognitive skill that is crucial for students' whole life. Duckworth, Peterson, Matthews & Kelly (2007) found that grit was an important factor to explain the variance in students' successes and was not significantly related with students' IQs. Grit was defined as "perseverance and passion for long term goals" (Duckworth et al, 2007:1087). Baum (2004) found that perseverance was an important entrepreneurial trait. Markman, Baron & Balkin (2005) (2005) demonstrated that entrepreneurs had higher self-efficacy and perseverance. The difference between grit and perseverance is that "grit" emphasized the persistence in long-term goals.

Although the power of grit is increasingly recognized, the ways to foster or improve grit through schooling are still not very clear. OECD (2015:40-41) mentioned that schooling was one of the important learning contexts to promote the development of non-cognitive skills, and curricular and extracurricular activities in schools were important factors to shape skills. This paper tried to contribute to educational practices through analysing the relations among different factors that may have effects on grit, considering teaching and extracurricular activities in college. This paper also contributed to the measurement of grit by translating and adapting the Grit Scale developed by Duckworth et al (2007) in the Chinese context.

Method

Participation

In this study, a specific college located in Hong Kong was chosen to be studied. All the undergraduates in this study were randomly selected. A total of 143 questionnaires were provided. 27 questionnaires were rejected because of inadequate or invalid information. Finally, 116 questionnaires were considered to be valid. The study was carried out in 2014.

Of the valid sample, college students were in their 1st, 2nd, 3rd, 4th study year. The ages ranged from 17 to 24 years (mean age=19.37). Of all the participants, 46(39.7%) were males and

70(70.3%) were female. The majors covered literature, science, engineering, law, medicine, social science, business and education.

Measurements

There were several parts in the research questionnaire to assess students' background information, grit (consistency of interest, perseverance of effort), belief in grit, college activities factors (exposure to teaching activities, perceived benefits from extra-curricular activities). All of these items in the questionnaire were scored with a 5-point Likert scale from 1 to 5. 1 represented *"completely disagree"*; 5 represented *"completely agree"*.

The Grit Scale developed by Duckworth et al (2007) was adapted in this study to measure grit. It contains 12 items, and constructs grit into two factors, "consistency of interests" and "perseverance of effort". As the Grit Scale is valid for adolescents and adults, we adapted the original Grit Scale of Duckworth et al (2007) to measure undergraduate students' grit in this study. Six items in this scale needed to be scored in reverse. In order to ensure understanding, all these 12 items were translated into Traditional Chinese. The reliabilities (Cronbach's Alphas) of the Grit Scale in this study ranged from 0.61 to 0.751.

The scale to assess the student's belief in grit, exposure to teaching activities and perceived benefits from extra-curricular activities was self-developed, because no existing reliable scales could be adapted. The reliabilities ranged from 0.727 to 0.798.

Results

Factor Analysis for Measurements

For the Grit scale, a principal component analysis with a two-factor method was used to analyse grit. Two factors were identified. Table 1 shows the results. Items from 1 to 6 were grouped into a component named "consistency of interests". The remaining items were grouped into the other named "perseverance of effort". The results of grouping were in line with Duckworth et al (2007). Using reliability analysis, Cronbach's Alphas of the overall scale was 0.69, 0.751 for consistency of Interests subscale, and 0.610 for perseverance of effort.

Table 1 Factor Loadings for Principal Component Analysis with Oblique Rotation for the items of Grit[1]

Grit scale	Component	
	1	2
item1[r]	**0.669**	0.027
item2[r]	**0.475**	0.165
item3[r]	**0.676**	-0.248
item4[r]	**0.748**	-0.160
itme5[r]	**0.695**	0.221
item6[r]	**0.647**	0.059
item7	-0.075	**0.564**
item8	-0.217	**0.366**
item9	0.197	**0.642**
item10	-0.121	**0.631**
item11	0.190	**0.612**
item12	0.235	**0.577**
Eigenvalue	2.957	1.992
% of Variance Explained	24.64	16.60

[1] Note: r means the item was scored in reverse.

Three factors were identified from the self-developed part in the questionnaire using principal component analysis with direct oblimin rotation method. Table 2 shows the results. The three factors were labelled as "belief in grit", "exposure to teaching activities", and "perceived benefits from extra-curricular activities". Each factor contained 5 items.

The factor labelled as "belief in grit" was represented by the following items: "Perseverance is an essential capability", "To achieve the goal, we must have perseverance", "We should finish what we started", "I want to be a person with perseverance", and "It is very difficult for the person who lacks perseverance to succeed".

The factor labelled as "exposure to teaching activities" was represented using 5 items: "Teachers often arrange learning activities for us, e.g. seminar, field survey", "During the learning activities, teachers often ask us to make plans", "Teachers often ask us to make our own learning objectives for each term", "Teachers actively teach us to finish what we have begun", and "Teachers actively teach us not to be discouraged easily".

The factor labelled as "perceived benefits from extra-curricular" was represented by the following items: "Through participation in extracurricular activities, I gained more self-management skills, e.g. management by objectives, stress management, time management, emotional management and so on", "Through participation in extracurricular activities, I know persisting in a goal is very important", "Through participation in extracurricular activities, I feel that achieving goals need perseverance", Through participation in extracurricular activities, I feel more capable of focussing on one or more months to achieve a goal", "Through participation in extracurricular activities, I feel that I won't be upset even if I encounter difficulties in future".

The reliability of "belief in grit" factor was 0.727. The reliability of "exposure to teaching activities" factor was 0.776. And, the reliability of "perceived benefits from extra-curricular activities" factor was 0.798.

Table 2 Factor Loadings for Principal Component Analysis with Oblique Rotation for the Items of Self-developed part in the questionnaire[2]

Items	Component		
	1	2	3
Perseverance is an essential capability	-0.115	**0.727**	0.076
To achieve the goal, we must have perseverance	0.000	**0.712**	0.118
We should finish what we started	-0.008	**0.604**	0.079
I want to be a person with perseverance	0.069	**0.759**	-0.150
It is very difficult for the person who lacks perseverance to succeed	0.287	**0.569**	-0.051
Teachers often arrange learning activities for us, e.g. seminar, field survey	-0.167	0.182	**0.649**
During the learning activities, teachers often ask us to make plans	0.088	0.103	**0.594**
Teachers often ask us to make our own learning objectives for each term	0.096	-0.003	**0.748**
Teachers actively teach us to finish what we have begun	0.273	-0.050	**0.687**
Teachers actively teach us not to be discouraged easily	0.037	-0.163	**0.829**
Through participating in extracurricular activities, I gained more self-management skills, e.g. management by objectives, stress management, time management, emotional management and so on	**0.550**	0.055	0.181
Through participation in extracurricular activities, I know persisting in a goal is very important	**0.751**	0.182	-0.017
Through participation in extracurricular activities, I feel that achieving goals need perseverance	**0.749**	0.107	-0.028
Through participation in extracurricular activities, I feel more capable of focussing on one or more months to achieve a goal	**0.760**	-0.049	-0.029
Through participation in extracurricular activities, I feel that I won't be upset even if I encounter difficulties in future.	**0.706**	-0.144	0.153
Eigenvalue	4.609	2.023	1.482
% of Variance Explained	30.729	13.485	9.881

Correlation Analysis

Correlation analysis was used to find the relations among different factors including students' grit which were constructed into perseverance of effort and consistency of interests, belief in grit, exposure to teaching activities, and perceived benefits from extra-curricular (see table 3). Grade and calculative GPAs reported by students were also analysed.

Only students' belief in grit was significantly and positively correlated with students' grit ($r=0.194$, $p=0.037$). Students' GPAs($r=0.246$, $p=0.045$), belief in grit($r=0.354$, $p=0.000$), exposure to teaching activities($r=0.368$, $p=0.000$), and perceived benefits from extra-curricular activities ($r=0.293$, $p=0.001$) were found to be significantly and positively correlated with perseverance of effort. However, the correlation between students' perceived benefits from extra-curricular activities and consistency of interests was significantly negative($r=-0.204$, $p=0.028$). That was, the students who felt getting more benefits from extra-curricular activities were less likely to keep consistent in interests. One possible explanation was that those students who felt getting more benefits from extra-curricular activities usually changed interests and participated in different types of activities, but did not persisted in one kind of activities.

It is interesting that grade negatively correlated with perseverance of effort($r=-0.081$, $p=0.385$), but significantly and positively correlated with consistency of interests($r=0.300$, $p=0.001$). This suggested that senior undergraduates tended to be less perseverant, but were more likely to persist in a long term goal than junior undergraduates. This also indicated that it

[2] Note: The factor loading in bold type represents the highest loading value.

was necessary to predict students' grit by predicting perseverance of effort and consistency of interests separately.

Table 3 Correlation Coefficients of All Variables[3]

Variables	grit	perseverance of effort	consistency of interests
gender	0.032	0.132	-0.057
grade	0.175	-0.081	0.300***
GPA	0.023	0.246**	*-0.163*
students' belief	0.194**	0.354**	-0.009
exposure to teaching activities	0.12	0.368***	-0.117
perceived benefits from extra-curricular activities	0.016	0.293***	-0.204**

Regression Analysis

Linear regression was used to predict students' grit including the two constructs of grit (i.e. perseverance of effort, consistency of interests). The multiple regression estimated models were:

$$\text{grit}=\alpha+\beta_1\cdot\text{grade}+\beta_2\cdot\text{GPA}+\beta_3\cdot X_1+\beta_4\cdot X_2+\beta_5\cdot X_3+\varepsilon \quad (1)$$

$$\text{perseverance of effort}=\alpha+\beta_1\cdot\text{grade}+\beta_2\cdot\text{GPA}+\beta_3\cdot X_1+\beta_4\cdot X_2+\beta_5\cdot X_3+\varepsilon \quad (2)$$

$$\text{consistency of interests}=\alpha+\beta_1\cdot\text{grade}+\beta_2\cdot\text{GPA}+\beta_3\cdot X_1+\beta_4\cdot X_2+\beta_5\cdot X_3+\varepsilon \quad (3)$$

Where X_1 represented students' belief in grit, X_2 represented exposure to teaching activities, and X_3 represented students' perceived benefits from extra-curricular activities. Table 4 shows the results.

Students' belief in grit had significantly positive contribution to grit (β_3=0.177, p=0.045) and perseverance of effort (β_3=0.243, p=0.009). Also, belief in grit positively contributed to consistency of interests (β_3=0.108, p>0.1). This demonstrated the importance of student's belief in grit. In other words, the undergraduates who believe more in grit were grittier.

Exposure to teaching activities positively contributed to grit, perseverance of effort and consistency of interests (β_4=0.124, 0.190, 0.062) respectively. The contributions of exposure to well-designed teaching activities to grit and perseverance of effort were significant. In other words, the undergraduates who were exposed to more well-designed teaching activities tended to be more perseverant especially for long term goals.

Students' perceived benefits from extra-curricular activities showed a different pattern. Students' perceived benefits from extra-curricular activities significantly and negatively contributed to consistency of interests (β_5=-0.211, p=0.054), but positively contributed to perseverance of effort (β_5=0.069). This suggested that the students who thought they got more benefits from extra-curricular were more likely to persist when confronted with setbacks, but were less likely to persist in a long term goal.

GPA had no significant contributions to grit, perseverance of effort and consistency of interests. In addition, GPA negatively contributed to grit (β_2=-0.006). It meant that the students with higher GPAs were not grittier than others.

[3] Note: *** Correlation is significant at the 0.01 level (2-tailed), p<0.01.
** Correlation is significant at the 0.05 level (2-tailed), p<0.05.

Table 4 Linear Regression Predicting Grit, Perseverance of Effort and Consistency of Interests with College Activities[4]

Independent variables	grit	perseverance of effort	consistency of interests
(Constant)	2.104***	1.430***	2.783***
grade	0.092**	0.019	0.163***
GPA	-0.006	0.059	-0.072
belief in grit	0.177**	0.243***	0.108
exposure to well-designed teaching activities	0.124*	0.190**	0.062
perceived benefits from extra-curricular activities	-0.070	0.069	-0.211*
R Square	0.098	0.219	0.129
Adjusted R Square	0.057	0.183	0.089

Discussion

Numerous studies have demonstrated the important role of grit on students' lives. However, little is known how to foster a student's grit. The present study tried to contribute to this area. The study explored the relations among different factors (grit, students' belief in grit, exposure to teaching activities, perceived benefits from extra-curricular activities), and tried to predict students grit using linear regression analysis. Undergraduate students in a college located in Hong Kong were randomly selected. The Grit Scale developed by Duckworth et al (2007) was adapted and the other scales used in this study were self-developed to measure students' belief in grit, exposure to teaching activities and perceived benefits from extra-curricular activities. The reliabilities of the measurements used in this study were demonstrated to be reliable within an acceptable rang.

Correlation analysis and regression analysis were conducted. The results suggested that students' belief in grit were important. The students who believed in perseverance and had more passions for long term goals were grittier. Well-designed teaching activities were also important. The college students who more often were arranged with diverse learning activities and who often made plans during learning process were grittier. As for students' perceived benefits from extra-curricular activities, the students who thought they got more befits from extra-curricular activities were less consistent in interests. In others words, the students who participated in different kinds of extra-curricular activities usually had not a consistent interest, and were more likely to change interests in a short time. On the contrary, the students who have more consistent interests were grittier, but they considered they did not get so many benefits from extra-curricular activities in college.

Another interesting finding was that the students with higher GPAs were not grittier than the other students. This result was different from that of Duckworth et al (2007). Duckworth et al (2007) found that grit was positively associated with GPAs, but negatively related with students' SAT scores. Nevertheless, this result also indicated that smartness could not guarantee grittiness. This was also similar to the findings of Heckman &Rubinstein (2001) and Heckman & Kautz (2012) which found that standardized tests did not capture students' non-cognitive skills. All these findings suggested that better cognitive skills did not ensure better non-cognitive skills. Non-cognitive skills deserve more specific attentions in schooling. Teachers should encourage

[4] Note: *** Correlation is significant at the 0.01 level (2-tailed), $p<0.01$.
** Correlation is significant at the 0.05 level (2-tailed), $p<0.05$.
* Correlation is significant at the 0.1 level (2-tailed), $p<0.1$.

students to believe in the power of grit, and stimulate students to practice making plans and to persist until things were accomplished.

There are several limitations for this study. Firstly, Correlation is not equal to causal effects. The dataset used in this study does not allow us to do causal interpretations. The correlation findings faced the challenge of the inverse causal relationship. Secondly, no cross-college data was collected. Causal analysis could be investigated in the further research.

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Students Perceptions of the Use of Technology in Teaching English and its Practices

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Abstract

This presentation is based on a research project conducted in an English Language Teaching department at a foundation university in Turkey to investigate students' perceptions of using technology in education and how much they make use of it to prepare their papers, presentations, and lesson plans for micro and real teaching practices. In the first step, information on students' perceptions on the use of technology was collected through a questionnaire. In the second step, the students were asked how much they use technology to prepare their papers, homework and presentations. In this step, the same questions were given to instructors to increase the validity of the study. The aim was to see the relationship between students' perceptions and what they really do.

Key Words: Using technology, English language teaching.

Introduction

Technology is used in all parts of life. In education there are a lot of debates on its uses but it is a common belief that if we use it properly, students would be motivated and interested in the lesson more. Another common belief is that, since the dependency on technology keeps increasing, schools need to prepare students who are competent in its use. One way to ensure this is to effectively integrate technology into the curriculum. However, teachers need to make sure that technology does not dominate the learning environment but just support it. One major goal could be to show learners how to use it for their benefits and to solve problems.

Educational departments in Turkey have been trying to equip teacher trainees with the latest technological developments to facilitate teaching and learning (Koç, 2013). Some classes related to this topic are: Computer, Computer-assisted Language Learning, Instructional Technology and Materials Design, all of which are directly related to technology. There are still others, like Methodology, Language Teaching Skills, Teaching English to Young Learners, Teaching Literature, in which the students are asked to prepare micro lessons and presentations using technology.

However, when we look at the educational system at public primary, secondary or high schools, we cannot see any use of technology at all. Many teachers working at those schools blame the syllabus, textbooks or lack of money and resources at schools. Fortunately, there are some teachers who find a way to integrate technology into their classes whatever the conditions are.

At the Departments of English Language Teaching (ELT) prospective teachers study the theory about the use of technology first. Later, they observe the instructors / professors use it and experience adapting what they have learned both by preparing papers / projects for their courses and by using it to prepare micro / real teaching lesson plans. The aim of this study is first, to find out student perceptions on the use of technology. Secondly, to identify the courses in which they really make use of technology to prepare papers and also lesson plans. Thirdly, to find out how much instructors are aware of whether students use it to prepare papers and micro / real teaching lesson plans. In this triangulation, the aim is to see whether there is a relationship between student perceptions on the use of technology and how much they really use it in their studies and in teaching English to learners.

Literature Review

Numerous studies have been conducted to identify the relationship between the perceptions of different groups, such as students, parents, employers, teachers, workers, etc., with varying aims in mind. Some of them are: to provide a better technologically literate workers and students (Robinson, 2008); to find out the perspectives on effective computer-based pedagogy (Niederhauser & Stoddart, 2001) and to determine the technologies that promote learning (Tang & Austin, 2009).

Lam, McNaught, Lee and Chan (2014) conducted a detailed survey on 1438 students from different disciplines. They concluded that all participants had a similar view and that is positive, towards the use of technology in teaching and learning. Tang and Austin (2009) developed a scale called "Students' Perceptions of Technology Scale" (SPOTS) and 215 university students took part in it. The results revealed that when professors used technologies; such as, internet, video, PowerPoint, projector, they could promote student learning and cater for their needs and aims. In another research on students, Başöz & Çubukçu (2014) found out that students using computers everyday have more positive

attitudes towards CALL and feel enthusiastic about learning a foreign language through computers than students using computers once a week. Another result of the same study is computer ownership, experience and academic courses on computers do not have a positive correlation with the attitudes of pre-service teachers.

In their article, Niederhauser and Stoddart (2011:15) examined the "relationships between teachers' instructional perspectives and their use of technology in instruction" and concluded that their "perspectives about effective computer-based pedagogy are related to the types of software they use with students" (p. 29).

Method

Participants

The questionnaire was given to thirty-two junior and twenty-three senior students at the Department of English Language Teaching, Faculty of Arts and Sciences, at a foundation university with about 5000 students. There are thirty female and twelve male junior and twenty female and three male senior students, aged between 20 and 25. Moreover, five course instructors of third and fourth grade students were asked three questions about the students' use of technology.

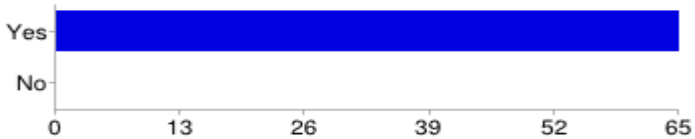
Instrument

The attitude towards computer-assisted language learning (CALL) questionnaire was given to 65 students. The questionnaire was taken from Vandewaetere & Desmet (2009:353)'s research aiming at "introducing a general framework to validate questionnaires measuring latent or unobservable constructs in research on CALL". In the first part of the questionnaire, student demographics and thoughts on the use of CALL were elicited. The technological devices they use for doing homework, presentations and preparing lesson plans were asked both to students and to five instructors who teach those students.

Results

Results of the student questionnaires

1) Do you have a computer?



Yes	65 %100
No	0 %0

2) In which courses do you use computers?

Teaching Language Skills	63 %97
Teaching Literature	58 %89
Language Teaching Methodology	54 %83

3) How long have you been using computers?

Years	Number of students	Percentage %
1-3 years	1	2
4-6 years	2	3
7-9 years	15	23
More than 9 years	47	72

Table 1. Use of Computers

As can be seen from the table, almost all the students, 95% have been using computers for more than seven years. We can say that they have started using them when they were teenagers.

4) How often do you use the Internet?

Daily 65 %100

According to this question all the students use the internet every day.

The attitude towards computer-assisted language learning (CALL) questionnaire

CALL questionnaire	Totally disagree	Disagree	Not sure	Agree	Totally agree
1- Learning a foreign language assisted by computers is not as good as learning through oral practice.	(5) 8%	(12) 18%	(15) 23%	(20) 31%	(13) 20%
2- Computer-based language tests can never be as good as paper-and-pencil tests.	(9) 14%	(19) 29%	(8) 12%	(13) 20%	(16) 25%
3- CALL is less adequate than traditional learning.	(8) 12%	(17) 26%	(22) 34%	(16) 25%	(2) 3%
4- People who learn a language assisted by CALL are less proficient than those who learn through traditional methods.	(14) 22%	(16) 25%	(19) 29%	(13) 20%	(3) 5%
5- CALL is a valuable extension of classical learning methods.	(0) 0%	(2) 3%	(30) 46%	(21) 32%	(12) 18%
6- CALL gives flexibility to language learning.	(1) 2%	(3) 5%	(9) 14%	(24) 37%	(28) 43%
7- CALL is as valuable as traditional language learning.	(2) 3%	(9) 14%	(27) 42%	(19) 29%	(8) 12%
8- CALL can stand alone.	(14) 22%	(20) 31%	(15) 23%	(8) 12%	(8) 12%
9- CALL constitutes a more relaxed and stress-free atmosphere.	(2) 3%	(3) 5%	(8) 12%	(28) 43%	(24) 37%
10- Learning a foreign language assisted by computer enhances your intelligence.	(4) 6%	(7) 11%	(20) 31%	(22) 34%	(12) 18%
11- I would like to learn foreign language by computer.	(11) 17%	(18) 28%	(13) 20%	(11) 17%	(12) 18%
12- Feedback provided by computers is clear.	(17) 26%	(14) 22%	(14) 22%	(13) 20%	(7) 11%
13- Feedback provided by computer gives me enough information about my mistakes.	(12) 18%	(17) 26%	(22) 34%	(7) 11%	(7) 11%
14- CALL develops my reading skills.	(4) 6%	(9) 14%	(16) 25%	(17) 26%	(19) 29%
15- CALL develops my listening skills.	(2) 3%	(1) 2%	(5) 8%	(24) 37%	(33) 51%
16- CALL develops my writing skills.	(7) 11%	(13) 20%	(23) 35%	(11) 17%	(11) 17%
17- CALL develops my speaking skills.	(16) 25%	(17) 26%	(15) 23%	(11) 17%	(6) 9%
18- CALL develops my grammar.	(2) 3%	(6) 9%	(22) 34%	(25) 38%	(10) 15%
19- CALL develops my vocabulary knowledge.	(1) 2%	(2) 3%	(10) 15%	(19) 29%	(33) 51%
20- Teacher's attitude towards CALL largely defines my own attitude.	(3)	(6)	(35)	(15)	(6)

	5%	9%	54%	23%	9%
21- Teacher's enthusiasm in CALL largely defines my own motivation.	(3) 5%	(5) 8%	(28) 43%	(18) 28%	(11) 17%
22- Teacher's proficiency of using computers in language learning largely defines my own attitude to CALL.	(3) 5%	(6) 9%	(25) 38%	(23) 35%	(8) 12%
23- I have faith in computer-based language tests.	(4) 6%	(7) 11%	(23) 35%	(19) 29%	(12) 18%
24- I have faith in computer-based language exercises.	(3) 5%	(6) 9%	(20) 31%	(23) 35%	(13) 20%
25- I feel less inhibited when communicating in the foreign language via computer than in face-to-face situations.	(2) 3%	(10) 15%	(23) 35%	(17) 26%	(13) 20%
26- In a face-to-face situation (classroom) I often feel anxiety when speaking in the foreign language.	(8) 12%	(14) 22%	(21) 32%	(15) 23%	(7) 11%
27- For me, it takes longer to start a face-to-face conversation than a virtual one on computers.	(10) 15%	(7) 11%	(24) 37%	(20) 31%	(4) 6%

Table 2. Frequencies

When we look at the table, we can summarize the positive attitudes of students towards the use of CALL as follows:

- Half of the students believe that CALL is a valuable extension of classical learning methods,
- Most students (80%) think that CALL gives flexibility to learning; only 7% believe it does not,
- 80% of students believe that CALL constitutes a more relaxed and stress-free atmosphere, only 8% think it does not,

In terms of enhancing intelligence, 62% of students think CALL can do so,

- 55% of students think that CALL develops their reading skills,
- A great deal of students (88%) believe that CALL develops their listening skills,
- 53% of students think CALL develops their grammar,
- Most students (80%) believe CALL develops their vocabulary knowledge,
- More than half (55%) of the students have faith in computer-based exercises,

On the other hand, the negative attitudes can be summarized as follows:

- More students, 51% think that learning through oral practice is better than CALL. 26% disagree with this,
- Only 38% of students think that CALL is more adequate than traditional learning,
- Less than half, 47% of students believe that CALL is more effective than traditional methods, Similarly, almost half, 42% of the students are not sure whether CALL is as valuable as traditional learning or not,
- Undoubtedly, since the participants are trainee teachers, more than half (53%) think CALL cannot stand alone, while 24% think it can,
- Almost one third, 35% of students want to learn a foreign language by computers and 45% do not want such a thing,
- Almost half (48%) of the students think that feedback provided by computers is not clear,
- For 44% of students, computers do not give them enough information on where they went wrong,
- Only 34% of students believe that CALL develops their writing skills,
- Similarly, only 26% of students think CALL develops their speaking skills,
- Less than half of the students (47%) have faith in computer-based language tests,

- Similarly, less than half of the students (46%) feel less inhibited when communicating in the foreign language via computer than in face-to-face situations

Results from the Instructors' questionnaire

Five "Teaching Language Skills, Teaching Literature and Language Teaching Methodology" course instructors of third and fourth grade students are asked three questions about the students' use of technology. The results are:

1. In the courses I am teaching, the students use the following technologies to prepare their papers:

- Computer
- Internet
- University databases
- Other(s): _____

Computer and internet are mentioned by all the instructors. Only one of them mentioned university databases. For others, they mentioned tablets and smart phones. For university databases, one instructor said: "Not all students visit the library to access digital data. Perhaps they are not aware of the type of information sources provided by the university or perhaps their English is not good enough to allow them to use these sources."

2. In the courses I am teaching the students use the following technologies to prepare their presentations:

- Computer
- Internet
- PowerPoint
- Projector
- Prezi
- Other(s): _____

Computer, internet, PowerPoint and projector are mentioned by all the instructors. Nobody mentioned Prezi. One instructor said: "I believe that students' PowerPoint skills vary a lot. There are some advanced level users who come up with amazing graphics that I cannot find on the net no matter how much time I spend. There are some average users and some poor users but regardless of the efficiency, it seems that most students know and spend considerable of time on the web sites."

3. In order to prepare lesson plans, fourth grade students use the following technologies:

- Computer
- Internet
- PowerPoint
- Projector
- Prezi
- Other(s): _____

The results for this one are the same with the previous point. Computer, internet, PowerPoint and projector are mentioned by all the instructors. Nobody mentioned Prezi. One comment for this is: "I witness that my students have used all these technological programs and devices."

Conclusion

In conclusion, when we examine the overall attitudes of students towards computer-assisted language learning, we can say that they have doubts about its usage in the classroom. They do not fully support it. However, when we look at their instructors' responses, we see that almost all the students use technology to prepare their homework, presentations and lesson plans.

When we look at the results in more detail, we can say that their attitudes are not very negative at all; for example, they believe that CALL constitutes a more relaxed and stress-free atmosphere (80%). This result supports the result of Başöz & Feryal (2014), which was 67.8%. Another very similar result is about the flexibility CALL gives to language learning,

which is 80% in the present study and 78.6% in the other. In both studies half of the students believe that CALL is a valuable extension of classical learning methods. The two studies are similar not only in terms of students' positive attitudes toward learning, but they are similar in their negative attitudes. For example, in both studies, students disagree that CALL develops their writing (34% in the present study, 27.6% in the other one) or oral skills (26% in the present study, 17.9% in the other one). In both studies the students do not think that CALL can stand alone.

To sum up, it is a common belief that technology use is necessary for the digital natives. We believe that as long as the students support the use of technology, they will continue using it when they become teachers and keep developing their abilities in this field and be useful to their students. As a result, we can say that further research can focus on the effective ways of using computers in language teaching.

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Appendix

SECTION I: PERSONAL INFORMATION

Please tick (√) the appropriate choices and provide the necessary information below.

1. Do you have a computer?

□ Yes □ No

2. How long have you been using computers?

□ 1-3 years □ 4-6 years □ 7-9years □ More than 9 years

3. In which areas of language learning do you use computers?

□ Language Skills □ Literature □ Methodology

4. How often do you use the Internet?

□ Daily □ Once a week □ Once a month □ Never

SECTION II: THE ATTITUDE TOWARDS COMPUTER-ASSISTED LANGUAGE LEARNING (CALL) QUESTIONNAIRE

Through this questionnaire, we would like to know what your attitude is towards Computer-Assisted Language Learning (CALL). Please read each statement carefully and indicate the extent to which you agree with the following statements. Please mark your response by circling the number on the right of each statement ranging from 1 (totally disagree) to 5 (totally agree).

	Totally disagree				**Totally agree**
1- Learning a foreign language assisted by computer is not as good as oral practice.	1	2	3	4	5
2- Computer based language tests can never be as good as paper-and- pencil tests.	1	2	3	4	5
3- Computer- assisted language learning is less adequate than the traditional learning.	1	2	3	4	5
4- People who learn a language assisted by computer-assisted learning are less proficient than those who learn through traditional methods.	1	2	3	4	5
5- Computer- assisted language learning is a valuable extension of classical learning methods.	1	2	3	4	5
6- Computer- assisted language learning gives flexibility to language learning.	1	2	3	4	5
7- Computer- assisted language learning is as valuable as traditional language learning.	1	2	3	4	5
8- Computer- assisted language learning can stand alone.	1	2	3	4	5
9- Computer- assisted language learning constitutes a more relaxed and stress-free atmosphere.	1	2	3	4	5
10- Learning a foreign language assisted by computer enhances your intelligence.	1	2	3	4	5
11- I would like to learn foreign language by computer.	1	2	3	4	5
12- The feedback provided by computer is clear.	1	2	3	4	5
13- The feedback provided by computer gives me enough information on where I went wrong.	1	2	3	4	5
14- Computer- assisted language learning develops my reading skills.	1	2	3	4	5
15- Computer- assisted language learning develops my listening skills.	1	2	3	4	5
16- Computer- assisted language learning develops my writing skills.	1	2	3	4	5

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17- Computer- assisted language learning develops my speaking skills.	1	2	3	4	5
18- Computer- assisted language learning develops my grammar.	1	2	3	4	5
19- Computer- assisted language learning develops my vocabulary knowledge.	1	2	3	4	5
20- Teacher's attitude towards CALL largely defines my own attitude.	1	2	3	4	5
21- Teacher's enthusiasm in CALL largely defines my own motivation.	1	2	3	4	5
22- Teacher's proficiency of using computers in language learning largely defines my own attitude to CALL.	1	2	3	4	5
23- I have faith in computer- based language tests.	1	2	3	4	5
24- I have faith in computer- based language exercises.					
25- I feel less inhibited when communicating in the foreign language via computer than in face- to- face situations.	1	2	3	4	5
26- In a face- to- face situation (classroom) I often feel anxiety when speaking in the foreign language.	1	2	3	4	5
27- For me, it takes longer to start a face-to-face conversation than a virtual one on computers.	1	2	3	4	5

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Analysis of Discourse Practices in Statistical Computing Laboratory

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Abstract

Classroom talk plays a significant role in a teaching and learning process. The author of this paper was concerned with the way student-student and teacher-student discourses promotes students' statistical thinking in the computing laboratory. An observation study was thus conducted to examine how social interactions among students in small groups and the teacher's intervention were organised in the laboratory. In the observation study, verbal speech and peer interaction were audiotaped. The various discourses were transcribed in full, with relevant excerpts being selected for analysis within a Vygotskian framework. The student-student discourse was analysed with the aid of Kumpulainen's framework. It was found that the high use of the organizational, judgmental as well as external thinking functions in the student talk when presenting the chart title and axis labels; approving or disapproving group mate's work; and monitoring data entry actively during keyboard input respectively.

The teacher-student discourse was analysed with the aid of Tharp and Gallimore's framework. Questioning was used frequently by the teacher to discover what the students knew, understood, or misunderstood, and to offer direction towards deeper thinking at times when students could not otherwise make progress on tasks. The teacher also used modelling assistance to help students see how to assemble and organise pieces of knowledge they might have already grasped or possessed. Contingency management was another form of assistance exhibited in the form of praise that affirmed the quality of students' work. The teacher offered cognitive structuring that assisted them to organise and justify various aspects of a regression modelling problem but left room for students to regulate their strategies based on their own creation and interpretation of a regression model they found was the best.

Key Words: social interaction, modelling, questioning, cognitive structuring

Introduction

Information Technology (IT) may re-organise an environment in which students and teachers develop learning partnerships to socially construct knowledge through peer collaboration, classroom talk and social interaction (Jones & Mercer, 1993; Mercer, 1995). Classroom talk plays a significant role in a teaching and learning process (Goos, 2000) because students construct knowledge, solve learning problems or accomplish tasks with the assistance of verbal speech in the form of student-student talk or student-teacher talk. Students make their ideas available via communication to others for comment, suggestion and argument and their thinking is further developed by having to make sense of what others say to them. Irrespective of whether students substantiate their own claims or challenge their learning partner's proposals, their thoughts are articulated and ideas and concepts will become more refined (Light, 1993).

Although Geiger and Goos (1996) reported on how different types of talk were used in technology-based mathematics classroom, how classroom talk promotes statistics learning and statistical thinking in an IT environment is unknown. IT here refers to enabling students to have a more intuitive feel for the concepts being studied; serving students to alleviate computational burden; and implementing computer logic by students. An observation study was therefore conducted to examine how social interactions among students in small groups and the teacher's intervention were organised in statistical computing laboratory.

Research Design

Since the observation study was set within a classroom, the research design and associated methods of collection and analysis of data were selected for their relevance to teachers and students as research participants. The participants included a teacher and 58 students enrolling in Year 2 of the Higher Diploma in Applied Statistics and Computing course offered by the Hong Kong Institute of Vocational Education. All the students had attained the elementary level of probabilistic and statistical concepts in their Year 1 study.

This cohort of students was selected because Regression Modelling is a module taught in their Year 2 study in which the teacher planned for improving classroom teaching practice by means of developing and adopting a model of statistical thinking and a cognitive model of correlation comprehension within an IT environment in which web resources and Excel were utilised with an emphasis on social processes of learning (cf. Li, 2009; Li & Goos, 2011). The delivery of the module follows a pattern of 2-hour lectures supported by 1-hour computing laboratory sessions in each of fifteen weeks. in Computing laboratory sessions were divided into small groups of two or three in order to increase students' opportunities for peer learning.

Methodology

Through all laboratory sessions, students were offered hands-on practice in regression modelling, which also helped develop mastery of regression heuristics. While they were accomplishing various modelling tasks collaboratively with their teacher and/or learning partners, there was necessarily a substantial amount of talk between students. The students' conversations and student-teacher discourse were audiotaped and transcribed in full, with relevant excerpts being selected for further analysis. Peer talk was preliminarily analysed based on Mercer's (1995) categories: exploratory, cumulative and disputational. Talk is generally categorised as exploratory when students critically evaluate what they are told prior to accepting. As such, exploratory talk moves knowledge and understanding from the superficial to a more refined level. Students who respond to their learning partners positively without critically evaluating what they are told use cumulative talk. Disputational talk is

developed when students challenge someone's proposal based only on their personal point of view. Fisher (1997) and Mercer (1995) pointed out that outcomes of collaborative learning had a close link with a specific talk category.

Peer talk was further analysed with the aid of the framework developed by Kumpulainen (1994). However, not all of Kumpulainen's classifications were observed in student conversations in the statistics classroom. Nevertheless, all utterances can be classified in one of the ways in Table 1 that shows common functions of classroom talk displayed in regression modelling work.

Classifications	Description
Informative	Seeking information about data and problem background or knowledge previously learnt
Compositional	Deducing practical implications for regression parameters involving discussion of data context, scatterplot construction and hypothesis testing
Interrogative	Seeking learning partners' feedback or approval when puzzling about their own work
Judgmental	Conveying one's agreement or disagreement
Organisational	Organising ideas and wording when presenting statistical work or constructing persuasive lines of statistical reasoning
External thinking	Articulating one's thought when presenting statistical output aloud
Responsive	Showing one's participation in learning activities or expressing one's agreement to a less extent
Reproductional	Repeating learning partners' response and one's own response without any elaboration or critical evaluation
Affectional	Expressing one's personal feelings, for example, task accomplishment
Argumentational	Challenging someone's proposal or defending one's argument with concrete evidence
Expositional	Discovering things unfamiliar or unanticipated without detailed planning, such as interacting with data, studying problem context, looking for alternative approaches, etc.
Hypothetical	Proposing statistical ideas without providing any evidence or explanation
Heuristic	Formulating or regulating strategies for correlation appraisal, model fitting, model refinement, etc.

Table 1. Classifications of talk during statistical work (modified from Kumpulainen, 1994)

In computing laboratory sessions, the teacher used talk to guide the construction of students' knowledge and orchestrate learning activities. Thus, the student-teacher talk was analysed using sociocultural perspectives derived from the work of Tharp and Gallimore (1988) and Mercer (1995). Mercer's framework (1995) was used to identify how the teacher

elicited knowledge from students; responded to what students said; and recapped to re-organise, or call attention to the significant ideas students had just presented. The student-teacher talk was further analysed to report a finer-grained account of teacher-led discussion in the way that assisting students to learn, via modelling, questioning, cognitive structuring, contingency management, feeding back and instructing.

Within each of these discourse categories, teachers may elicit, respond, or recap. For instance, questioning can be used to elicit what students already know or how their understanding develops or misunderstanding arises. Alternatively, questioning can be used for responding to students if the teacher wishes to extend discussions. Questioning can also be used to offer directions towards task improvement or accomplishment after recapping students' useful ideas as hints.

Research Findings

The teacher tended to intervene in student's learning activities with a computer in order to check the quality of understanding they gained and how students' thinking should be facilitated when they met with obstacles. He noticed that three students, A, B and C were puzzled as to how to graph and comprehend correlation data even though they had completed some correlation tasks. He came to their computer workstation and recalled what he discussed with all students in the lecture the day before to orient them to the task at hand. He drew their attention to a set of data and the use of Excel. They listened to the teacher's hint but did not show much of a response. Thus, he wanted to know what impeded their learning progress; and how he could offer learning assistance (see Excerpts 1-4).

Excerpt

1.	Teacher:	Before you use Excel, you read this set of data. Based on this context, you look at …
		(The teacher was pointing at the data on an Excel spreadsheet).
		What do you mean by the tax refund?
		Do you know what is the meaning of tax refund?
		(Students A, B & C shook their heads to signal they did not know the meaning.)
		Let's say taxpayers, they paid tax in 1999.
2.	A & B:	Hm! Hm!
		(A, B & C started to pick up the problem background.)
3.	Teacher:	The Financial Secretary said "Return part of personal tax back to the taxpayers."
4.	B & C:	Hm! Hm!

The assessment question, *"What do you mean by the tax refund?"* was used by the teacher to elicit what the students knew and understood. He found that progress was obstructed in the task of correlation comprehension because the problem context they were working on was different from the one they had discussed the day before. Thus, at this stage,

he briefed them on contextual background of the problem. The students indicated their understanding during pauses in his briefing.

Excerpt

5.	Teacher:	This is the amount. This is the percentage. You read this? This is the percentage. *(The teacher referred the relevant data by pointing at their Excel spreadsheet.)*
6.	C:	Hm! *(C responded to showing she understood what was told.)*
7.	Teacher:	And this is the monthly family income in thousands of dollars, OK?
8.	A:	Hm! Hm! *(The teacher explained the measurement unit of data.)*

The teacher assisted retrieval of the meaning of tax refund by reiterating the variable names, content and measurement unit of tax refund data on students' Excel spreadsheet. This, he hoped, would facilitate the students' transition from understanding data to performing an appraisal by studying the data relationship.

Excerpt

9.	Teacher:	You look (at the data)! Say, based on this context, do you think there is a relationship between the percentage of the tax refund spent within one month of receipt and the family income? *(The teacher waited for about few seconds.)* Do they have the relationship?
10.	A, B & C:	Hm! Hm!
11.	A:	OK.
12.	Teacher:	*(The teacher had checked their answer on their laboratory worksheet.)* You've just discussed, "There is a relationship." And the next question is whether these data cover a reasonable and meaningful range. OK?
13.	A, B & C:	Hm! Hm!
14.	B:	OK.
15.	Teacher:	What is the minimum value for the percentage in this case? *(The teacher found A & B were sure about what was going on. So, he decided to leave them with the question.)*

		Read this question carefully and then I'll come back.
16	A, B & C:	OK.

The teacher drew students' attention to recalling the data context and he posed a question, in Excerpt 9 to gauge the point at which the students should target. The students' verbal responses did not have any discourse context but the teacher found the response written on their laboratory worksheet confirmed their understanding. He recapped their answer and subsequent questioning was used as a means of assisting thinking associated with a logical extension of examining data.

To sum up, the students listened attentively to the teacher, but were not actively engaged with discussions initiated by the teacher. They only gave simple verbal responses to the teacher's questions but without attempting to give any elaboration or justification. Nevertheless, the students' written responses affirmed their understanding after instructing and questioning assistance offered by the teacher and so he handed over the responsibility for subsequent correlation tasks to them.

After the teacher had offered students A, B and C assistance, these students studied relationship between the variables on their own. Kumpulainen's (1994) and Mercer's (1995) frameworks were used to analyse the nature and contents of talk among students when they moved on to graphing correlation data together without teacher's assistance.

Excerpt

17.	C:	Do we plot a straight line for the data? (**Interrogative**) *(While A was thinking about what minimum value was for y-axis, C proposed to construct a scatterplot.)*
18.	B:	It would be better to construct it (a scatterplot). (**Judgmental**)
19.	C:	It would be more easy to judge. (**Judgmental**)

Students A, B and C basically knew how to approach a correlation problem. C proposed to construct a scatterplot and sought her learning partners' feedback, using interrogative talk. At the same time, A had shown an implicit agreement and was thinking about what the minimum value was for the $y-axis$. This shows that A worked faster than her learning partners. B replied why she agreed with C's proposal and C explained why to construct a scatterplot using judgmental talk. The use of exploratory talk throughout this dialogue illustrated that their discussions helped them develop a more refined level of understanding of a scatterplot.

Excerpt

20.	B:	Just key in the data! (**Organisational**)
21.	C:	Yes, key in the data into Excel but we need to watch it carefully. (**Judgmental**)
22.	A:	Be careful! (**Responsive**)

23. C: Yes, otherwise we will be in trouble. (**Judgmental**)

Student B gave the instruction to input data into an Excel spreadsheet for subsequent scatterplot construction. Although C gave the same instruction, she reminded A and B to watch the data as well as the display of data meticulously upon each successive keyboard input and A agreed with her. Interestingly, B's instruction (Excerpt 20) was organisational as commanding a straightforward data input task, whereas C's instruction was judgmental in realising that incorrect data entry would spoil a scatterplot and would be difficult to rectify (Excerpts 21 and 23). That is, the entries appearing on the dialog box of Excel graphing tools were retained (hard-coded) and could not be overwritten. Any incorrect entry had to be deleted completely and then re-entered, otherwise this would create a serious problem if great care were not taken with data entry. A's talk was responsive to agree and alert to input data correctly (Excerpt 22). In the ensuing segment their talk was cumulative aiming at preparing data for scatterplot construction using Excel and did not call for any critical evaluation (Excerpts 20-23).

Excerpt

24. A: 70, 55, 100, … , OK? (**Interrogative**)

(A keyed in the data.)

25. C: 13 (**External thinking**)

(A keyed in the data.)

26. A: 13 (**External thinking**)

. .
. .
. .

32. A: 2, 4, 6, … six pairs of data (**Judgmental**)

(A constructed a scatterplot.)

After student A had read the data aloud when keying, she used interrogative talk to seek her learning partners' agreement (Excerpt 24). They did not respond, but soon after, C read the data aloud and A keyed in the data. A provided feedback to what data was heard and had already been keyed in. The talk displayed mostly an external thinking function, monitoring data entry actively during keyboard input (Excerpts 25-31). Prior to scatterplot graphing, A's talk displayed a judgmental function, checking for the correct number of pairs of data inputted, because graphing correlation required the data to be in pairs (Excerpt 32). The nature of the talk was cumulative, revealing the way they all closely monitored data entry before graphing. This would enable them to correct their mistakes more promptly leading to the basic requirement of graph construction, that is, presenting proper format, layout and axis orientation of a graph.

33.	C:	120 (%)? The graphing tool enlarges the y-scale. (**Expositional**)
34.	B:	Over-scale, right here! (**Judgmental**)
		(C pointed at 120% shown in y-scale.)

The function of talk became expositional at the time C discovered a y-value of 120% in the scatterplot constructed by A as displayed on their computer monitor. She queried the legitimacy of 120% because she believed the Excel graphing tool enlarged the y-scale, ending up with the y-value of 120%, thereby exceeding its meaningful data range within the context of tax data. Of course, 100% was the maximum percentage of amount of tax refunded that could be spent. 120% would represent an over-spending of the amount of tax refunded, but this was not acceptable. B's talk showed judgmental function when she admitted C's discovery and pointed out the over-scale problem resulting from an extraordinary percentage, 120%.

Excerpt

35.	A:	Are the axes swapped? (**Interrogative**)
36.	C:	Yes, the axes are swapped. (**Judgmental)**
37.	B:	No! No, it was right! It was right. These are … (**Argumentational**)
38.	C:	Here is what? (**Argumentational**)
		(C was pointing at the x-axis.)
39.	B:	These are x (-values). The maximum x-value is 100 and this should represent x. But the axis scale does not contain 100 and the maximum is 70. Therefore, this scatterplot is correct. (**Argumentational**)
40.	C:	Doesn't this (y-)axis represent percent? (**Argumentational**)
41.	A:	The data had interchangeably been keyed in. (**Organisational**)
42.	B:	The data had interchangeably been keyed in. Oh yes! You're right. Click! (to swap the data input) (**Judgmental**)
		(A swapped the data input.)
43.	C:	x-values should be here. (**Judgmental**)
44.	A:	This should be for y-values. (**Judgmental**)
45.	B:	Aha! Aha! (**Affectional**)

With the over-scale problem ignored, student A queried the correctness of the axis orientation used in their scatterplot but she received different responses from B and C (Excerpts 35-37). C answered, "*Yes, the axes are swapped"* in supporting A's query, and sounded more confident with her own answer. When B was insisting the axis orientation was correct, C interrupted and challenged B, "*Here is what?"* while pointing at the x-axis. B defended her answer aloud in response to C's challenging question but B did not articulate her thoughts when checking whether or not the values presented in the x-scale made sense. She was still holding a wrong answer. C found B's defence did not make sense so she challenged B further by asking a more specific question, *"Doesn't this (y-)axis represent percent?"* When B was thinking about C's question, A proposed a way of rectifying the answer and announced, *"The data had interchangeably been keyed in."* A's proposal clarified B's thinking, which then helped her to recognize her misunderstanding, B then commanded, *"Click!"* to correct the mistake. The interaction enabled them to explore subtle differences between the orientation of the x-axis and y-axis that evolved from the regression problem, thereby demanding the strategic level of statistical thinking. Within the strategic level, thinking is associated with predicting something unknown based on one's personal view and judgement emerging from a statistical perspective or methodology; and devising a scheme or plan for achieving a particular objective related to statistics.

Although the talk among the three students (Excerpts 35-45) showed mainly concern for data entry, they still found the axis orientation flaw owing to improper order of data entry, that is x-values and y-values were swapped in the scatterplot they constructed. Student A initially used interrogative talk when spotting the problem in axis orientation and C employed judgmental talk to express her agreement with A's query. Subsequent talk between B and C (i.e., Excerpts 37-40) exhibited an argumentation function as B defended her answer and C challenged B. The divergent views between B and C were reconciled by A's organisational talk that announced a swap of the data input. After the data swap, A's and C's talk was judgmental to declare the axis orientation was now correct. B's expression *"Aha! Aha!"* was affectional in nature to express task achievement. The successful outcome of this collaborative learning episode, that is, making a concerted effort to correct the axis orientation, resulted from exploratory talk (i.e., Excerpts 35-45) that critically evaluated and changed the axis orientation and refined the students' understanding of Excel graphing conventions.

Excerpt		
46.	B:	Title … (**Organisational**)
47.	A:	The chart title should be (**Organisational**)
48.	C:	Oh! The title … (**Organisational**)
49.	B:	Should be … (**Organisational**)
50.	C:	The relationship between the … (**Organisational**)
51.	B:	The percentage of the tax refund spent within one month of receipt and the monthly family income (**Organisational**)
52.	A:	Something like that …. percentage of the tax refund … (**Organisational**)

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(A talked while keying in the scatterplot title.)

53. B: It's too long. (**Organisational**)

Students A, B and C attempted to give a title to their scatterplot by turns but they could not summarise what the scatterplot intended to show. Their talk here (Excerpts 46-49) was organisational in nature while maintaining an interaction among themselves and inviting their learning partners' suggestions. When drafting the title, C grasped a few words and announced, *"The relationship between the … "* and B supplemented, *"The percentage of the tax refund spent within one month of receipt and the monthly family income"*. A consolidated the titles both B and C suggested. In so doing, language, thoughts and actions were linked when A keyed in the title on the scatterplot. B said, *"It's (The title's) too long."* A probably agreed with B and summarised the title concisely. B and C agreed with the title amended implicitly. Their talk (Excerpts 50-53) was organisational in nature. Overall, the talk was cumulative as all three composed and put forward the title of a scatterplot to convey its central theme. This composition task did not deal with critical evaluation, but they placed emphasis upon the conciseness of the title of a scatterplot.

Excerpt

54. A: The x-axis label? (**Organisational**)

55. C: (The labels of x-axis and y-axis were) income in thousands of dollars … (and the) percentage of the tax refund (spent respectively). (**Organisational**)

(A keyed in the labels of x-axis and y-axis.)

To complete the task of scatterplot construction, it is necessary to give labels for the x-axis and y-axis. Thus, A asked her learning partners, *"The x-axis label?"*; C replied with the labels of both x-axis and y-axis. The question-and-answer had an organisational function, describing what the x-axis and y-axis represented. This is a typical type of cumulative talk, not involving critical evaluation.

Excerpt

56. A: It looks like we should exclude the 120 (% in the scale of y-axis)? (**Interrogative**)

It is unreasonable to have 120 as it is over-scale. (**Compositional)**

57. B: It looks like we (should) have (this value). No need to change. (**Judgmental**)

58. A: We quit from here (the Excel scatterplot) first. (**Hypothetical**)

59.	B:	It looks like we should go back (to) the previous dialogue box to re-scale this (y-axis). Quit from here first. (**Heuristic**)
60.	A:	It's about here (y-axis). Click or right-click the mouse? (**Interrogative**)
		(They all laughed.) (**Affectional**)
61.	C:	Wait! Click. (**Judgmental**)

Student A alerted them to revisit the over-scale problem and proposed excluding 120% together with her justification that this was over-scale and absurd within the context of tax data. A said, *"It looks like we should exclude the 120 (% in the scale of y-axis)?"* with an interrogative tone when seeking B's and C's feedback. A's justification was compositional in nature (Excerpt 56) because she deduced an implicit but practical implication of the percentage of tax refunded that was spent, that is, indicating 120% was an out-of-range percentage as the percentage of tax return could not be greater than 100%, the amount of tax paid. Although B disagreed with A, *"... No need to change"* (Excerpt 57), neither debates nor discussions arose. This was simply because B did not challenge A, and eventually conceded the need for reformatting the y-scale. Thus, B's utterance was judgmental rather than argumentational. A said, *"We quit from here (the Excel scatterplot) first."* to suggest what to do in Excel. The context of her speech was hypothetical in nature, proposing a step for rectifying the y-scale in Excel but without providing any explanation or clear procedures. The procedures, *"It looks like we should go back (to) the previous dialogue box to re-scale this (y-axis)."* formulated by B had heuristic functioning. At the time, A was pointing at the y-axis with a mouse pointer, she was concerned with the correct mouse action and asked, "*Click or right-click the mouse?"* to prompt the "Format Axis" dialogue box in Excel. Her utterance was interrogative in nature when seeking her learning partners' advice regarding a mouse-click action. They all laughed to signify they had confidence in accomplishing the correlation tasks and such expression was affectional in nature. Finally, C announced, *"Click"* that is, judgmental when affirming A's mouse-click action.

The above conversation illustrated the use of various types of talk: interrogative, compositional, judgmental, hypothetical, heuristic and affectional to suit different needs for achieving certain purposes or accomplishing specific tasks. Although the axis-reformatting tasks had not much critical evaluation involved, the talk can be classified as exploratory as implicitly deducing a practical implication of the percentage of tax refunded that was spent and formulating procedures for rectifying the y-scale.

Excerpt

62.	B:	Underline (the title). (**Organisational)**
63.	A:	Underline looks ugly. (**Organisational**)
64.	C:	What's this? (**Interrogative**)
65.	A & B:	This is the title. That's all about it. (**Organisational**)
66.	B:	Enlarge the scatterplot a bit. (**Organisational**)

67.	C:	OK. (**Organisational**)
68.	A:	This is the scatterplot title. (**Organisational**)

To make their scatterplot more eye-appealing, they proposed enhancing its layout. B suggested underlining the title of their scatterplot. Yet, A found this ugly so she undid title underlining. C asked, *"What's this?"* to draw their learning partners' attention to checking the wording of the scatterplot title. Both A and B replied, *"This is the title."* B suggested enlarging the scatterplot; C agreed, and A accomplished the task. Their talk relevant to the scatterplot enhancement tasks was mainly organisational in nature. Interrogative talk was used only when C wanted to draw their learning partners' attention to checking the wording of the scatterplot title. Summing up, the talk was cumulative when accomplishing the straightforward task of layout enhancement of the scatterplot.

Excerpt

69.	Teacher:	Yes, this is good!
70.	A, B & C:	Hm! [inaudible]
71.	Teacher:	In your labelling (graph title), you can simplify this. Just say, the percentage of tax refund spent. I can tell you, that's nothing wrong with your labelling.
72.	A, B & C:	Hm! [inaudible]
73.	Teacher:	You don't have enough rooms sometimes; so we just grasp or pick up the keywords.
74.	A, B & C:	Hm! [inaudible]
75.	Teacher:	When you present the graph to audience, so explain what you mean by percentage of tax refund spent. … You understand what I mean?
76.	A, B & C:	Hm! [inaudible]
77.	Teacher:	If there is not too much room for you to put down the long labeling (graph title), just pick the keywords.
78.	A, B & C:	Hm!
79.	Teacher:	This is good! *(The teacher was pointing at the graph title they had just revised with a grasp of keywords.)*
80.	A, B & C:	Hm! Hm!
81.	Teacher:	Good axis scales and labelling! 0%, … , 100% because the maximum percentage of tax refunded you can spent. *(The teacher was pointing at the 100%.)*

82.	A, B & C:	Hm! Hm!
83.	Teacher:	Very good!

It was observed that the students became self-directed and could spot and correct graphing mistakes without the teacher's assistance. However, talk among students involved the teacher when he intervened in their learning activity to check their progress. Thus, the following analysis of the student-teacher talk employs Tharp and Gallimore's (1988) and Mercer's (1995) ideas. Contingency management in the form of praise was offered by the teacher in different circumstances to build students' positive learning experience. The first example of praise (Excerpt 69) was an evaluative comment provided to confirm a correct title they gave to their scatterplot. The second example of praise (Excerpt 79) was given to acknowledge the students' revised, and more concise, scatterplot title. The third example of praise (Excerpt 83) was offered to reflect the overall quality of their scatterplot including a concise title, correct axis labels and reasonable axis-scales. All these instances of praise (contingency management) were offered as responding to the students' scatterplot graphing. The students were also offered various forms of instructing assistance by the teacher to refine the title of their scatterplot (Excerpts 71, 73, 75 and 77). The teacher gave positive feedback on the scatterplot they constructed, particularly axis scales and axis labelling before this graphing task drew to the end (Excerpt 81). During this period of student-teacher interaction, the students listened to the teacher attentively and gave verbal responses, *"Hm! Hm!"* showing their participation and expressing their agreement with the teacher's praise and instruction. The students also gave a non-verbal response to the teacher's instructing assistance, that is, by revising the title of their scatterplot in Excel. The teacher recapped the students' scatterplot title displayed on their computer so as to develop subsequent instructing assistance.

Students A, B and C displayed different levels of understanding in approaching a correlation problem. C had a very limited understanding of the goal to be achieved but B knew what to do next and A had already started thinking towards the goal, that is, determining the y-scale for graphing correlation data. Without teacher's intervention, social interaction among students was maintained in high level in the situation where the three students demonstrated their own awareness of the over-scaling problem and took great responsibility for revising the axis scales, axis labels and title of a scatterplot when programming Excel by turns.

The high use of the argumentational function in the student talk was an effective means of provoking deeper exploration of data content as this steered their discussions away from mere information exchange. Specifically, B defended her own answers whereas C challenged her answers.

The teacher intervened in their learning tasks and provided evaluative feedback on the quality of their scatterplot graphing. He recapped the data context and gave instructing assistance to his students in improving the title conciseness of their scatterplot. All of these actions represented contingency management in reinforcing and rewarding the students for their work.

Conclusion

This observation study has provided insights into patterns of student-student and student-teacher talk in a statistics classroom operating in an IT environment. The samples of dialogue analysed in this paper do not include all students participating in the study, but were

selected because they are representative of the kind of talk observed throughout the observation period.

With regard to student-student talk, the evidence presented here suggests that students were active participants and held a common conception of what could be achieved cooperatively. Almost all of the talk analysed in this paper was relevant to the tasks at hand, and there was no evidence of Mercer's disputational pattern of talk, where opinions are presented and disagreements emerge without attempt at justification. Most of the students' talk was exploratory and focused on a particular theme related to the task, or segment of a task, that students were tackling. Exploratory talk was observed when it was necessary for students to use higher order thinking to accomplish more sophisticated learning tasks. A few instances of cumulative talk were observed, when straightforward tasks such as scatterplot comprehension were attempted. In these circumstances, students proposed ideas or accepted the ideas of their learning partners without finding it necessary to give or seek justification. So both exploratory and cumulative talk proved to be valuable for knowledge construction.

When working together in the absence of the teacher, students were more vocal and the content of talk was richer, illustrating the use of various types of talk: interrogative, compositional, organisational judgmental, hypothetical, heuristic, external thinking and affectional to suit different needs for achieving certain purposes or accomplishing specific tasks. There was also evidence that group interaction was associated with positive affective responses so that these tasks and the talk that they promoted, may have been beneficial in building social relationships and fostering rapport between students.

Analysis of the episodes presented in this paper showed how the teacher, through pursuing specific learning objectives associated with development of statistical thinking, was able to guide students' talk and reasoning. The teacher aimed to act as a facilitator of student discussion and exploration. He made decisions about when to supplement students' knowledge and skills, when to leave them to solve problems on their own, and when to use questioning and other means of assistance to stimulate thinking, direct actions, or promote intellectual exchanges between students.

Questioning was used frequently to discover what the students knew, understood, or misunderstood, and to offer direction towards deeper thinking at times when students could not otherwise make progress on tasks. The teacher also used modelling assistance to help students see how to assemble and organise pieces of knowledge they might have already grasped or possessed. Contingency management was another form of assistance exhibited in the form of praise that affirmed the quality of students' work under three different circumstances: building, maintaining, or bolstering their confidence. To situate learning within students' capabilities, the teacher offered cognitive structuring that assisted them to organise and justify various aspects of a regression modelling problem but left room for students to regulate their strategies based on their own creation and interpretation of a regression model they found was the best. The teacher would only use instruction if he thought that students felt threatened by questioning. This analysis demonstrated key roles played by a teacher in orchestrating social interaction between students in an IT environment that were aimed at developing statistical thinking.

The findings of these analyses of talk in a statistics classroom are grounded in sociocultural theories of learning. The analytical frameworks revealed how talk structured thought in the context of correlation analysis, and how the nature of tasks was associated with different patterns of talk. This study suggests that tasks should be designed to encourage co-operation rather than independent work or competition between students.

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Social Media in the classroom: Challenges and Opportunities for a Better Teaching and Learning Experience in a New Framework

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Abstract

Social meida has undoubtedly become a crucial part of many college students' personal and social life. This paper examines the social media usage among university students through the case study of Central Connecticut State University. In the spring of 2015, we surveyed students from nineteen different programs asking them about their social media proficiency, their usage in the classroom and the reliability of social media outlets as a source for academic work. The goal of the project was to find out whether their usage is more geared towards personal interactions or academic efforts. In the spring of 2015, we surveyed students from nineteen different majors We discovered a large population of highly connected and heavy social media users, (those students spending more than thirty-one minutes on social media per day, according to Martin 2013), who were not engaging in the classroom through social media outlets. This also led us to question whether as faculty we are incorporating social media as part of our course methodology, and wether social media could open a window of opportunity to connect with this "generation next" in a more active, relevant and meaningful way.

Key words: Social media, classroom, course methodology

Introduction

Every morning, all across America, hundreds of thousands of students enter their classrooms, ready for their classes. From community colleges to Ivy League universities, students and professors engage in a learning process filled with high expectations, a certain degree of struggle and hope for not only an advancement of the mind intellectually, but also a better preparation for the upcoming professional world. Undoubtedly, the entire college experience has become a pivotal moment in a person's life. And every day, the same students that fill the classrooms are faced with a number of challenges that will affect their academic performance.

Social media, although quite young as a social phenomenon, is probably the biggest addition to college life in the past ten years. Students are heavily connected, using outlets and tools such as Facebook, Twitter or Instagram that allow them to interact, communicate or simply pass time. Social media and technology to a larger extent, are now a crucial part of a young adult's existence. The student population at Central Connecticut State University is connected twenty-four hours, seven days a week. Research shows the level of dependance on technology to be at all time record high, with a large percentage of students who make up the heavier users of social media. In practical terms, we can define social media as the "internet-based applications that can carry consumer-generated content, which encompass media impressions created by consumers, typically informed by relevant experiences, and archived or shared online for easy access by other impressionable consumers" (Blackshaw, 2006).

Technology at large, and social media in particular, have clearly defined our present generation of students, labeled "Generation Next" by Pew Research (2013). Some of the main features of an average student today were spelled out in a report published in 2013, which highlighted the following as common elements in our students. First of all, we are facing a generation that uses technology and the Internet to connect with people in new and distinctive ways, mostly evolving the idea of self-fulfillment: Pew Research also refers to them as the "Look at Me" generation. They are clearly aware of technology's advantages and disadvantages. An excess of information has not kept them disconnected from parents and family, and they tend to be radical in the continent (tattoos, nontraditional hair styles, body piercings), but not in the content. In terms of political involvement, they tend to show higher percentage of voting participation, and are less cynical about government and political structures. Almost half of them classify themselves as democrats, and they seem to be comfortable with globalization and have been raised on the culture of instant gratification.

Another key element in the social fabric of this generation is the use of technology. A recent report published by Pew Research entitled "Social Media Goes to College", offered insight in today's college student connection with technology. Some of the findings included the following: Students began using computers between the ages of 5 and 8. By the time they were 16 to 18 years old all of today's current college students had begun using computers – and the Internet was a commonplace in the world in which they lived. Compared with the general population (59%), students are online much more frequently (86%) and they are frequently looking for email, with 72% checking email at least once a day (and 66% have at least two email addresses). Almost half (49%) first began using the Internet in college; half (47%) first began using it at home before they arrived at college. They are equipped (85% of college students own their own computer, and are not shy about admitting to a degree of procrastination online: 78%

of college Internet users say that at one time or another they have gone online just to browse for fun, compared to 64% of all Internet users.

College Internet users are heavy music users, and are twice as likely to have ever downloaded music files when compared to all Internet users: 60% of college Internet users have done so compared to 28% of the overall population. They are also twice as likely to use instant messaging on any given day compared to the average Internet user. On a typical day, 26% of college students use IM; 12% of other Internet users are using IM on an average day.

In 2009, a research experiment aiming to measure the students' dependence on technology, conducted by the International Center for Media & the Public Agenda (ICMPA) at the University of Maryland, College Park, showed intriguing results.[i] The assignment was simple: two hundred students would volunteer to withdraw from technology for a period of twenty-four hours. The researchers enrolled students who voluntarily agreed to give up on technology and then recorded their impressions after the experiment had ended. The main finding of the research was the fact that student described their experience without technology in terms of physical addiction. In words of the researchers, "Most college students are not just unwilling, but functionally unable to be without their media links to the world (ICMPA, 2009).

Data shows that young 18-25 college students are heavily involved in social media. Students are sharing posts, updating status, creating blogs, sharing video and interacting with one another in levels previously unseen. With their behavior, our students are well aligned with what experts are considering now a new trend of consumers who now "expect to be active participants in the media process. This requires new approaches to media strategies, involving media that do not simply replace traditional media, but rather expand media choices to capture, reach, intimacy and engagement" (Hanna, Rohm and Critteden, 2011).

This generation of students, sometimes referred to as "generation next" or "generation y", enters the classroom with years of experience in social media networking. They search for ways to connect in a new environment, including their relationship with media. According to DeAndrea "Newer forms of social media differ from older, traditional broadcast media in that they enable peer-to-peer messages, as opposed to unidirectional transmission of one-to-many media content" (DeAndrea et al, 2011). They are clearly ahead of their predecessors and in many cases their professors as well. Not only they are more connected, but they are laying a new set of social usages for technology in the classroom. This poses a new threat for professors and educators in general. How do we interact with students who seem to be largely uninterested in traditional methods of lecturing and teaching? How do we integrate their social media skills in the learning process? How are the social interactions between students and faculty affected by social media? And lastly, and more importantly, what efforts are we putting in the classroom to exploit the benefits of social media?

With these questions in mind and the experience of dealing with social media in the classroom in different ways, I decided to conduct a research project with my students to find out what the role of social media in the classroom was, and what their usage for academic purposes could be.

Methodology

The project started with the simple observation that my students were not only connected on social media, but seemed *too* connected. In the spring of 2015, I taught an advanced course on social media at Central Connecticut State University. As part of the syllabus of the course,

students had to develop a large consultancy group project where the goal was to create a social media marketing strategy for a non profit. We developed the project in the classroom during the week. It was precisely those contact hours with students where I began to wonder whether they were fully exploiting social media for their academic projects, papers and projects for classes, or whether they were separating personal from academic usage. As I introduced some research tools available online, I realized some students were completely oblivious to those, while others had already used them for different projects.

The project was designed to confirm my initial hypothesis: there was a clear difference between personal and academic usage of social media among my students. I was interested not only in the amount of time, but also on the strategic usage of social media. For instance, if they had to research a particular topic, most of them seemed to simply Google the keywords and work from there. Only a few would use LinkedIn or Twitter to search for the information. They seemed to keep the academic and personal spheres on social media truly separated: Although students were actively involved in social media, they were not using it for academic projects, but only personal interactions. This sparked a conversation in the classroom that led to this project.

For the purpose of the research, social media usage for academic purposes is described as any use of social media for class projects such as writing papers, researching for information, establishing group dynamics, sharing information for group projects, working cohesively with team members and approaching companies and individuals on social media.

The research method used was a survey, underpinned by the following research questions:

1) What is the level of presence of social media in the students' lives, including the amount and frequency of use?

2) Do they use social media for academic purposes? If so, what are the most common uses of social media?

3) Do they know if there are existing policies related to social media usage in the classroom and in the university at large?

The survey was structured in three areas. Questions 1 through 5 focused more on the key demographic component of the study: presence on social media, time spent, and technology used to access their accounts. Questions 6 and 7 asked about specific usage ("Which of the following have you done within last week on social media?" and "Have you ever used social media for a class related activity?). Questions 8 and 9 were designed to measure the student's perception of trust and reliability of social media (asking about sources and their level of reliability). Lastly, questions 10 to 14 asked specifically about connection with other classmates, usage during class time, the existence (or lack of) policies regarding social media and the professors' usage of social media as part of a class tool.

The demographics of the student body at Central Connecticut University are as follows: A public institution serving a largely commuter school (70% of students do not live on campus), with a large undergraduate population (82% of students) with almost a identical gender distribution (51% females - 49% males). Almost 67% of students hold at least one part time job, most of them belonging to a wide middle and low class section of the central suburban areas of Connecticut around the capital city of Hartford.[ii]

To avoid any possibility of bias or external influence, we decided to focus on students who were not a part of the social media course I was teaching correctly. In order to avoid further

external influence from the researcher, we had the Department's graduate student assistant carry out the field research portion of the project

Once the surveys were completed and tabulated, the results were as follows. In terms of gender, the survey came close to the demographic composition of the university with 46% males and 54% female student, with an average age of 20 (35%) and 21 (36%) followed by 18 year-olds (19,2%) The majority of respondents were under twenty-three years of age. As far as field of study, the responses included degrees from across the board, with a total of 19 different programs, representing 18,2% of the total number of programs offered by the institution.[iii]

The first question addressed the level of proficiency on social media, according to the surveyed student. Over a scale of one to ten points, students were asked to rate themselves from 0 being not proficient to ten being highly proficient.

Level of proficiency	1	2	3	4	5	6	7	8	9	10
% of responses	0	0	1,4%	3,2%	8,5%	8,5%	17%	38%	11,7%	11,7%

Table 1. Responses to Q1: How savvy do you consider yourself on Social Media?

Based on the responses to this question, we understand that a large majority of our students rate themselves considerably savvy on social media (78,4% over the level of 7). The largest group of students (38%) ranked themselves highly with eight points of our ten, with only a few residual responses show a low level of interaction on social media.

The following question addressed the social media outlets used by our students. They were asked to indicate if they had an active profile on the following outlets:

- Facebook. The world's largest social network. Founded in 2004, it now has 700 million users worldwide.
- Twitter. Micro blogging site. As of March 2015, it has over 500 million users.[iv]
- Instagram. Recently acquired by Facebook, Instagram is a highly popular photo sharing and video-sharing site, where users publish pictures and share them with their network. As of December 2014, Instagram had 300 million users worldwide.[v]
- LinkedIn. Resume building site, where users upload their CV and can connect with companies and other users, endorsing their professional skills. Highly used in the corporate world, it has 364 million users worldwide.
- Tumblr. Micro blogging site, more geared towards the creative crowd. As of 2011, it had 30 million users.[vi]
- Pinterest. Similar to Instagram, it allows sharing photographs but it also adds an element of organization in different categories.
- Snapchat. Video-sharing site where users can share images or short videos. There are 60 million users of Snapchat.[vii]
- Other tools (we kept this option open to less used outlets).

Outlet	Percentage of students who had a profile	Outlet	Percentage of students who had a profile
Facebook	93%	**Tumblr**	20,6%
Snapchat	92%	**Vine**	4,7%
Twitter	87%	**Reddit**	1,5%
Instagram	87%	**Tinder**	1,5%
Pinterest	44%	**Yik Yak**	1,5%
LinkedIn	31,7%	**Vampirefreaks**	1,5%

Table 2. Q2 Do you have a profile on the following social media outlet?

The results from this question offer three interesting conclusions. First of all, the fact that most of our students use largely four outlets (Facebook (93%), Snapchat (92%), Twitter (87%) and Instagram (87%). The second conclusion is more surprising: only 31,7% of the surveyed students keep active profiles on LinkedIn, precisely the tool that brings relevance to their upcoming professional careers. According to Hall (2013) It could also be seen as an indication of the student body social media usage being more directed towards personal leisure than professional development. These results parallel other research previously conducted, such as Shweiki Media (2013), with almost identical figures for the different outlets.

Pinterest and Tumblr proved to be the least popular photo sharing sites, and under the option "other" we found a 4,7% responses indicating Vine and a few remedial presences on Reddit, Tinder, Yik Yak and Vampirefreaks.

We were also interested in the amount of time spent on social media every day. The results showed almost half of the participants (46%) admitted using between two and three hours. One out of four admitted to an hour or less, while 19% opted for the option between four and six hours and only 10% admitted to spend more than four hours daily on social media. In connection with the previous question, students were asked to indicate the access platform to social media.

Technology	Percentage of students who had a profile
Mobile phones	98%
Tablets	19%
Laptops	59%
Computers	42%
School computers	18%

Table 3. Q5 where do you access your social media profiles?

The most common device used to access social media was a mobile device, with a response rate of 98%. Far from it were personal laptops (59%), followed by personal computers

(42%), tablets (19%) and school computers (18%). Although this answer reveals the presence of technology among our students; the fact that schools computers were the least used it could also be connected with the fact that the student population is largely commuting to class (the official data from the university shows a percentage as high as 70% of students commuting to class every day). Therefore the time spent on school is mostly during lectures, after which many students leave campus. There is not an existing culture of computer lab usage by students: they only remain in school for lectures. As an indication, the Communication Department keeps two Apple labs open almost ten hours a day with little affluence.

The following question dealt with the type of activity performed on social media. They were given different options, accordingly to the most popular activities on social media, and asked to select as many as they usually did within the week before the survey was conducted.

Activity on social media	% of students performing it
Update status	46%
Share or watch videos and photos	76%
Chat with friends	70%
Play games	16%
Share news	31%
Research information for a class project	25%
Like a photo or a status	93%

Table 4. Q6 What of the following have you done within last week on social media?

The most common activity in social media involved liking a photo or a status (93%), followed by actively participating on social media sharing videos or pictures (76%). Interpersonal communication via chat was also one of the largest options (70%). Far behind were status updates (46%) and sharing news (31%). The least performed activity on social media was researching information for a class project. Only 25% of students admitted to use social media for a class related projects. Interestingly enough, the following question.

Question seven asked students directly if they had used social media for a class related activity. The vast majority of students (63%) answered affirmatively. This result clearly contradicts the previous question, where only 25% of surveyed students admitted to use social media for a class project. The disparity between the percentages (25% vs. 63%) is remarkable.

On question eight we dug deeper in the usage of social media for the classroom. This time we reverted the order of elements and asked students to think specifically about their research and gathering information strategies. We asked them to name the tools they used for their last assignments. The options were Google, Wikipedia, the library, journals and social media.

Tools used for class projects	% of students using it

Boston, USA
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Google	51%
Wikipedia	16%
Library	11%
Journals	19%
Social Media	3%

Table 5. Q8 Think about the last assignment you had. Where did you find your sources?

Analyzing the results from question 8, we see clearly that Google was used half of the times, with journals and Wikipedia following at a distance (19% and 11% each). Only a remedial percentage of students (3%) admitted using social media for the assignment.

The logical next step was to ask about the reliability of the sources from the previous question. We pretended to confront their usage with their own opinion about the trustworthiness of the tools. That is, if Google is not a very reliable source in the mind of a student, why insist on relying on it as the main tool? As expected, the results were as telling as the question before. Students were asked to rate in a scale the reliability of the sources in a scale (1 being not reliable at all and 10 completely trustworthy). The results were as follow:

Tools used for class projects	Average grade or reliability
Google	8,22%
Wikipedia	5,2%
Library	8,9%
Journals	8,7%
Social Media	4,1%

Table 5. How reliable in your opinion are the following sources?

Comparing all the tools and their level of perceived reliability, we find can see how the items "library" and "journal" ranked higher with an overwhelming curve on the upper side of the scale, while Wikipedia was almost average (5,2%) and social media tended to score mostly between the 3 and 6 on the scale (hence the 4,1% average result).

The last set of five questions was strictly connected to the object of research, and was formulated using a yes or no choice. On question ten we asked students whether they had connected with other classmates on social media for class projects.

Have you connected with classmates on social media for class projects?

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Yes	75%
No	25%

Table 6. Question 10.

Question 11 covered one of the hot spots of social media integration in academic life, class disturbance and distraction. When asked directly if they had accessed social media during lecture time, an overwhelming majority of students (89%) admitted being on social media at some point during the class.

Have you accessed social media profiles during class time?	
Yes	81%
No	19%

Table 7. Question 11. Have you accessed social media profiles during class time?

The result validates one of the main preconceived ideas about this generation of students: they are always connected, regardless of the social situation. A lager majority of the surveyed individuals (81%) admitted checking social media during class time, whether browsing Twitter, sending a video on Snapchat or messaging friends through Facebook. This obviously becomes part of a much larger conversation about some of this "generation Y" technology-influenced behaviors: lack of attention spam, loss of interest and a certain lack of respect of previously very rigid social situations, such as classroom settings. What used to be a traditionally quiet environment of attention and concentration on the lecture has turned into a good moment to interact with friends over social media. The improvements in technology have clearly facilitated it, and have redefined our previous concept of classroom management.

We were also interested in studying the perception about how we as faculty are using social media as a tool in the classroom, and whether that was connected to student perception of class content. We asked students about the faculty performance, and 76% claimed that professors were not using social media at all as a tool or as a resource for content related to the class material.

Do your professors use social media as a tool or a resource for content?	
Yes	34%
No	76%

Table 9. Question 12. Do your professors use social media as a tool or a resource for content?

The last two questions dealt with a particularly interesting aspect of the presence of social media in our classrooms: the existence (or lack of) different policies. We asked two different questions, the first one (Q12) concerning the individual policies regarding social media, which rank from absolute bans and frontal disapproving to warnings on the syllabus to a lukewarm attitude towards technology. Students claimed to know that their professors had a social media

policy on 66% of the cases, while the remaining 34% indicated lack of knowledge, not lack of existence.

Do your professors have a policy regarding social media in the classroom?	
Yes	66%
No	34%

Table 8. Question 12. Do your professors have a policy regarding social media in the classroom?

The last question also offered an interesting response. This time we asked about the university as a whole, and whether students were aware of a social media policy on campus. The response was an overwhelming 90% of students who admitted not knowing if there was such a policy implemented on campus. Interestingly enough, they were correct, for there is nothing to this date implemented on a large scale to regulate social media usage on campus and in the classroom.

Do you know if there is a social media policy implemented on this campus?	
Yes	10%
No	90%

Table 10. Question 14. Do you know if there is a social media policy implemented on this campus?

Conclusion

The research findings provided us with a number of interesting facts and challenging notions for the future. In many ways, those questions are transportable to a different universe, as they underpin the very human nature of the college student experience with technology.

In relation to the research questions, we obtained interesting answers that in turn demand further research. In regards of the presence of social media in our students' lives, it was clear that a vast majority of students surveyed had incorporated it to their everyday lives. The average use of 2-3 hours per day is relatively low compared to other research. Similarly, the distribution of social media outlets was as expected, with Facebook leading the charge along with Instagram, and Twitter relegated to a third position. As noted, the major surprise was the low score obtained by LinkedIn, arguably the more useful tool in the students' upcoming professional experience, yet almost two out of three students surveyed did not have an active presence on LinkedIn. As most institutions, Central Connecticut State University places an important emphasis in the transition to the professional world through the Center for Advising and Career Exploration (CASE). On a regular basis, students can attend specific career building events, such as CV writing seminars, career fairs, mock-up interviews and job searching tips. Maybe it would also be an interesting addition to the number of services provided by CASE to offer a seminary on LinkedIn for students, to prepare them to face the world after college with a solid presence on the web's number one career building social media outlet.

When we asked students about the usage of social media for academic purposes, the responses were telling. First of all, a large majority of them admitted to using social media during the classroom time, regardless of the connection with the lecture content. That is, they are prone to being distracted by social media, or they may simply turn to social media out of disengagement. The lack of specific policies from professors and the university at large can also be responsible for the overall confusion. According to the survey, two out of three professors had no specific policies regarding social media. At best, professors may have an opinion about how to deal with the disturbance factor of technology in the class, but they are yet to engage with social media in terms of content and as a connection tool with the students.

Students were also reluctant to use social media for academic purposes, basing most of their online research on search sites such as Google, and not utilizing networking tools for group chats, online meetings and file sharing. This could be partially due to the Faculty's lack of engagement on social media, as most professors are still requiring traditional research papers, sources such as journals and books and are not utilizing social media to conduct research, despite the many tools available to do so. It could also be explained as part of the student general attitude of disengagement and detachment from the academic content of the class, as social media is seen for leisure, personal connections and fun.

Our project ends with an open question and an invitation to reflect of our concept of social media policy in the classroom. There seemed to be a large gap between the students and our Faculty in terms of social media acceptance and usage. But as social media keeps shaping the future students' life, it is crucial for us as faculty to engage with them at that level and utilize their tools to adapt our content to their language. Undoubtedly, social media seems to be the perfect vehicle to do so.

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Endnotes

[i] The results of the experiment can be found online at Source: http://withoutmedia.wordpress.com/

[ii] Fast facts about CCSU: http://web.ccsu.edu/uploaded/departments/AdministrativeDepartments/Institutional_Research_and_Assessment/Fast_Facts/FactsS2014.pdf

[iii] CCSU offers a total of 102 programs with different variations. In our survey, we had students from the following programs: Communication, Nursing, Biology, Exercise Science, Psychology, Marketing, Secondary Education, Sociology, Journalism, Chemistry, Business Management, Computer Science, Bimolecular Sciences, Finance, Mechanical Engineering, Construction Management, Economics and Biochemistry.

[iv] Twitter MAU Were 302M For Q1, Up 18% YoY - Twitter (NYSE:TWTR) | Benzinga]". April 28, 2015. Retrieved May 2, 2015.

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21st Century Academic Forum Conference Proceeding
2015 Conference at Harvard

The Role of Harvard University In Affecting Global Educational Reforms That Can Be Implemented in Egypt

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Abstract

The purpose of this analytical study was to explore the role that Harvard University can play to influence global educational reforms in the 21st. century. As a leader in education, Harvard University has provided a number of new educational reform models in the new millennium that can be replicated globally. The new millennium has revealed many challenges that are clear signs of the change that people are aspiring to have, not merely in politics or economics, but more importantly in education. Taking Egypt as an example for investigating the problems of education that many countries face, the current study examined the problems that affect teaching and learning in the 21st century. The researcher collected data from multiple sources including a Likert scale questionnaire, classroom observations, teachers' interviews, students' learning records, and the lived experiences of teachers, students, and parents. The results of data analysis revealed an urgent need for implementing reform to improve education. The recommendations of this study highlight the importance of connecting effective educational reforms to the concept of human and societal development. Educational reform should help educators prepare citizens for the 21st century. Education should facilitate the integration of the population into successful civic systems. Therefore, new educational research-based reform models that can be replicated globally, and guided by the educators' constructive actions can help solve the 21st century problems. The new reform model, guided by Harvard University research, and presented in this study, to be implemented on a large scale in Egypt, is based on a triad approach, incorporating: (a**)** systematic planning; (b) dynamic reform organizational management strategies; and (c) real-time technology measurement. The triad system is a reform model founded on cognitive theories of learning. The suggested triad reform model can be replicated in various counties based on needs assessment.

Key Words: educational reform, school transformation, triad reform model

Introduction

The 21st century has revealed many conflicts that have pervaded the world, including wars, terrorism, poverty, unemployment, and the inability to accept cultural diversity, all of which have accumulated due to lack of effective education. Educational reform has become inevitable for preparing students to cope with the challenges of the 21st century, and help people achieve better life styles in various countries all over the world. To help schools attain such goals, the researchers at Harvard University have introduced novel research-based models for education reform that are based on large- scale improvements to enhance the quality of education such as 'Leading the Way', 'Education Reform, Accountability, and the Achievement Gap'; 'Data-Driven Teaching', and 'Building New Structures for School Leadership', among others. Since the new models have been successfully implemented in USA, replicating some of these models can help many schools in Asia, Africa, Eastern Europe, and Middle East to improve their education. Education reform in Middle East, for example, is essential for addressing the political and economic problems that have accumulated due to lack of effective education. Taking Egypt as a sample to illustrate how Harvard University research can affect the education reform globally, this study aimed at exploring the avenues through which Harvard research-based reform models can be applied. The experts at the Presidential Specialized Council for Education and Scientific Research in Egypt are currently seeking international partnership and cooperation for improving education in Egypt. In this respect, Lisa Anderson (2014), the president of the American University in Cairo (AUC) stated that the AUC was committed to enhancing collaboration among the research communities in Egypt and USA to help the Egyptian educators solve the problems of education. As such, this research focused on identifying the problems of education in Egypt, and exploring the impact of Harvard University research on implementing new models for educational reform based on empowering teachers, administrators, students, and parents to participate in the process of transforming the Egyptian society.

Study Background

The current research was based on exploring the new educational reform models that Harvard University implemented at various schools to prepare students for the new millennium so as to ascertain their applicability to various schools in other countries such as Egypt. Education reform is required for the preparation of the Egyptian citizens in the 21st century. The complexity of the education problems in Egypt stems from the disparity between the skills needed for jobs and the level of skills attained by the educational system. According to Ginsburg and Megahed (2011), the majority of students have not acquired the skills necessary for global recruitment. The Egyptian educational system has also been criticized for not providing adequate professional development programs for teachers to foster competencies and enhance the application of research-based teaching methodologies. Additionally, the rapid increase of the number of students at schools in Egypt has resulted in the emergence of problems related to large classes including the lack of buildings and resources, the increase of the negative classroom environments, the inadequate application of technology, the inability to accommodate students with disabilities, and the increase of private tutoring, which has become a financial burden on the Egyptian families, and which has created an informal education sector to compensate for the shortcomings of governmental education (Ministry of Higher Education, 2010). Hence, adopting a new vision for effective education that aims at stimulating human potentialities and capabilities is an important step towards reformation.

Problem Statement

Many schools all over the world face serious problems owing to the complexity of the challenges that emerged with the advent of the 21st century. Traditional school systems that are based on rote learning have become an obstacle for preparing students to be successful creative thinkers and problem solvers. As a leader in education, Harvard University has initiated comprehensive research to identify the problems that teachers and learners encounter in the new millennium, and proposed a number of educational reform models that can be implemented in USA as well as abroad to promote global education. Guided by the methodology of Harvard University, many researchers have begun to investigate the problems that hinder the education systems in many parts of the world. Some of the educational systems that need urgent reform include those of Africa. For example, the problems of education in Egypt are so overwhelming that many parents have decided to withdraw their children from schools and teach them at home.

According to UNICEF's statistics (2014), Egypt's population reached almost 86,700,000 people, with an annual growth of 1.6%. However, such human capacity is hindered by the rate of illiteracy, which reached 16,806,657 people. Only 24.9 % hold intermediate education certificates and 9.56% hold graduate and post-graduate certificates. The primary school participation, gross enrolment ratio reached 105.3% for males and 99.2% for females. The secondary school participation, net attendance ratio reached 70.5% for males and 69.5% for females. Taking into account the impact of education on economic, political, and social development, there is an urgent need to apply educational reform to help in the process of development in Egypt. The common complaints among the Egyptians include the ineffective pedagogy that is based on rote learning. Teacher's complaints stem from their having to teach large classes, and from lack of incentives. Students' common complaints focus on humiliation and physical punishment inside the classrooms. Parents express deep concern regarding the increase of violence at schools. Current research (Green, 2014; Ginsburg & Megahed, 2006; Ginsburg et al., 2010) indicated a correlation between quality education and economic advancements in such areas as health, agriculture, heavy and small industries, and technology. Implementing new models of educational reforms that meet the needs of the citizens and the society has become imperative.

Purpose Statement

The current research aimed at exploring the avenues through which Harvard University research can be implemented for providing appropriate solutions to help the schools in Egypt recover. Harvard University, in collaboration with AUC and other Egyptian universities, can provide expertise to help teachers acquire high level professional skills. Applying a new educational reform model, which is supported by the government and the people, can also help in solving the problems that Egypt confronts. Therefore, based on the analysis of Harvard University research, this study focused on implementing the researcher's triad reform model that is based on (a**)** systematic planning; (b) dynamic reform organizational management strategies; and (c) real-time technology measurement, to improve the educational system at schools. The application of such a model is an effective step towards building a prosperous society where education is connected to human and societal development to realize human potential and empower people to participate in constructive actions for solving the school problems.

Theoretical Framework

The conceptual framework of this analytical research is derived from the cognitive theories of learning. Cognition is a set of mental abilities that help learners process knowledge through comprehension, analysis, synthesis, and evaluation (Blomberg, 2011; Goldstein, 2014; Matlin, 2009; Sollberger, Rankin, & Bruce, 2010; Sternberg, 2011). Furthermore, the triad reform model that the researcher designed in this study stems from the philosophy that the human mind, when positive, creative and interactive, helps in developing healthy, vibrant and prosperous learning communities that contribute to the success of the entire society. Madkour (2011) indicated that brain-based models employ comprehensive approaches that capture the authentic state of learning. Psychologists are concerned with the cognitive process as cognition can modify negative behaviors and attitudes. Enhancing teachers' and students' cognitive abilities is important to increase intrinsic motivation. Cognitive approaches also embrace methods for understanding various socio-cultural settings at schools.

In this respect, Sollberger, Rankin, and Bruce (2010) pointed out that brain regions are associated with multiple social functions; therefore, social cognition provides social stimuli to modify behavioral responses. According to Bruce, an educational reform model that incorporates social cognition can help people identify the interactive neural networks that are responsible for social and emotional functions; thus, guide people to cooperate in achieving a productive change in the schools. Cooke et al. (2013) asserted that people, through teamwork, showed shared cognition. Shared cognition in teamwork occurs when the focus is on the similarity of knowledge structures among the team members. The interactive team cognition theory (ITC) emphasizes the importance of modelling for achieving better performance at schools. Chinn, Buckland, and Samarapungavan (2011) argued that integrating topics related to epistemic cognition could improve performance and achievements.

Osgood-Campbell (2015) emphasized the connection between cognition, neuroscience, and educational theory and practice. Hence, research on Mind, Brain, and Education (MBE) explored this connection through investigating the impact of sensorimotor activity on academic competencies such as comprehension of knowledge, and scientific thinking. Osgood-Campbell asserted that cognition can be used in MBE curricula for two purposes, namely, training practitioners, and using interdisciplinary research to develop education. The bottom line is that to implement an effective educational policy that addresses the needs of the schools and connects education to society's developmental projects, there must be an emphasis on learners' higher-order thinking skills.

Methodology

The researcher employed an analytical mixed approach to explore the problems and the educational models prevailing in the Arab societies, specifically, in Egypt. The mixed method allows a contextual analysis of events, which is an important source of data collection in research design (Creswell, 2007; Lichtman, 2013; Thomas, 2011; Yin, 2014). The multiple data collection of the current study included a Likert scale questionnaire, interviews, field notes, audio and video files, and examinations of records such as school plans, textbooks, teachers' lesson plans, and students' assignments. A second approach for collecting the data depended on a series of classroom observations. The third approach employed a review of the curricula of some schools. Because inductive paradigms deal with real time data, field observation, field notes, and textual data and community perception, (Creswell, 2012; Edmonds & Kennedy, 2012; Flick, 2010), collecting real-time data in such a multiplicity of ways was necessary for a comprehensive understanding of the school problems in Egypt. The population of this research study consisted

of 100 Egyptian participants from governmental and private schools. The participants provided quantitative and qualitative data. A pilot study was conducted to validate and obtain reliable data.

Instrumentation

In addition to the Likert scale questionnaire designed for the current study, a focus group of administrators, teachers, students, and parents participated in providing data on the following research core questions:

Research Questions

1. What are your views as shareholders on the educational system in Egypt?
2. Why does Egypt need a research-based education reform?
3. How useful are schools in preparing students for the 21st century?

Data Analysis Results and Discussion

The quantitative data analysis was based on using the Statistical Package for the Social Sciences (SPSS) software to analyze the questionnaire responses. The research hypothesis stated that if the school implemented the triad reform model, rapid progress in education would be achieved. To validate the hypothesis, the researcher used the one sample *t*-test to explore if there is any statistical significance. The results show that there is a statistical significance at the level of 0.1 as the 2-tailed significant is less than 0.1 and the *t* values of items exceed that of df (99) which is 2.6264. Thus, the null hypothesis is rejected. The number of the participants who responded to the questionnaire questions reached 100 people, including 84.7% from governmental education, and 15.3% from private education. The questionnaire results indicated that 100% of the participants believed that schools in Egypt need effective educational reform to cope with the challenges of the 21st century. The demographic data of the current research revealed the participants' age, level of education, and social status. About 54% of the participants were between the ages of 22 and 25, and 41% of the participants were older than 25. About 40.8% of the responses indicated that the teaching methods used at schools were not effective.

The qualitative data analysis depended on a cyclical process which advanced from general to specific observation. Data analysis involved coding of data, identifying salient structures, and listing the emergent themes. The Nvivo 9 software was used to analyze the text data derived from the interpretation of the participants' experiences. The researcher used text analysis, inferential assessment, and descriptive figures to write the analysis report. The responses to the research core questions showed how urgently schools needed reformation. By comparing the data collected from classroom observations with the perceptual data from the focus groups, the researcher was able to generate a complete picture of the school problems, which included problems with the implementation of the curriculum, lack of teaching staff, inadequate professional development programs, lack of resources, inappropriate physical conditions of schools, large classes, students' negative behaviors, and lack of involvement and communication among schools and the community. Moreover, the data of the classroom observation showed extensive focus on traditional teaching methods which encourage rote learning rather than critical thinking. The data also revealed the need to use creative thinking and problem solving strategies, modify the learning environments, and engage students in authentic assessment processes. Table 1 shows the emergent themes emanating from the participants' perspectives of Egypt's education problems.

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Emergent Themes	Number of Responses
Rote Learning	69
Lack of research skills	54
Large classes	89
Courses do not meet society's needs	87
Shortage of teaching experience	85
Non-existence of creativity in the curriculum	90
Lack of cooperation between school and community	69
Inadequate technology resources	57
Absence of motivation	77
Negative learning environment	84
Ineffective student assessment	82
High tuition fees at private schools	53
Inadequacy of people empowerment	63

Table 1. *Emergent Themes of Egypt Education Problems*

As shown in Table1, the emergent themes include lack of creativity (90 of 100 participants), which means that schools need to add new courses to help teachers and students enhance creative thinking skills. Another emergent theme is high tuition fees of private schools (53 of 100 participants) indicating that people in Egypt seek improvement in governmental education. The emergent themes also include: the lack of cooperation among schools and the community (69 of 100 participants); courses do not meet society's needs (87 of 100 participants); lack of teaching experience (85 of 100 participants); learning environment is negative (84 of 100 participants); ineffective student assessment (82 of 100 participants); absence of motivation (77 of 100 participants); rote learning (69 of 100 participants); inadequate technology resources (57 of 100 participants); inadequacy of people empowerment (63 of 100 participants); and lack of research skills (54 of 100 participants). Figure 1 displays the themes statistically.

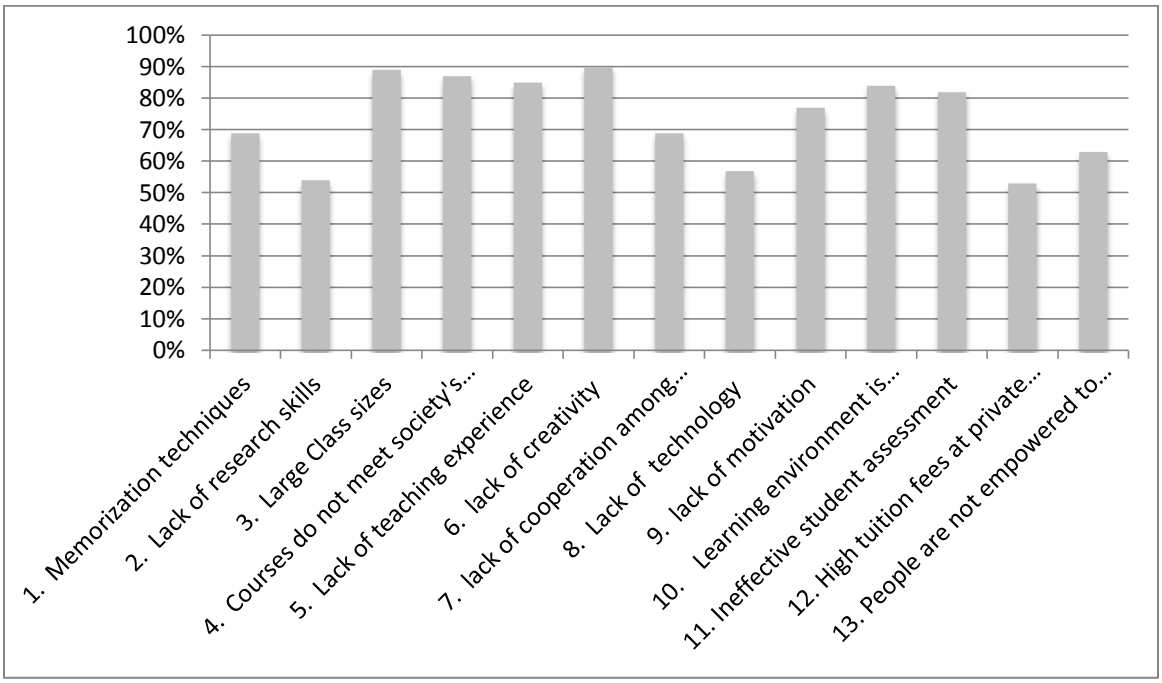

Figure 1. Percentages of participants' perspectives of Egypt education problems

The themes that emerged from analyzing the participants' responses regarding solutions to renovate Egyptian education are shown in Table 2. Table 2 displays 12 themes that emerged as solutions to the problems of Egyptian education, including: applying effective accountability system (94 of 100 participants); using proper professional development programs (93 of 100 participants); improving classroom environment (93 of 100 participants); reducing class sizes (92 of 100 participants); involving teachers in the reform process (82 of 100 participants); fostering creative thinking (87 of 100 participants); using authentic assessment (75 of 100 participants); adding new courses to meet society's needs (74 of 100 participants); promoting student research (69 of 100 participants); enhancing cooperation between school and community (64 of 100 participants); motivating students (64 of 100 participants); and linking education to society (57 of 100 participants). The inferential assessment of the qualitative data indicated that a research-based reform model should be implemented to solve the problems of education in Egypt.

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Emergent Themes	Number of Responses
Link education to society	57
Promote student research	69
Renovate schools and reduce class sizes	92
Add new courses to meet society's needs	74
Use proper professional and self- development programs	93
Enhance cooperation between school and community	64
Use effective accountability system	94
Promote creative thinking	87
Improve classroom environment	93
Use authentic assessment	75
Motivate students	64
Involve teachers in the reform process	82

Table 2. *Emergent Themes of Solutions for Egypt Education Problems*

Data analyses of the focus groups indicated the need for improving the entire education system. The primary suggestions that teachers, students, and parents made dealt with the desire to adopt a new vision for education that aligns education to societal development. Teachers indicated that the traditional assessment of students became futile since students were not engaged in the assessment process. Students' concerns were that teachers did not pay attention to learner's individual needs. Parents recommended that by improving the learning activities at schools, the financial burden of the private tutoring would be removed from their lives. Administrators expressed the need for staff development to promote the concept of accountability. Moreover, the current research findings regarding the curriculum review revealed that teachers did not have supportive materials to design daily instruction. Data from video recordings showed that teachers needed professional programs for continuous training to modify classroom teaching strategies.

Literature Review

The literature review conducted for the current study indicated an alignment with the research data analysis and research findings, in terms of the concepts, the strategies, and the reform that policy makers in Egypt should adopt. Research (Buchanan, 2001; Cuban, 2003; Department of Education, 1998; Goldstein, 2014; Green, 2014; Hanushek, 2013; Proefriedt, 2010; Tough, 2012; Zwaagstra, Clifton, & Long, 2010) concluded that many schools need to address some reform issues, including education visions, pedagogy, education standards, curriculum and instructions evaluation, students' individual needs, gifted students' education, special students' requirements, educational leadership, and society needs. School reform movements also focused on issues regarding parental and community involvement. Providing continuous professional development training is another important element in educational reform since teaching methodology affects students' learning outcomes. The core question that educational reform addresses is: why do schools fail to achieve their goals? Dewey (2012) argued that schools fail when they cannot fulfil the needs of the society. Researchers, policy makers, and educators should re-evaluate the pedagogical practices to enhance students' engagement and to empower teachers (Goldstein, 2014; Green, 2014; O'Connor, 2013; Taylor et al., 2011). Marzano and Pickering (2010), and Marzano and Heflebower (2011) highlighted the important skills that students should acquire to excel in the 21st century, redefining four areas of students' engagement so as to include emotions, interest, perceived importance, and perceptions of self-efficacy. Such areas are neglected in most of the schools in Egypt.

Models of education reforms vary according to school needs assessment. Standards-based education reform contains the research of Benjamin Bloom, Constance Kamii, Jean Piaget, Jerome Bruner, Lev Vygotsky, Marc Tucker, Maria Montessori, William Spady, among others. The education foundation for reform movement encompasses cconstructivism, active learning, discovery learning, inquiry-based learning, problem-based learning, open-space school, holistic grading, small schools movement, and inclusion, among others. The School Reform Models (Department of Education, 1998) contains 44 reform models. The models include: Accelerated Schools Project (K-8); Coalition of Essential Schools (K-12); Community Learning Centres (PreK-Adult); Core Knowledge (K-8); Direct Instruction (K-6); Expeditionary Learning (K-12); High Schools That Work; League of Professional Schools (K-12); Montessori (PreK-8); Roots and Wings (PreK-6); School Development Program (K-12); Success for All (PreK-6; and Talent Development High School with Career Academies (9-12), among others. These models depended on comprehensive approaches to align the curriculum with the professional development training programs (Department of Education).

With the coming of the 21st century, many universities have begun to investigate the problems that hinder schools progress. Harvard University, as a leader in education, presented a number of new educational reform models that view education from a different perspective; a perspective which is based on new visions for education goals in the new millennium. Models such as 'Leading the Way', 'Getting to Excellence with Equity', 'The Problems and Promise of Common Core', 'Education Reform, Accountability, and the Achievement Gap'; 'Data-Driven Teaching', and 'Building New Structures for School Leadership', are based on building positive relationships in an authentic environment for constructive actions to solve the 21st century problems, including violence at schools, teachers' low performance, ineffective educational leadership, and inadequate parental involvement. For instance, 'Leading the Way' is a family research project which aims at providing some resources to enhance family engagement (Tamer, Harvard University, 2015). 'Getting to Excellence with Equity' focuses on excellence with

equity rather than closing the achievement gap (Walsh, Harvard University). 'Getting to All Means All' reform model focuses on revealing the correlation between socioeconomic status and educational achievements (Reville, as cited in Harvard University). 'The Problems and Promise of Common Core' are based on supporting academic standards across states (Walsh, as cited in Harvard University). 'Education Reform, Accountability, and the Achievement Gap' constitute a reform model that supports raising school standards to enhance accountability (Mehta, as cited in Harvard University). 'Data-Driven Teaching examined how policy makers can use data analysis programs to measure students' development (Reville as cited in Harvard University). 'Building New Structures for School Leadership' is another model that aims at improving educational leadership to create high quality instruction. Elmore (2004) argued that the historical paradigm, in which instruction is merely the work of the teacher, is an obstacle to achieving students' academic goals. Elmore noted that the tasks of leadership should not be restricted to organizing, budgeting, and managing because leadership is responsible for the overall performance of the school. Educational leaders should focus on improving the instructional practice and performance, rather than imposing complex procedures.

Some of the causes of reform failure include lack of funds, misunderstanding of the educational goals, or lack of cultural relevance. Reforms also fail when the schools do not empower people to take initiatives for change. Regarding the reform cost, Odden (2012) noted that educators can improve student learning with tight budgets if school leaders are talented enough to prepare appropriate financial strategic plans. Hachtmann (2012) asserted that contextual conditions affect education reform. Barrick et al. (2011) highlighted the role of the community in planning and conducting internships. Hammerness et al. (2005) emphasized that effective professional development should lead to adaptive expertise. Research also focused on changing the traditional modes of thinking of teachers and students because the focus in education should be on critical thinking. Wang and Wang (2011) proposed a model-directed approach to teaching and learning higher order thinking. Hung (2008) asserted that using systems modelling can enhance students' systems-thinking skills. Monroe et al. (2015) argued that the introduction of systems thinking can improve students' understanding of systems thinking since systems thinking is an essential cognitive skill that enables individuals to develop understanding of any concepts. Moreover, Kensler et al. (2012) concluded that teachers and administrators lack the skills to use data effectively for continuous school improvement. Kensler et al. suggested that professional development should focus on individual skills, collective dialogue skills, and systems thinking skills. Rodriguez (2013) stated that exploring the teaching brain could help in setting up reform policies that focus on teachers' professional and psychological development. Rodriguez concluded that teachers should recognize themselves as self-created in order to understand how "their context and intentions affect the teacher-student interaction" (p. 77).

Hazzard (2014) highlighted some important key concepts in any effective reform including engagement, ownership, and collaboration to allow teachers to focus on students' growth. Lass and Zandt (2014) pointed out that course materials must be designed to address students' interests and needs. Yamaguchi and Proctor (2009) asserted that a successful training manifests itself when the trainers become able to solve problems and handle challenging situations. Additionally, research (Healy, Wohldmann, Parker & Bourne, 2005; Healy, Wohldmann, Sutton & Bourne, 2006, as cited in Yamaguchi & Proctor, 2009) indicated that the contextual factors during the training period determine how the trainers understand, store, and retrieve the information and apply the acquired skills in new situations. Yan and Xiaotang (2014) asserted that novice teachers showed significant change in classroom practices due to professional

development programs while gaining new experiences, and using reflections on practice. Renee and McAlister (2011) emphasized the principles of contextualization to make connections between classroom learning and student experience. Renee and McAlister also highlighted the role of ccommunity organizations in supporting education reform through linking reform to economic and social development. Aasen, Proitz, and Sandberg (2014) underscored the importance of understanding the complexity and ambiguity of education policy and development. I this respect, Aasen, Proitz, and Sandberg stressed that the more awareness is placed on knowing the political regimes the more successful the strategic plans of the reform become. Hence, successful educational reforms depend on understanding the national policy, and the technical and administrative plans.

Based on the findings in the literature, the conclusion is that educational reform is a powerful tool for improving schools and societies, and that creating a research-based, cohesive, effective, and replicable reform model is feasible. Since the world has become a 'small village', sharing the same complex problems where all the countries affect each other, a research-based global reform model can be replicated effectively. Such a model can be developed with the support of Harvard University as a world leader in education. Providing worldwide educational coaching within a framework of research-based reform models can be a successful program to continually reinforce change and improvement at schools. Harvard University can support global education in the 21st. century through providing financial and research resources, holding seminar and workshops outside Harvard premises, guiding training for educators in remote areas, offering consultations on education reform, and creating a global community of shareholders who seek change.

Recommendations

The first recommendation of the current research is to support educational reform as a global movement led by universities, and educational organizations to face the challenges of the 21st century. The second recommendation involves presenting new visions of education that address the individual needs of students and schools; visions that focus on human development and growth. The third recommendation is to reinforce the act of the integration of learning theories research into school objectives. The fourth recommendation is to enhance fieldwork rather than imposing policies and procedures on schools. Finally, the researcher designed the *Triad Reform Model*, as shown in Figure 2, to be implemented based on schools' needs assessment.

The Triad Reform Model

The Triad Reform Model, as displayed in Figure 2 incorporates three axes: (a) systematic planning; (b) dynamic reform organizational management strategies; and (c) real-time technology measurement. *The Triad Reform Model* is founded on the concept that education is connected to human and societal development to transform people, and their learning environments through creating learning communities. Creating learning communities is important for shifting the organizations from being fragmented, competitive and reactive, to becoming systematic, cooperative and creative (Kofman & Senge, 1993).

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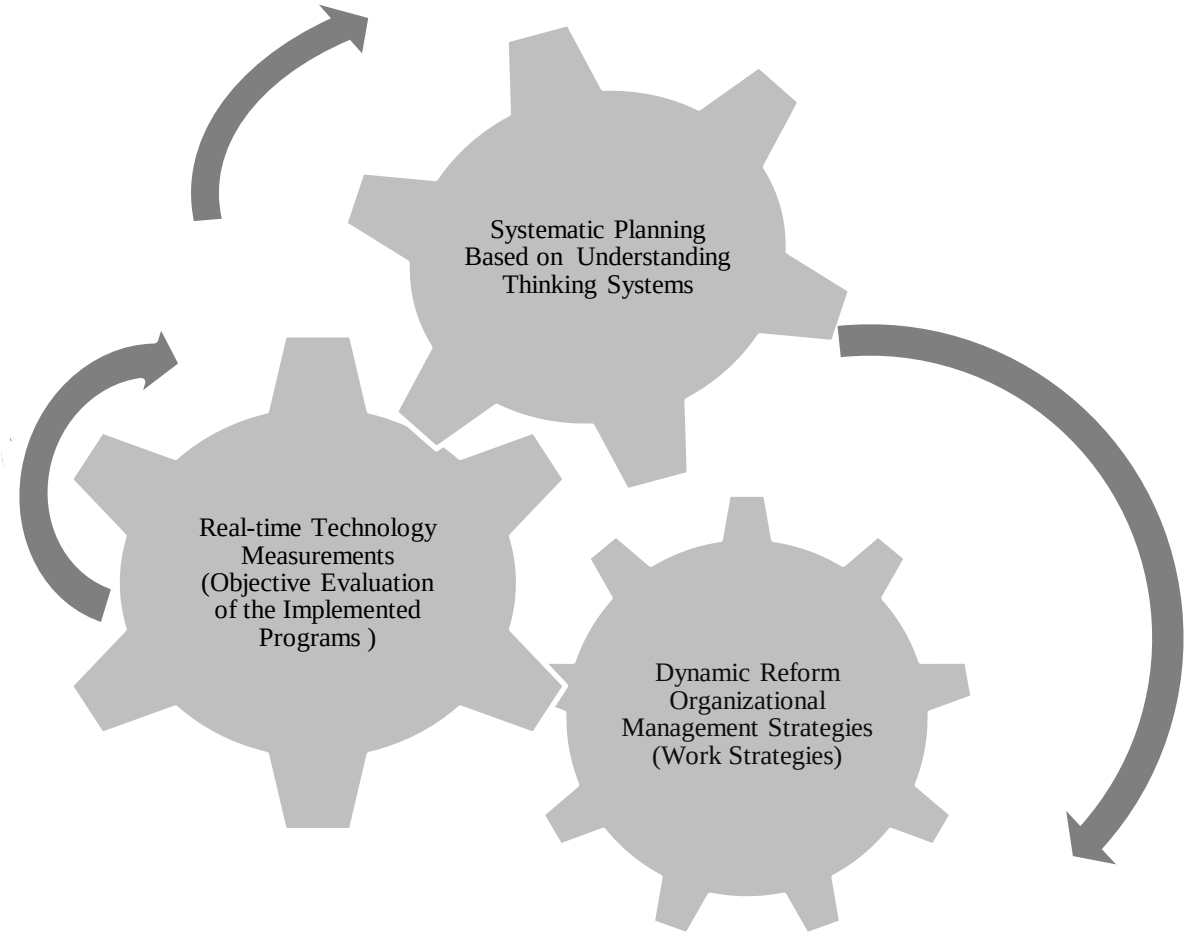

Figure 2. The dynamic triad reform model

As displayed in Figure 2, the *Triad Reform Model* shows how the process of reform begins by helping teachers and educators enhance their thinking skills, then by using working strategies the school can interact with its environment to engage all the people in the society in the reform. The model is based on restructuring the schools from within, and enhancing the role of shareholders in achieving quality education. The main goal of presenting this model is to suggest a number of solutions to solve the problems of Egyptian schools, and improve education services relying on the activation of local investment. Loans, grants, and donations from banks and financial institutions can be provided to help schools buy more space and expand their services. In addition to local investment, international educational aids can be used to support the reform process. A school that implements the *Triad Reform Model* successfully can be recognized as a 'Model School' that can be replicated in other rural or urban areas. Furthermore, the interaction between the education sector and economic projects in the country can play a major role in providing job opportunities for youth in various sectors in the society.

How does the Triad Model work?

The *Triad Reform Model* provides a practical mechanism, i.e. a scientific system, for the reform process to take place. However, due to the variation of the human elements in the education sector, flexibility in addressing the real situation of each school should allow a systematic implementation of the model within a framework of the school's strategic plans. The triad model includes the following components:

A) **Systematic planning**: is the process that sets up the foundation of the programs and activities for restructuring the school. Systematic planning includes appropriate decisions to be made to improve the staff of the school through developing their thinking skills. Systematic planning, in this respect, is connected to systems thinking, which is a process of understanding how human thinking systems influence one another. The concept of "system thinking" was introduced in the General System Theory, and then developed by Peter Senge , who defined 'systems thinking' as the capstone for any successful organizational learning. One of the main goals of education is to help teachers and students think effectively. Thinking is the foundation of schooling. Students must, from early age, acquire critical, analytical, creative and innovative thinking skills. Critical thinking as a dialogue is also important to help teachers and students interact with each other and with the society. Many of the violent problems in the society stem from citizens' inability to conduct constructive dialogues. According to Paul (2013), critical thinking helps learners use intellectual standards. Therefore, helping the school community to enhance thinking skills, and thinking dialogues is necessary for achieving a successful reform.

B) **Dynamic Work Strategies**: are a number of practical strategies for remediation, and monitoring the reform process including training professional development programs for teachers and administrators, incentives for improving teaching performance, incentives for improving administrators' performance, programs for improving students' performance, extracurricular activities to increase parental involvement, and programs for motivating the community's financial support for schools. The dynamic work strategies also include programs to provide infrastructure funds, educational supplies grants, fund raising campaigns, projects for supporting children and students from families with limited incomes, school finance referendum programs, school budget support programs, scholarships for supporting disabled children, and programs for supporting orphan children. The training programs also include workshops, seminars, and scholarship programs for exchanging local and international experience.

C) **Real-Time Measurement Technologies**: refer to field-based measurement of the progress made by the school using technologies for collecting and analyzing data to evaluate the results based on objective and scientific principles. In addition, technology can be used to improve scientific research for schools. Technology can also be used to enhance education through promoting distance learning, virtual classrooms, SMART education, and creating a community of network learners. Additionally, technologies can be used to promote innovation.

As such, the *Triad Reform Model* aims at improving schools from within through building learning communities that empower educational leadership, teachers, students, parents, and society organizations. Since building learning communities requires basic changes in thinking and behavior that reverses static beliefs, there is a need for a systematic, cooperative, and creative school system where commitment is emphasized. *The Triad Reform Model*, thus, focuses on increasing commitment to education reform through a diagnostic and intervention process with the help and the support of public and private organizations. The role of the business community can be reinforced through partnerships with schools to provide financial resources to support the training and the incentive programs. When educational leaders

encourage teachers and students to work together in making important decisions, learning becomes experiential and creative. Experiential-creative learning can provide the society with competent citizens who are capable of creative actions and innovations.

Implications and Conclusion

This analytical study explored Harvard University's role in influencing and supporting global educational reforms to help countries such as Egypt implement an effective reform. Based on the concept that education is connected to human and societal development, the researcher introduced a triad reform model that incorporates: (a) systematic planning; (b) dynamic reform organizational management strategies; and (c) real-time technology measurement, to be implemented in Egypt. As new generations of Egyptians have aspirations towards modernism, the suggested reform can help in establishing learning communities to restructure the school systems, upgrade higher education, and promote an accountability system that allows for an effective reform process. The hope for creating a modern society is actually based on understanding modernism in terms of providing better education in a solid society where citizens are passionate for learning and creativity. Education, thus, should be connected to the concept of development. The areas that require modifications in the Egyptian education system are school policies, curriculum planning, instruction methodologies, students' assessment, and leadership strategies. The curriculum should contain courses in thinking skills, research skills, social and cultural skills, art, fine arts, drama, music, and physical education. In addition, religious education needs to be redesigned with the purpose of helping students develop their critical thinking.

The significance of this research study is that it highlights new definitions of education, emphasizing the real purpose of education at schools, institutions, and universities, through connecting education to human and social development. This research study also provides new avenues for making the necessary reforms from within the schools, where reform programs are implemented by the school staff, instead of imposing general policies that do not address the needs of the schools. Linking education to the development of all aspects of the society motivates educators and education policy makers to address the needs of individual citizens and the needs of the society in the 21st century. Ginsburg and Megahed (2011) confirmed that when educators focus on improving the quality of pre-service teacher education in Egypt, teaching and learning will make progress in the schools. Moreover, Ginsburg et al. (2010) asserted that effective reform requires transformation of the school community, and modifications in the governance. Ginsburg et al. also noted that the community participation declined because the Egyptian Ministry of Education does not encourage the existence of a local decision-making authority. Centralization is another aspect that hinders the educational reform in Egypt. Ginsburg et al. emphasized that decentralization would allow various branch offices to help in the implementation of the reform. Hence, the current research study aimed at exploring appropriate solutions for a successful reform in Egypt.

Moreover, the triad reform model is not inelastic since it depends on the application of the educational theories through fieldwork at schools. The model, therefore, is applicable in any society where data is collected from each school independently to examine the actual problems on- site, and provide appropriate solutions. A number of desired outcomes have been recorded during the process of data analysis of this study including: a) aligning education with society development will achieve the desired dynamic society that can cope with the challenges of the

21st century; b) the quality of education will improve through developing the quality of human beings; c) the rate of illiteracy will decrease; d) schools will apply an accountability system that emphasizes collaborative skills; e) teachers' professionalism will improve through continuous training programs; f) students' motivation will go up through a dynamic and productive school system; g) school leaders will empower the staff to fulfil their tasks; h) the human values of the classrooms will be fostered; i) collaboration among various sectors in the society will be increased; j) social and economic development will grow; career planning will improve through a guiding and supervising system; k) multifarious higher educational institutions will develop as schools will provide new generations of creative lifelong learning students; l) Job opportunities for certified teachers will multiply; m) Job opportunities for skilful citizens will increase.

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Thinking in My Language to the Official Languages: What a Challenge!! A Case of the Basarwa (Bushmen/San) Children in Botswana

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Abstract

The Botswana education system bases its philosophy on education for all using English and Setswana as the official languages for learning and teaching in schools despite the diversity of the society. Botswana has 8 Setswana ethnic groups with Setswana as their mother tongue and 26 minority languages. Some of them speak Sengologa/ Sekgalagadi; a language of their so-called masters. The Basarwa children find it difficult to converse in Setswana but are usually taught by teachers from the Setswana ethnic groups or those fortunate to be articulate in Setswana and English. When these teachers instruct Basarwa children whose languages are mutually unintelligible, it becomes a great challenge. Learning is burdensome; frustrating to both the teachers, parents of the Basarwa children; and the children themselves. The teaching of children in their mother tongue cannot be overemphasized. Education becomes a foreign concept from their indigenous culture leading to a higher risk of dropping out of school, a feeling of discrimination by the teachers who cannot communicate in their language, or understand their culture.

The study utilized the qualitative method to establish the difficulties the Basarwa children face in adapting to the Setswana and English ways of learning and the reasons for their high dropout rates. Greater attention was paid to the strategies and methods the teachers used to reach out to these children in order to assist them with their schooling. The study was carried out in a small settlement in the Kgalagadi Desert called Phuduhudu.

Keywords: Basarwa, mother tongue, indigenous culture, diversity

Introduction

Botswana is a small country in terms of population (2.2) million according to the 2011 population census. Minute as is in population size, it is as large as France and the state of Texas at 580 000sq kilometers. It is surrounded by Angola, Namibia, South Africa, Zambia and Zimbabwe. In the upper north people speak languages similar to what is spoken in Angola, Zambia and Namibia while in the north there is influence of Zimbabwe languages. Some people in the Kgalagadi desert areas have a language that is a mixture of Afrikaans and Hottentots language. Within the country there are Namibian communities that still speak Herero, a Namibian Language. The Basarwa have distinct languages despite their small population. It is difficult for a Mosarwa from one community to understand the language of another from a different community even though they may both speak in clicks; which surprises some Batswana since they classify this group of people as one.

In the eastern side of the country where most Batswana communities are found, and where the land receives adequate rainfall for farming and livestock to base all the modern infrastructure and facilities, a large number of the different ethnic groups can speak Setswana. This is a language spoken by the 8 Batswana ethnic groups. These individuals and many others in various parts of the country stand a better chance of communicating in Setswana and English, which are the two official languages.

The Basarwa are the indigenous people of Botswana who were dispossessed of their productive land and pushed deep into the Kgalagadi semi-desert. The Basarwa suffered under the oppression of the dominant Batswana communities, a situation which has not changed that much to date. Servitude contributed to elitism of most of the Batswana communities leading to a stratified society (Good, 2008). A whole Basarwa family would be owned through generations and the children denied the opportunity to attain education because they had to assist their parents, or take over their parents' responsibilities in the so called "master's" household.

Today poverty is still rife among the Basarwa and other Batswana communities that were not fortunate enough to own cattle or land. However, the present president, Lieutenant General Seretse Khama Ian Khama, is on a mission to reduce abject poverty through food baskets, poverty alleviation schemes and encouragement of the civil community to contribute towards building houses for the poor. This is a great challenge that requires effort to create job opportunities for the youth, women and rural populations mostly affected by poverty that includes the Basarwa.

The purpose of the study

The major concern for the study was to understand the challenges that Basarwa children experienced in learning in Setswana and English while their ethnic language were different from the two languages of communication. The study established how the children managed to grasp concepts taught and how they translated their thinking to the languages of communication, namely Setswana and English. The researcher was able to identify the concerns the teachers had about the participation of the Basarwa children in their learning and how much the parents were involved in the education of their children.

Statement of the problem

The researcher documented the experiences, perceptions and challenges of the Basarwa children learning in two foreign languages that they were unfamiliar with. Although these are the

official languages of communication in the country, the children in Phuduhudu spoke Sekgalagadi or Sesarwa language known as Sixasi.

Research questions

The major research question was to identify challenges that Basarwa children faced when learning in Setswana and English. Subsequent questions included;

- Finding out the children's, parents' and teachers' mother tongue
- Identifying the children's experiences in learning in the 2 official languages
- Demonstrate the challenges the teachers faced in teaching the Basarwa children in Phududuhudu
- Outline how much the parents were involved in assisting teachers to interpret their mother tongue to help their children learn.

Significance of the study

This study is significant since it will assist the government, Ministry of Education and Skills Development, academics, curriculum developers, parents and other educational stakeholders appreciate the challenges faced by teachers and children in the country's remote areas. This may encourage the government to find ways of incorporating innovations to teach a diverse population. Although this is controversial, research has shown that teaching children in their mother tongue facilitates learning. The hope is that the government of Botswana may revisit the recommendations of the Revised National Policy on Education and introduce innovations that could enable schools teach children in their mother tongue at lower levels. This may encourage the Botswana government to review its education system, train teachers from different ethnic groups to assist children from the marginalized communities. There are high rates of drop out among the Basarwa communities and teaching them in what they are familiar with may motivate them to stay in school. The government may develop better strategies and change the pedagogy to suit the needs of Basarwa children. The study will add to the research pool on issues affecting education the marginalized communities such as the Basarwa.

Literature review

Educational policies

Botswana's educational philosophy is based on two policies that share the same sentiments of education and access as a fundamental right for all. In addition, living in harmony, as purported by the first national philosophy of *Kagisano* (social harmony/peaceful co-existence) with its 4 principles of development, democracy, unity and self reliance (Botswana government, 1977) is embraced. The intention was to move the country from the traditional agro-based economy to an industrial one in order to compete with the rest of the world. This philosophy was a milestone and closed the dependence on colonization by the British, however, although the sentiments expressed were exciting, very little was said about how to transform the Basarwa communities and embrace them politically, socially and economically to be at par with other Batswana social groups. The discussions pertaining to education and access to all was a "one size fits all" ignoring the enormity of the problems created by diversity within the nation. Though the intention was to provide education for all there were and still are children missing out on education, with no mechanisms within the government arena to advocate their involvement or account for their absence. Some of these children live with their parents in the remote areas

known as the Kgalagadi Game Reserve Conservations (KGRC) where they were later re-located into smaller settlements for the provision of other social amenities. International bodies such as International Survival have fought what appears to be a losing battle: to persuade the government to allow the Basarwa to remain within the hunting and game reserve areas.

The first philosophy of education known as Education for Kagisano (social harmony advocates the 4 national principles of democracy, development, self-reliance and unity. Due to the diverse Botswana population, it has been difficult to develop independent, democratic and self reliant individuals with a uniform curriculum. The reason for this is that the curriculum is more academic based, is examined theoretically with limited experiential learning to cater for the non-academic students. The most successful principle is that of unity since Batswana are able to co-exist in harmony despite their diversity. Every Motswana has a right to settle in any place they choose without being discriminated against or harassed by those who might feel they have the birth right to a location. Unfortunately most Batswana have congregated in the east where industrial development is confined, at the expense of other parts of the country. Therefore most people migrate to these areas in search of job opportunities and better lives. However although not backed by research, a small number are Basarwa may be found to hold high positions or any other within the economic arena.

Most Basarwa still prefer to co-exist with nature and do not seem to care about the effects of modernization. It is mostly the highly educated people who move to mining areas, towns and cities such as Jwaneng, Orapa, Selibe Phikwe, Gaborone and others. Ironically villages close to these mining towns do not enjoy the economic gains from these minerals. Most of the money from diamonds, copper and other minerals are used to develop cities/towns/large villages far from the communities where mining takes place. The Basarwa, too, in some instances were removed from their ancestral homes, and they too suffer the same fate because they can no longer hunt wild animals which has been their way of life for centuries.

The second educational policy termed "The Revised National Policy on Education (RNPE) emanated from the 1990 Jomtien Conference the on Education for All. Based on this, education in Botswana continued to advocate for access to all including adults. Its objectives were to discuss the basic learning needs of children, youths and adults especially to improve the quality of education as well as revitalizing the commitment and support of all sectors and institutions interested in realizing the educational objectives (Botswana government, 1994).

Schools have been set up in the remote areas with boarding facilities to enable Basarwa children to access education. The only problem was that the education was a new concept among the Basarwa and no initiatives were taken to introduce schooling to the communities in phases. Basarwa children were separated, and still are, from their parents, which poses a social problem since the Basarwa are a closely knit community. Separating children from their parents has always been traumatic, hence causing some children to abscond from school; high rates of absenteeism; dropout or at times death since some children attempt to go back to their communities only to get killed by wild animals. In some cases, when their children were separated from their parents, some Basarwa parents would set up their temporary shelters around the school to observe what would happen to their children especially concerning corporal punishment that is still common in Botswana. Basarwa discipline strategies do not include corporal punishment. The government has tried to keep the Basarwa children in school by providing them with the basic needs including waiving fees to buy uniforms, but this does not encourage them to stay in school.

Botswana's language policy

In addition to Botswana's 2 official languages namely Setswana, the national language and English, there are 26 minority languages. A minor language would be the one that does not belong to the eight Setswana ethnic groups with different dialects. This power dynamic has caused agitation amongst non-Setswana speaking groups (Nyathi-Ramahobo & Chebanne, 2004).

Due to the fact that 80% of the population speaks different Setswana dialects, teaching all at levels of education is in English and Setswana. In primary and secondary schools Setswana is taught as a subject. At tertiary institutions it may be termed as African Languages. The greatest challenge is that the orthographic version of the language differs significantly from the spoken form. Setswana as any other languages has evolved such that the young generation cannot complete a sentence without adding an English word. In the past, parents/grandparents used to tell stories around the fire using the traditional proverbs and idioms. This provided children with skills to read between the lines to get meaning from the experiences related in the story. This process allowed the children the prospect to transfer this knowledge to learning Setswana in the classroom. This traditional concept has died off and contemporary parents do not have the competency or time to spend telling traditional stories to the children. Most of the children give up on learning Setswana because it is difficult for children from affluent families who do not understand or speak Setswana completely. Therefore if the language of interaction and learning in school eludes and evades the children from the Setswana communities how would the ones speaking a different language learn?

All children from various ethnic groups study in Setswana and English. At the lower levels standard 1 and 2 children learn through the "Breakthrough" method to Setswana and English which introduce children to concepts by relating pictures to words thus leading to learning how to read and write. Even though this system sets the foundation for learning from a young age, it precludes the young Basarwa children who cannot speak either Setswana or English leading to the death of their languages, culture and their indigenous knowledge (Chebanne, 2012).

Several attempts have been made to formulate a language policy in Botswana but there has not been any progress. Some strong culturally based ethnic groups have set up committees or tribal/ethnic groups to write books and translate the Bible to their languages such as Ikalanga and the Wayeyi as a means to promote their languages through the registration of linguistic association. The Bakalanga set up a society known as Promotions of Ikalanga Language (SPIL) in 1986; the Wayeyi the Kamanakao Association in 1995; the Batswapong formed the Lentswe la Batswapong in 1998 (Kamanakao Association, 2001). Currently there are thirteen of these organizations, which aim at developing the languages and cultures of the respective ethnic communities, which were viewed as dying due to non-recognition, leading to non-use.

In 2002, these organizations formed a coalition called RETENG, (meaning we are there/ we are alive/we are present) such as the Multi-cultural Coalition of Botswana in order to speak with one voice **(**Nyathi-Ramahobo, 2004 & Chebanne). Although this did not make a great impact on influencing the mother tongue to be taught in school lately these minority groups can showcase their culture through dance and music which assists them command some form of respect from the nation. They are also involved in developing multilingual materials with the goal of developing some of Botswana's unwritten languages.

According to Nyati-Ramahobo & Chebanne (2004), "Botswana's language education policy is not written; it is understood, inferred and observed from reality" (p. 52). Documents such as the national constitution merely allude to language policy, but stop short of fully declaring a position.

Teacher training in Botswana

Botswana has 2 primary education training colleges in Serowe and Francistown. Tonota and Molepolole Colleges of Education train teachers for junior secondary school (grades 8-10) while the University of Botswana trains teachers for grades 11-12. However, teachers with a diploma in education teach in both junior and senior secondary school. Lately, the government has decided to upgrade almost all the teachers to a degree level for quality assurance in high schools.

The teacher training curriculum is based on generic educational theories of the Western world. There are no indigenous theories of teaching Batswana to enhance the children's learning. The training of the teachers is in English and Setswana. Some of these teachers end up placed to schools in the most remote areas of Botswana to teach children who speak some of the 26 so-called minority languages. There are very few teachers from some of these minority groups and the placement of teachers to schools is based on where there is a shortage; and therefore it is very rare for a teacher to teach in their own locality. Another challenge is that there are very few graduates from most of the so-called minority groups. There are no mechanisms in place that ensure the training of teacher aides from these 26 ethnic languages such as high school dropout who could assist the Setswana speaking teachers to educate the children.

Teachers become disillusioned due to the lack of modern infrastructure, poor communication links and no means of entertainment in these areas. For this reason, teachers sometimes abscond from work, or refuse to teach in these areas. Sometimes when they go to large villages and towns/cities to receive their pay they tend to spend more time there thus missing lessons. The government pays the teachers some remote area allowance which most teachers feel is insufficient compared to the inconveniences they experience. The author's wish is for the government to train those dropout students who have gone through junior and senior secondary schools as interpreters for languages that the conventional teachers do not understand.

Methodology

Study site: The village of Phuduhudu

This village is one of those Basarwa areas known as "settlements". When the nomadic way of life dwindled, the Basarwa had to look for places to live. One group settled in Phuduhudu, which was originally their "masters'" cattleposts (cattle rearing places in Botswana). These Basarwa worked for Bakgalagadi, Bangologa and other Batswana groups. Other Basarwa groups chose places with small water pans. Water pans are areas in the desert where water collects during the short rainy season from October to January and can be stored for longer periods of time after the rainy season. However, unfortunately the Phuduhudu Basarwa group settled in a place without water pans.

Phuduhudu village is sandy, flat and hot with very little vegetation. There are literally no other physical features except sand. This area has no access to modern amenities such as electricity and piped water. Although the school has electricity there is no internet connection or cable television for the children to view different features and be able to visualize how these look

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like. The irony of this is that the curriculum in Standard 6 and 7 require children to identify several features such as hills, rivers, valleys, etc. which they have never seen. There is a main road that passes through to other larger villages such as Kang and Ghanzi and Jwaneng, one of the diamonds mine that the children have never been to. The only familiar features are big trucks that pass through the village to the nearest towns and neighbouring country, Namibia.

There are about 500 people with a small primary school of 142 pupils from standard 1 to 7 and the school is the centre of the village activities. During the time of the study, there were a school head, deputy school head and 7 teachers and between 18-20 students per class.

Sampling

Parents

The researcher used semi-structured to interview 11 parents and their children for the purpose of comparison. Three of the parents were Basarwa, 1 a Zimbabwean, while the rest (7) were Bakgalagadi. Only one of the Basarwa parents could speak Sexasi (the community's Sesarwa Language).

Three parents were individually interviewed, 2 together, and a group of 5 as a focus group. It appeared that some parents were embarrassed to mention their ethnicity because the researcher had to encourage them to speak out about their identity. Most of them were shy, similar to their children and did not provide adequate information. These parents were requested to express the concerns, contributions and challenges they faced in assisting their children with their school work.

Teachers

A total of 6 teachers were interviewed including the school head. Among these teachers one was the Guidance and Counseling teacher and the other, the Learning Disabilities teacher. The Standard (grade) 1, 4 and 7 teachers were part of the sample since the researcher chose to study children in these classes. None of the teachers were from the village.

Children

A total of 30 pupils were interviewed, 15 girls and 15 boys; 10 standard 1s, 10 standard 4s and 10 from standard 7 were identified by their teachers. For each class an equal number of boys and girls were sampled by their class teachers who chose those children they thought were more assertive enough to participate in the study. The rest of the children would hide behind each other when spoken to, or they looked down.

Research tools/data collection

The researcher utilized the interviews, document analysis and observations. The researcher conversed with the Basarwa and stayed among them for a week, moving around the village documenting their ways of life.

The Basarwa are mostly illiterate and interviews and observations were the best tools to use in data collection. Observations were carried out as the teachers taught and when the children were waiting in line to collect their food ration. In the classroom the teacher did most of the talking more while the pupils sat and listened quietly.

When reviewing documents, such as the school register, it could be observed that the children were punctual and that there was a high rate of attendance. It may be assumed these children attended school due to the meal programme.

Ethical considerations

The researcher submitted a proposal requesting permission to carry out this research to the Ministry of Education and Skills Development Research Department. Access to the school was easy since the deputy school head was the researcher's former student.

A month before data collection the researcher spoke to the deputy school head about her interest to carry out the study. The deputy school head called a Kgotla (traditional meeting) to sensitize the community about the study and its importance. The villagers were receptive that although consent and assent forms were provided, none of the participants completed them.

Findings

Ethnicity

The respondents were asked what languages they spoke. One parent interviewed was Zimbabwean married to a Mokgalagadi and articulate Ndebele, English and Sekgalagadi. Only one Mosarwa parent out of the 3 could speak her mother tongue "Sixasi"which is a Sesarwa language. The 2 Basarwa parents could only speak Sekgalagadi while rest (7) were indigenous Bakgalagadi.

The children were asked the same question about the languages they spoke, and all the 30 pupils spoke Sekgalagadi with limited Setswana and English. Among the 30, 10 of them were Basarwa but could not speak their language. When asked when they [children] came in contact with Setswana and English, all of them indicated that they used the 2 languages at school but not at home. The researcher asked the parents if they had ever been to school. Two parents had never been to school while the rest went through standard 1 up to Form 3 (grade 10).

Both the parents and children were asked if they found it difficult to learn in Setswana and English and their response was in the affirmative. The parents stated that they only spoke Sekgalagadi to their children and that was the reason why the children found Setswana difficult. None of the parents ever spoke English to their children.

The teachers were asked what ethnic groups they belonged to. One teacher and the school head were of the Bakgalagadi origin; 1 was Khalanga, while (6) teachers were from the Setswana speaking ethnic groups. The Khalanga speaking teacher was very fluent in Setswana. The Khalanga teacher is one of the ethnic groups found in the eastern part of the country where Setswana is commonly spoken.

Educational level

When asked about the level of education attained, 2 parents pointed out that they had never been to school while 3 had dropped out of primary school. Five of them had been to secondary school but dropped out before completing the cycle.

When quizzed why they did not complete their studies all of them said they found it difficult to separate from their community. Only one of the parents stated that she had completed Form 5 and continued to study courses in Purchasing, and was at the time of the study working for the school as a cleaner.

The teachers were asked to state their level of education and their qualifications ranged from a diploma in education to an academic degree. Their teaching experience ranged from 2.5 to 32 years. However, the Learning Disability teacher had never gone for formal training other than attending a few workshops although he was expected to deal with children with leanring challenges.

Language of communication

When the children were asked what language they spoke when they first came to school all of them signified that they were communicated in Sekgalagadi. One teacher added that most children in Botswana were taught in a third or fourth language and this made communicating in Setswana and English difficult.

The children further explained that the languages of communication at school were Setswana and English, which were too difficult to learn. When persuaded to explain where they got help when they faced difficulties, they stated that their siblings who had dropped out of school assisted them at times. The children said that it was very rare for their parents to assist them with their school work or how to express Setswana concepts. Only the Zimbabwean parent spoke to her children in English and Sekgalagadi.

It was observed that all the teachers spoke fluent Setswana and English. When asked if they would like to learn Sekgalagadi, all the 6 teachers stated that they had no interest in learning the language.

Likes and dislikes

The children were asked to specify which language they preferred and which they disliked most. All of them pointed out that they enjoyed Setswana and English, but when asked to say some words in both languages they found it challenging to do so. To determine that the children enjoyed Setswana as they claimed, the researcher requested the standard 1 pupils to recite traditional stories in Setswana. The children failed to but instead told the stories in Sekgalagadi.

Reading ability

The standard 4 pupils were asked if they could read and were offered a standard 1 English textbook and all the 5 girls and 2 boys were able to do so. The standard 1pupils were able to read a sentence by putting words on flashcards to make sentences. Eight standard 1 pupils were able to write their names.

It could be inferred from the findings that it was challenging for all the pupils to learn in English.

Curriculum

The teachers were asked to describe the structure and content of the primary school curriculum. All the teachers felt that the curriculum was had too much abstract content which was overwhelming for them as teachers. They commented that most of the concepts were difficult for the pupils who one teacher referred to as “slow learners”.

The teachers further explained that there were several innovative strategies to use in the classroom but with the caliber of students they were handling; it was difficult to utilize these strategies. Most of the strategies in the curriculum required self directed learning which was not possible for the students/pupils/children in that school.

Teacher 1: "We have unique problems. We shouldn't adopt teaching methods that do not work for us. If we could sit down as the Kgalagadi region and think of methods that could work for us, maybe it would work".

Two teachers referred to the curriculum as "poor" since the content was too advanced for the pupils to comprehend. One teacher said,

Teacher 2: "The biotechnology I did at the college is the one done by these pupils now".

Teacher 3: "Mathematics is too much. You try to break it down to make it a little bit simple, but it is so difficult".

One teacher indicated that the children could not transfer learning. They found it difficult to identify concepts that were common among the subjects.

Teacher 3: "We did population in standard 6 and are repeating it in standard 7 but none of my students remember anything from the previous lessons" However, she mentioned that the students did better in practical subjects and sports activities such as football and netball.

The Guidance and Counseling teacher informed the researcher that most of the children in Phuduhudu settlement had never travelled outside the settlement and lacked exposure to modern facilities and other features required to be studied in the curriculum. This placed the children at a disadvantage when the children were expected to concepts and features they have never seen or experienced. She gave examples of physical features such as a hills and river and that since the settlement was in a sandy area, all what the children were familiar with were sand dunes.

Guidance and Counseling teacher: *"The curriculum requires them to possess knowledge about mining in Botswana, deal with transport systems when they have never been to a mining town, seen a train, ferry or aeroplane".*

Due to the challenging curriculum, one of the teachers indicated that there was high failure rate in the school.

Another teacher stated that for the years (2011-2014) the children were taught by untrained temporary teachers who left before they completed the syllabi they were teaching. The untrained teachers lacked the knowledge of teaching methods and of the subject matter.

Lack of intrinsic motivation

When asked what they thought caused poor performance at the school, all the teachers mentioned that the pupils lacked intrinsic motivation and did not have any role models in their communities to emulate. Another issue was that they felt the children had a short attention span. The teachers further explained that the children never took books home to study, and if they did at times the books would be returned to school dirty or torn. When the teachers asked the children about the state of their books, they would state that their parents used the books as cigarette wrappers. When the teachers asked the children to do their homework, some instead hide the books in the sand.

One teacher expressed concern about the poor attention span of the pupils. He stated that he went to an extent of asking the nurse if there were any medical issues involved. He indicated that the nurse elucidated that some of the parents drank and smoked during pregnancy leading to underweight babies. According to the nurse this affected the children's brain systems. Other children were born at home under poor and unhygienic facilities.

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Gender differences

When the teachers were asked which children performed badly, one teacher alluded to the fact that the male pupils were more challenged than their female counterparts. The researcher observed the standard 4 pupils to read a standard 1 English book and found out that 3 out of 5 boys could not read.

Parental involvement

The parents were questioned how often they visited the school to check on their children's performance or assist the teachers. Nine parents confessed that they never visited the school nor assisted the children with their school work, except for the Zimbabwean mother and the school cleaner. This was further articulated by the teachers who lamented about how difficult it was for them [teachers] to persuade parents to participate in their children's learning.

One teacher stated that poor parental involvement was such a concern that even the children vandalized the school property the parents failed to take responsibility to repair the damage. Teacher: *"Even when the children are destructive, they don't care".*

Nomadic life

One teacher brought up an important aspect about the lifestyle of the Basarwa of Phuduhudu. He mentioned that even though moving from place to place seemed to have disappeared, children and parents still practiced a nomadic way of life within the community. Children had the freedom to stay anywhere they wished; from one home to another which was not a matter of concern for the parents. Due to this parents would never know if the children attended school or did their homework. The school had the responsibility to follow up the parents to alert them about their missing children, when the children did not turn up for school. Some Children spent time at places known a 'Spot"-places were traditional beer was sold and slept late and would be fatigued and dozed off in the morning.

Cultural background

The researcher wanted to know what cultural issues affected the performance of the children. One teacher alluded to the fact that the Basarwa community were not used to exerting themselves or work hard due to their original nomadic way of life; and therefore the children found it challenging to put effort in anything they did.

The teachers explicated that other cultural aspects that affected the children's performance were absenteeism of the girl child during their menstruation period. The girls stayed home for over a week undergoing some rituals and would never be allowed to do any school work at this time. He stated that the school at times offered to send work home for the child but the parents would refuse to allow the child do any school work since it was against their culture.

One teacher stated that the Basarwa/Bakgalagadi children were very shy such that even when they knew the correct answer, they would never pronounce it out loud or confidently. The shyness was coupled with a culture of secrecy to an extent that even when teachers identified abused children, it was difficult to get information from the child and a lot of abuse cases were never reported to the police or the social welfare department.

Sexual relationships were common among the youths because as one teacher alleged, the Basarwa parents performed the act in the presence of the children. The whole family could share a single traditional hut or sleep in the open with the children and it was difficult for the parents to resist the temptation of being intimate in the presence of their children. Some of the girls in standard 4-7 (10-13 years) were already married and lived with husbands who they cared for after school.

Poverty

When asked about the economic state of the community, one teacher acknowledged that most of the children were malnourished because the parents had no sources of income. In some instances, the pregnant women did not visit the health facilities known as clinics but gave birth at home due to poverty and ignorance.

The children went to school hungry and the school fed them at 10am and 4pm. The main food was home-made bread and beans. Lining up to collect food was a difficult process that the teachers had to threaten the pupils to control them- a sign of hunger.

The school played a dual role of teaching and alleviating poverty. The old kitchen in the school was used by 2 women who provided the children with the food required and in turn the women made a living as a means to reduce poverty among the women.

One parent lamented that, *"I don't want to be a poor person, I want to change my status too and be called rich".*

Personal hygiene/negligence

The researcher wanted to find out why the children appeared uncared for and untidy and all the teachers expressed grief about the poor hygiene of the students. Most of the students' parents were either teenagers or middle aged and spent time drinking and smoking, hence neglecting the children. Some children had ringworms on their heads while some walked barefooted.

Observations and document analysis

The school attendance was high due to the feeding programme. Unfortunately very few parents attended the PTA meetings. During the research the researcher sat in the classrooms to observe the learning and teaching. There were very few teaching and learning aids, especially in the lower classes. The school had started a pre-school section to try and help the children appreciate school and reduce the challenges faced in dealing with the Basarwa children. The pre-school children learnt in a classroom without toys or any modern learning equipment. They had pieces of papers to draw on and the school deputy head explained that the desks and chairs the children used had been borrowed from a nearby day care centre that was closed down.

The children ate their breakfast at 10am and served another meal at 4pm. Lining up to collect food was a difficult process that the teachers had to threaten the pupils to control them-a sign of hunger. Most students depended on the government for food and school supplies but their parents would sell the supplies to but traditional beer. The school therefore took the responsibility to feed the children at 4pm to avoid being fed traditional beer.

Although the government provided school supplies, food and uniform to most children it was observed that there were some children who did not receive the packages. The deputy head explained that the Social Welfare department felt those ones were better off than the rest. Several

parents came into the school from early morning until lunch time and it was observed that those parents had HIV and AIDS infected children who needed to take their medicines at certain times. The clinic nurse preferred to supply the medication to the parents who would immediately walk to the school to give to the children. The reason for this was that when the parents were allowed to take the children's supply home, they would make the children take the medication with traditional beer.

From reading the newspapers about issues affecting the marginalized groups, some Bakgalagadi ethnic representatives and activists had registered their concern about the language called "Sekgalagadi". They explained that there was no such language because Kgalagadi is a description of the area they live in, meaning a dry place. The representatives/activists stated that the people in those areas spoke languages such as Sengologa, Setlharo etc. This was an important fact that requires more research and understanding.

Recommendations

There are several ways in which the Basarwa children in Phuduhudu could be assisted to motivate them appreciate learning;

- Those parents who had dropped out of school and are fluent in Setswana and English and could be used as interpreters in the early years.
- The teacher training programmes in Botswana must develop robust curricula that prepare teachers to incorporate appropriate pedagogy in their teaching; train them to appreciate teaching in challenging environments. The teachers may visit the remote areas in Botswana before they start teaching to sensitise them on the conditions other Batswana communities live and learn in.
- The government needs to provide teaching and learning resources and ascertain that the remote areas have electricity/generators that could assist to operate computers, connect internet to enable these children see and observe some of the features, infrastructure they are unfamiliar with. The school could be adopted by other schools in cities and large towns, business people in the community to assist the government in by providing books, toys and other learning/teaching materials.
- All the children need to go for excursions to places with different physical features and modern facilities.
- The curriculum needs to be contextualized to meet the needs of the children in different communities. Botswana has diverse population and the one-size-fits-all curriculum has shown over time that it does not work for everyone. Most of the children from remote areas do not finish school or perform poorly and remain in abject poverty and dependence on the government.
- The Phuduhudu children need to be encouraged in sports, creative and performing arts since they prefer practical knowledge.
- Those children who can read and write in the school could partner with the ones challenged to form a "buddy" reading system.
- It is important that the teacher use more experiential learning with the students since it is easier for them when they practice.
- The government must have a quota of how many people from the minority groups must be employed in government and not made to compete for jobs and other opportunities with those who are already advantaged.

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- Parents must be sensitized about the importance of education and their contribution to the leanring of children. They could be asked to collect work form school for the girl children to continue learning during their menstrual cycle rituals.
- The government, NGOs and other stakeholders could educate parents and their children about the dangers of early marriages, the uncontrolled and non monitored movements of children, but not deny the Basarwa to practice those aspects of their culture that is important to them.
- Instead of providing food baskets to the Basarwa the government must find ways of providing job opportunities within the community to reduce poverty. Basarwa are a closely knit community that prefers to live in their settlements rather than mix with other communities.
- The social welfare department must monitor those parents who neglect their children.

Summary

This study is about the challenges that Basarwa children face in leanring in Setswana and English. A lot of issues emanated from this study which affected the learning of the children. Language barrier was one of complex issues that children in remote areas face as they attempt to learn. Problems such as cultural background, poverty and others contributed to the challenges children faced.

It is important for the government to review the curriculum to ascertain that it caters for the diverse Botswana population.

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Just Google or Just Research to Improve the Response-Ability of Research Participants?

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Abstract

Research investigations that examine contemporary issues in the 21st century generate information that can be "googled". Google searches however, may not satisfy the need for a deep understanding of existing information, signalling the need for additional research. Research inquiries are especially pressing when it is evident that despite previous investigations social challenges remain. This study informs of a socially appropriate way to gather information and is part of a larger PhD project that examines the social experiences of adult learners living in rural communities. Particularly, this research contains a methodology that offers each adult learner a social opportunity to engage with the researcher for an extended time period in order to further their own social interests; a methodological approach expecting to improve the opportunities of research participants. Despite being able to google information, some adult learners appreciate more personal advice and support to achieve their goals. Further investigation may seek those circumstances that lead to participants either accepting or rejecting an extended social connection with researchers. This study contributes to existing knowledge about research methodology.

Key Words: Marginalised Individuals, Social Research, Ethical Methodology

Introduction

Google is a significant repository of information that assists researchers to explore a foundation for their investigations. In addition, investigators studying social challenges may reflect on the methodological approaches for their studies. Considering and utilising different methodological approaches may address social concerns with greater expediency than waiting for research to influence the implementation of state based social policies. The process of research may therefore assist research participants that experience complex social problems. This paper reports on the principles of an approach to a PhD study intended to dispense social benefits to the research participants.

The study presented here is part of a project that examines the inclusion and exclusion of adult learners as residents in South Australian rural communities. Previous literature reports that Australian rural communities and their members are often marginalised due to a lack of local resources and services that are enjoyed by the majority of Australians (Alston, 2005; Gray & Lawrence, 2001). Withdrawal of government funding in rural areas since the mid-1980s has reduced employment and development prospects in many communities. Primary production for world markers has likewise reduced the incomes of rural community members (Haslam McKenzie, Hoath, Buckley, Greer, & Rolfe, 2013; McIntosh et al., 2008). Research that involves individuals that reside in these communities offers an opportunity to reflect on methodology that can benefit the participants in the study as well as generate research knowledge. It is theorised here that one possible way to achieve social benefits from research is an approach that offers an opportunity for the participants to spend time to further their social goals. In particular, this offers the study participants a chance to engage with and direct the capacities of the researcher and assist them in realising their goals. It is of interest to academia and policymakers to understand the reports of participants in relation to this method and the consequences for participants and their communities.

Bettering the Social Chances of Individuals

An understanding of the ways in which research participants interact with principal investigators rests on an appreciation of; contemporary social policies, the role of education to generate social improvement; the social circumstances of residents in rural South Australian communities and; a discussion of the reinvigorated prospects for ethical commitment in research. Exploring literature on these topics lays the foundation in understanding the circumstances of adult learners in rural communities and the possibilities for gathering information through socially appropriate research. To begin with, the next section discusses Australian social policy initiatives.

Contemporary Australian Social Policies

Reports of growing social disparities between individuals in the regions they inhabit have drawn the attention of Australian policymakers. The response is the generation of social policies that have been driven by the introduction of social inclusion initiatives. Since 2007, social inclusion objectives, and particular participation in employment, are described in policy documents as supplying individuals with the resources for healthy social interactions (Australian Social Inclusion Board, 2008b). Social inclusion and its twinned concept, social exclusion originated in Europe when Lenoir (1974) mentioning “les exclus” in a parliamentary speech. “Les exclus” or individuals labelled as socially excluded are considered to be significantly socially disadvantaged. Social exclusion arises through a multiplicity of intersecting social determinants in the circumstances of individuals, such as poverty and low educational attainment. Since Lenoir (1974) articulation of social exclusion in France, the concept has spread across the globe to describe socially deprived situations that marginalise individuals. Likewise, within Australia, social exclusion has been adopted by policymakers to account for the social forces that may combine to restrict healthy social interactions and as a replacement for the term “poverty” that focusses on low

income (Australian Social Inclusion Board, 2008b; Phillips, Miranti, Vidyattama, & Cassells, 2013). Social exclusion and its twinned concept, social inclusion have an almost universal application in the foundations of current social policies.

Within the Australian policy context, Social Inclusion Principles were introduced to serve as an aspirational basis for social improvement (Australian Social Inclusion Board, 2008a). With the widespread adoption of social inclusion initiatives`, there are propositions that the concept of social inclusion may be used to conduct action research. However`, an extensive review in an attempt to conceptualise social inclusion highlights significant research shortcomings. Social inclusion and social exclusion are both ill-defined at this time. Both concepts seem to exist as a social process`, as individuals may become either socially included or socially excluded. A complication is the concepts are also used to describe a state of individuals being either socially included or socially excluded. Furthermore`, it is apparent that an individual may be socially included`, socially excluded or both at the same time depending on the criteria used to determine their status. For instance, an individual in low-income employment may be socially included according to policy documents, but classified as socially excluded according to by research parameters. An even greater challenge for researchers, who would like to initiate social inclusion programs, is that social exclusion is used to describe a process whereby social determinants come together to inhibit the social interactions and responses of individuals to social opportunities. However, this same theory is used to speculate about the role of socially excluded individuals to overcome social barriers (Edwards, Armstrong, & Miller). The uncertainties about social or personal responsibility for exclusion suggest that any research that moves according to a social inclusion approach may be problematic. Investigating existing social outcomes may be better executed by engaging in another approach that is not entirely reliant on conceptualising social inclusion or social exclusion.

The Role of Education

Education is well-documented in research as being traditionally associated with positive social outcomes (Black, Duff, Saggers, & Baines, 2000; La Due Lake & Huckfeldt, 1998). Individuals who are involved in education may therefore inform researchers who seek to understand interventions that benefit social outcomes. In particular, social inclusion initiatives promote the participation of the individual in either education or employment as a means of social improvement (Australian Social Inclusion Board, 2008b) thus providing an environment that encourages the involvement of adult learners' in education programs. Enlisting adult learners in research therefore, is a way to understand the role of education in social outcomes. The assistance of adult learners who are residents in rural communities provides a reflection on existing social initiatives from the perspective of individuals who may be deemed in policy as socially excluded; and review the role of educational attainment in generating social improvement. This is especially pertinent where adult learners continue to be marginalised due to a lack of services and resources in rural communities (Newman, Biedrzycki, Patterson, & Baum, 2007).

The State of South Australia is located in the southern central part of the Australian continent. The State is populated by 1.67 million residents, including 1.23 million individuals who live in the Adelaide metropolis (Australian Bureau of Statistics, 2013). The areas outside of the metropolitan area are home to approximately 440 000 residents: many of whom live in relatively arid areas that support the primary production of major Australian exports such as mining concentrates, wine, wheat and livestock (Spoehr & Jain, 2012). Due to economic reliance on exporting to world markets, the population of rural areas may experience rapid economic changes and therefore have; complex education needs to cope with local changes (United Nations Educational Scientific and Cultural Organisation & International Centre for Technical and Vocational Education and Training, 2013). In addition, the current opportunity to conduct research in South Australian rural communities accords with it being the nation's first state to introduce social inclusion initiatives. (Australian Social Inclusion Board, 2008b). This highlights South Australia as an important site in

which to understand the improvements from social inclusion based policy. Furthermore, in July 2012, the SA government introduced "Skills for All" funding for priority education courses as part of a continuation of its commitment to social inclusion (Government of South Australia, 2012). The "Skills for All" initiative provides low or no cost vocational and education training in prioritised education programs for all South Australian residents who are at least 16 years of age (Government of South Australia, 2012). Improving access to education for all South Australians improves the prospects for rural members to engage with educational programs and apply their knowledge to the creation of futures in a globalised world. Presumably this education process includes the revitalisation of the social interactions of rural community residents to improve their life chances.

The Principles of the Research Design

Engaging with adult learners that reside in the rural communities of South Australia is the foundation of a PhD thesis anticipated to appreciate their social experiences. The PhD research is intended to offer a worthy contribution to the academic community, the researcher and the participants. The study undertaken here reflects on the social benefits of the PhD research methodology for the participants. In comprehending existing literature concerning the prospects of South Australian rural communities, it is evident that residents located in sparsely populated and isolated communities are subject to economic and social factors, which either separately or in combination contribute to their marginalisation: e.g., unemployment, low income and a lack of education opportunity. The circumstances of the participants requires careful consideration of the approaches that may benefit everyone involved with the research and particularly the methods that could best promote the social wellbeing of the participants.

Many participants in research are offered recompense for their contributions in the form of vouchers, payment or raffle tickets that compensate them for their time. However, it is questionable if this technique is adequate when conducting research examining individuals subjected to apparent and persistent social deprivation. To prevent initiating social harm through the research, I pursued a profound understanding of the ethical considerations for engaging in research with marginalised groups. The work of Strega (2005) discusses this dilemma for researchers who investigate enduring social concerns. Strega (2005) promotes that previous research on social inequities has often done little to assist the circumstances of marginalised individuals. Further, she emphasises that, any research that enlists the contributor of marginalised participants should provide direct and meaningful advantage to them. The work of Young (2011) offers a way to instigate a meaningful advantage to marginalised individuals by recommending the public resourcing of individuals as a means of social assistance. As a researcher in a publicly funded university I felt obligated to support an undertaking of the PhD research in a manner that satisfied the social needs of the participants. This would mean therefore fulfilling an obligation to compensate the participants in a way that offers them a meaningful social advance. Conceivably, participants would spend time assisting me to achieve my social goal of PhD, and it would therefore be fitting for me to assist them with their social goals. I speculated that prolonging a social interaction between myself and the participants as a way for them to receive support for would be a way that I could assist them. I offered them an equivalent amount of my time for the time that they had contributed to the study. My time would be allocated in accordance with their decisions about their particular social aims, so that participants would be able to influence the decisions that have the greatest social consequences for them. It is argued here, that the conduct of research in this manner, generates an opening to understand and report the consequences of a researcher engaging in social interactions with participants as a means to reciprocate their contribution.

Research Purpose

This study seeks socially appropriate ways to gather research information. It focusses on the on the research methodology of the PhD project to further knowledge about approaches to research that fulfil an enhancement of the social wellbeing of individuals who participate.

Methodology

Semi-structured interviews were used to gather the narratives of adult learners in South Australian rural communities. The interview method allows participants in the study to communicate their experiences and allows the researcher to clarify points of their oral reports to serve the research purpose. Twenty-one adult learners who were either studying a non-compulsory education course or, had recently attained their qualification were enlisted to contribute to this study. The participants were between the ages of 28 and 70 and represented by 17 women and 4 men. The majority of participants reported suffering from a long term illness or injury and were living below the poverty line as fulltime carers for vulnerable others. Some participants experienced other severe deprivations, such as being homeless. The circumstances of the participants are congruent with the literature review about rural communities and their members that suggested that adult learners in South Australian rural communities would be marginalised and living in circumstances with multiple social disadvantages. It is therefore important that research investigations that seek the views of rural residents as participants find ways to support their social well-being.

The educational attainment or qualification intent of the participants ranged from a Certificate I qualifications, an educational step before the South Australian Certificate of Education, to a PhD as a final qualification in the Australian education spectrum. The interviews with participants were recorded and transcribed and each transcript has been reviewed and approved by the participants for use in this study. Semi-structured interview questions included, "can you tell me how long you have lived in the community?", "can you tell me what advice you would have for someone who was thinking of moving to your community?", and "can you tell me the best way to get involved with your community?" The data from the interviews is being analysed in NVivo in line with an inductive approach to understand the social significance of adult learning in rural communities. Importantly, each participant has been offered an amount of the researcher's time that is equivalent to the amount of time that the participant contributed to the study. Some participants have eagerly engaged and spent time interacting with the researcher to fulfil their social goals, whereas others expressed the view that they will not need anything in return for their contribution. I shall first discuss the outcomes for those who have taken the opportunity for further social interaction to achieve their social goals, and then consider the results for those who have expressed that they do not require any further assistance from the researcher.

Findings

The semi-structured interviews and the review of the transcripts facilitated an understanding by the participants about strategies that are intended to improve their social chances. These strategies included their educational endeavours and often led them to recognise novel social approaches that may further their life chances. Through giving an oral history to the researcher, many participants felt a sense of accomplishment that their story was heard and that it would be represented in research. After the interviews, participants often reported a "sense of hope" about their futures and that of their communities. The semi-structured interviews allowed adult learners to express their concerns about the social challenges in their rural communities. Participants expressed a need to be socially involved in their communities, and the challenges that rural communities face. A significant part of these challenges were social difficulties and the barriers to engaging in social opportunities as a rural resident.

Participants expressed a need to be involved with their communities. Jane stated "I really wanted to be not just seen, but actively participate and contribute to the community in some way. Lily agreed, " I guess I'm a community based person. I wouldn't do what I do if I wasn't community based". Wynne thought that being involved meant, "Giving something back to the community". For these contributors their community is an important part of their social identity.

Many participants expressed various problems that their communities face, Heidi opined "I'm thinking for this community… I think the services are just shutting down more and more". Likewise Helen saw funding as a community issue, "they're always struggling for finances and I think a busy community is a healthy community and I think that this community down here is very, very asleep". Katrina agreed and reflected on health services in her community "it's a real debacle, community health at the moment. It's putting strains on the whole community". In accord with the literature review, the withdrawal of services and resources are contributing to the demise of rural communities and marginalising their residents. Anne proposed that social issues were paramount in rural communities, "some of our social problems are the biggest issues that our community faces". Julie revealed that social disparities disrupted community, "we can't have a true community unless we've got fairness and equity". Margaret revealed that travelling between communities has led her to observe social differences, "Working over there's really interesting, because there's huge support from the families, but definitely a totally different social system to over here". Communities and their social issues are reported by the research participants as urgent problems that may benefit from research interventions.

Time and opportunity to fulfil social opportunities was also a problem, Emily stated, "Even mums with little kids don't have the time to make friends". Derek expressed that being in a rural community "makes me feel that I don't actually live in my community or maybe I'm here as a part time resident." Whereas Lisa expressed that there was a lack of local consultation, "I think, community projects, we should all have a say, encourage them to have a say". Meg also reported that local input was imperative for community development, "We know what's happening with our community and we know what our community needs". The social challenges in the communities of the research participants demonstrate significant barriers for community development.

Concerning an offer of the researcher's time, about half of the participants sought further social engagement to further their goals. It is noteworthy, that those participants who were in circumstances with multiple deprivations did not appear more or less likely to engage with the researcher for their personal benefit. Rather the request of participants to engage with the researcher was governed by a perceived urgency on the participant's behalf to achieve a particular social goal. This led to considerable social interactions to strategize and implement plans to assist the participants with their self-identified objectives. The types of social support offered to the research participants included aiding their education endeavours, assisting with the gain of employment, and helping with various matters related to community groups. Contributors were equally enthusiastic to work towards both furthering their education and employment, as well as advancing community development projects. It is proposed that the eagerness of participants to pursue community development demonstrates that the participants are aware and supportive of the local social progress. This study shows that supporting the contributors often assisted them in the achievement of their own goals, which in turn enriched the social fabric of their community.

As a researcher engaged to support the participants, it was problematic that some of the goals of the contributors, such as attaining low-income employment are reported as placing individuals at a social disadvantage (Pocock & Masterman-Smith, 2008). However, it was my resolve that a time donation would be in alignment with participants' decisions about their circumstances, rather than using time to persuade them into a different course of action, which may or may not assist them in the future. There is however, some tension with supporting the aims of participants when the outcomes possibly lead to their further deprivation. However, I argue that participants are best placed to understand their own needs and their direction of available social resources is paramount

to an autonomous realisation of their life. Positively, there was a reduced delay in the benefits that participants received in response to their research contribution, supplying evidence that this method generated more immediacy in the social outcomes from the study. The social benefits from the supporting the participants in their social endeavours may have considerable variations that may be best understood through further research.

Half of the contributors were not supported by this research in any discernible way. Some of the participants are yet to decide what they would like assistance with. Others consider this opportunity as a reserve resource to be called upon in further times of anticipated educational difficulties. As one contributor put it, he perceives this offer as an "ace up the sleeve" for when he receives a particularly difficult assignment that he needs help with. It is gratifying to be placed in such a position by someone who contributed two and half hours of his time to assist my PhD study. Many contributors reported that they were satisfied to give something to me and the research community. Contributors that could give such a social gift without needing a return expressed that they were rewarded by this action, indicating that there is a type of social return in being able to give without anticipating or needing reciprocation. More work needs to be done to understand how an opportunity for some contributors to demonstrate that they are in position to give without needing reward benefits them and bolsters their sense of social capacity.

If the findings here are to be better understood, further investigations are required to understand the circumstances under which marginalised contributors are eager or reluctant to accept resources. A significant part of this investigation would be to ascertain if this socially supportive methodology furthers social advantage or disadvantage. The approval of ethics committees for research involving the most marginalised may also need revision. Revising some ethics approval procedures may obligate researchers to assist marginalised contributors and their communities in an accountable manner clearly outlined in the initial research proposal.

Conclusion

Google may provide answers to some of our questions; however, research that enlists a contribution from marginalised individuals is not an easy information task. It is important for researchers to re-consider their role as investigators of persistent social disadvantage and how they can offer direct and meaningful advantage to marginalised contributors. Contemplating the ways in which socially just research may be conducted has led to this small study that shows how a simple social engagement between researcher and participant both informs researchers with elegant insights and offers possible solutions to the social dilemmas. It further shows that our interactions as researchers can produce knowledge outcomes not only for ourselves and our institutions, but also in ways that support our research participants. If we are to avoid imposing our own shortcomings into the circumstances of others, supporting individuals with autonomous decisions about their futures remains a substantial component of an ethical and supportive research methodology.

Understandably, it may be argued that this research design and number of participants lends itself to improving social outcomes of everyone involved. However, regardless of study size, it is timely for researchers to ponder the need for existing practices that produce microscopic social investigations with little or no change in circumstances. In contrast, if research is going to be conducted in ways that are socially supportive then it is worthwhile to explore research designs and the resultant outcomes in terms of social change. This revitalised direction may begin by appraising how research participants will be able to influence their life chances and make social responses because of their involvement in research.

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Social-Emotional Learning and Resiliency Amongst Middle School Students

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Abstract

The article addresses the interpretation and examination of theories based on social-emotional intelligence and resiliency by theorists Erikson, Bandura, and Goleman. Comparisons of the perspectives show the interrelation of social-emotional intelligence and resiliency with an evaluation of further implications for use in education. The influence of the article is to improve the human and social conditions of education to provide adolescents with worthy and meaningful opportunities to learn through social-emotional intelligence and resiliency. Through social-emotional intelligence and resiliency, institutions focus on creating well-adapted adults that are able to use strategies that assist with cognitive, psychological, social, moral, and biological positive growth to prepare students for 21st century competencies.

Key Words: Emotional Learning, Resiliency, Middle School

Introduction

Students do not enter the classroom as blank slates. Rather they have engaged in experiences, altered their thinking, and developed cognitively, behaviorally, and emotionally prior to entering the classroom. The young adolescent, while adjusting to puberty, is also combating identity, family, and personal crises. In addition, the early adolescent seeks to understand themselves and asks for others to respect their individuality and growth. Differentiation is a necessary component to classroom instruction to respect student individuality and growth. However, differentiation should be more than instruction. For middle grade learners, differentiation involves understanding, building, and sustaining identity, self-efficacy, and emotional and social intelligences. As students build on social-emotional identities, they grow in emotional, cognitive, behavior, and social areas that are necessary for teamwork, critical thinking, and problem solving.

Social-Emotional Identities

Erik Erikson's (1980) text *Identity and the life cycle* provides an in-depth analysis into how children from birth develop into the adults they are today. Either those adults have a sense of identity, thus a strong sense of self-efficacy and resiliency, or the adults have weakened identities that lead into a poor sense of self-efficacy and the disability of withstanding challenges. Albert Bandura (1997) in his text *Self-Efficacy: The exercise of control* correlates directly to Erikson's (1980) concept of identity. Daniel Goleman (1995 & 2006) analyzes identity, self-efficacy, resiliency, learning, relationships, and neurological decision-making processes to develop the concepts of emotional intelligence and social literacy. Emotional intelligence allows the individual to manage emotions in effective and meaningful methods rather than allowing emotions to overwhelm, inhibit, or create unhealthy personas. Social literacy develops from the concept of emotional intelligence and demonstrates how an individual's environment can influence, both positively and negatively, biological and social well-being.

Identity

Constructed from our biological hardwiring and our environmental influences, the human identity develops. Upon birth, the chemical womb no longer exists and the child enters the social exchange system of society that will determine limitations and opportunities (Erikson, 1980). There are three stages of the identity process in childhood: trust, autonomy, and initiative. Erikson (1980) suggests that a healthy personality begins with basic trust and develops based on experiences within the child's first years. Without the basic foundations of identity, the middle grades learner may struggle through adolescence.

Developing basic trust requires a mutual regulation between the parent and the child (Erikson, 1980). According to Erikson, mutual regulation requires that when a child is in need of a changing, a feeding, desires holding, that he or she will gain that opportunity from a secure base. If basic trust is not established, the infant then develops a sense of basic mistrust and may find it difficult to gain trust in other relationships due to the poor sense of trust as an infant. During the stage of autonomy, the child begins to struggle with and finally understand retention and elimination (Erikson, 1980). Within this mode, the child begins to struggle with how to maintain self-control without losing self-esteem from the ambiguity he or she receives from parents or other adults in leadership positions (Erikson, 1980). Without the initial stage of trust, the child begins to doubt, feel shameful, and fearful to attempt challenging tasks. The middle grades educator has the responsibility of developing trust and allowing for autonomy.

Allowing exploration in the middle grades classroom leads to gaining confidence that ultimately develops into greater awareness of self and independence. If initiatives and independence are thwarted at any stage throughout the child's development, the child then begins to develop guilt. Guilt develops from the sense of failure from not fulfilling expectations during the stage of dependency. During the collaborative nature of imagination and play, a child understands the purpose of developing products together that lead to developing the fundamental values of independency.

Self-Efficacy

Self-efficacy is an important factor, according to Bandura (1997), that promotes motivation and behavior, and influences actions that affect an individual's life that "refers to beliefs in one's capabilities to organize and execute the courses of action required to manage prospective situations" (p. 2). Self-efficacy is the motivation, esteem, and productivity that is desired in adolescent students. Self-efficacy increases by producing effective, meaningful, and significant pieces of information or products. Self-efficacy, according to the definition, becomes a factor that promotes individual achievement (Bandura, 1997). When an individual feels as if they cannot complete a task, they become demotivated and do not accomplish the goal that is set forth. On the other hand, an individual that is strongly motivated will have the drive and force to complete and accomplish effectively the goal they have established for themselves.

There are four sources of efficacy: the mastery of experience, social modeling, social persuasion, and psychological responses (Bandura, 1997). The teacher becomes the model and initiator of the sources of efficacy. When performing challenging tasks well, Bandura (1997) suggests that the individual has a higher sense of self-worth, thus increasing self-efficacy. Bandura also found that observing others complete similar challenging tasks with similar backgrounds promotes increased self-efficacy within ourselves. By watching others, we believe that we can accomplish the same. Social persuasion assists the individual to accomplish challenging tasks with motivational conversations, scenarios, or other forms of encouragement (Bandura, 1997). Encouragement assists the individual to attempt to accomplish the challenging task in an effort to please the other person. Psychological responses also dictate the reactions individuals have to different situations (Bandura, 1997). An individual who is anxious and fearful about completing a task results in poor effectiveness and productivity, while those who are joyful and confident are more apt to complete a task effectively.

Emotional Intelligence

There are families of emotions that reveal themselves in our neural capacities and outwardly behavior. Those emotions are anger, sadness, fear, enjoyment, love, surprise, disgust, and shame. The families of emotions act as waves and create a ripple effect to our moods that can develop our temperaments throughout the day (Goleman, 1995). Goleman (1995) suggests that emotions behave as a map to direct our behavior and assists in determining how individuals handle recurring challenges (Goleman, 1995).

Emotional intelligence focuses on the abilities of motivation, persistence to keep moods under control, and to empathize (Goleman, 1995). With a greater emotional intelligence, the individual is able to master relationships and handle unforeseen challenges to promote productivity. Several emotional intelligences are verbal alacrity, mathematical-logical alacrity, spatial capacity, kinesthetic knowledge, musical knowledge, interpersonal skills, and

intrapsychic capacity (Goleman, 1995). The multiple intelligences of individuals allow for diverse classrooms.

Five domains within emotional intelligence that are important for the adolescent learner include knowing one's emotion, managing emotions, motivating oneself, recognizing emotions in others, and handling relationships (Goleman, 1995). Having emotional awareness involves the ability to recognize emotions, understand what causes those feelings, and recognize the differences between feelings and actions (Goleman, 1995). Managing emotions develops individuals who are better with anger management, have fewer verbal or physical disruptions, are able to express anger appropriately, are less aggressive or have less self-destructive behavior, are more polite and better at handling stress, and are less lonely and socially anxious (Goleman, 1995). With the ability to manage emotions, individuals have the base of self-respect and awareness of situations. Empathy involves being able to take the perspective of others, having sensitivity to the feelings of others, and becoming an actively involved listener (Goleman, 1995). Handling relationships promote the increased ability to analyze and understand relationships, increased ability to resolve conflicts, problems, and ability of negotiation, becoming assertive and using those skills within communication, desire to be outgoing and involved with peers, and more concerned, considerate, and cooperative (Goleman, 1995). The high emotional literacy of an individual improves academic achievement, social encounters, business relationships, and personal dealings.

Gained from a number of strategies and concepts, emotional intelligences are positive opportunities for self-improvement and positive relationships. When faced with obstacles that inhibit effective communication, positive health, or healthy relationships, the direct and intentional practice of the above strategies or concepts can reduce the negative influence of obstacles. Increasing the positive aspects of emotional intelligence will prompt and promote the positive improvements of social intelligence.

Social Intelligence

Social intelligence is a two-part concept that includes social awareness and social facility. Social awareness includes rationalization beginning with primal empathy, the sensing of nonverbal emotions; attunement, listening completely; empathetic accuracy, understanding another's feelings, thoughts, and intentions; and social cognition, knowing how social worlds function (Goleman, 2006). Social facility builds on social awareness to create meaningful interactions. According to Goleman (2006), social facility begins in the low road and transverses through to the high road with synchrony and the interaction with others nonverbally; self-presentation and presenting the self honestly and sincerely; influence and the ability to influence the outcomes of interactions; and concern, compassion felt, and the actions we take to help others.

According to Goleman (2006) factors in maintaining high, cognitive, and active involvement are the emotions of the leader. The security each individual feels under the supervisor promotes their ability to work, achieve goals, and overcome challenges (Goleman, 2006). Those who feel as if their leader values them are able to take criticism well and to improve based on the suggested feedback (Goleman, 2006). On the other hand, individuals with toxic leaders are fearful, anxious, and are not able to take criticism well. The emotional well-being of the leader has a correlation to the effectiveness of the classroom. The role the valuable leader perpetuates allows subordinates to feel connected. The connected feeling, based on the links people share across emotional spectrums, creates a secure base for the employee or

subordinate and the boss or leader (Goleman, 2006). The security enhances performance, increases comfort levels, and promotes the desire to want to do more for the benefit of others, the company, or self.

School Manifestations

Understanding social and emotional intelligences, self-efficacy, and identity aid in developing the whole child. School manifestations are present in daily classroom instruction and leadership. Developing the whole child involves expectations, school-based interventions, foundations, and building on foundations.

Expectations

Expectations are a triggering factor of perseverance and resiliency. The expectations others have for us can transpire to expectations that we gain for ourselves. Students begin to question the meaning, relevance, and purpose of their tasks. Students then begin to question the purpose of the instructor and any biases the instructor may have of their students.

Motivational performance feedback is a revealing component of teacher expectations to students. Beyond the sticker and generic messages that come from case overload, motivational performance feedback equips the student for self-assessments and resiliency. Attempting motivational performance feedback, students know the importance of their tasks, increase in their knowledge gained, and are prepared for future tasks (Gueldner & Merrell, 2011). Teachers provision of motivational performance feedback attempts to deliver to students the positive feedback and expectations that are vital for students to thrive in the classroom. Without the motivational performance feedback, students may lose individuality in the classroom, and may become recluse, further decreasing their resiliency and social-emotional intelligence.

Expectations and accountability assists in the development of responsible learners. Responsible learners are developed by doing their own thinking for intentional choices and accepting consequences, both positive and negative (Wieserma & Licklider, 2008). Components that promote high expectations and accountability of students are open-ended questions and tasks, students being held accountable consistently, and meaningful and real-world tasks that create and develop experiences and interactions (Wieserma & Licklider, 2008). Effective classroom learning environments hold the beliefs and assumptions that learning happens in the individuals mind, each individual contributes to the others' learning, individuals are responsible for personal learning, learning takes place due to social interaction, metacognition is vital for constructing meaning, and that a safe environment enhances learning (Wieserma & Licklider, 2008). There are several levels of expectations (Wieserma & Licklider, 2008). The original stage involves students doing as instructed, followed by students reluctantly applying concepts to old and new ideas (Wieserma & Licklider, 2008). The final stage of students meeting their high expectations is their ability to surpass others' expectations and their productivity (Wieserma & Licklider, 2008). Students interacting with others, recording thoughts in a journal, completing meaningful projects, and self-assessment assist in the attainment and retention of high expectations and accountability (Wieserma & Licklider, 2008).

Developing high expectations in students correlates with creating and maintaining positive student-teacher relationships. Several school contextual influences affect teacher trust in the school such as teachers' behaviors, standards, attitudes and beliefs, teachers' perceptions, and teacher-student interactions (Van Meale & Van Houtte, 2011). Organizational school context assists in increasing student-teacher relationships and trust. Gender, socio-economic status,

school sector, school size, and ethnic composition are factors for trustful student-teacher relationships. Majority female schools, high socioeconomic status, the private school sector, small schools, and racial-ethnic similarities increase the trust within student-teacher relationships (Van Meale & Van Houtte, 2011). The major factor that decreases trust within student-teacher relationship is socioeconomic status (Van Meale & Van Houtte, 2011). The assumption is that those with low socioeconomic statuses are unable to develop and maintain secure foundations in the classroom environment due to their unsecured foundation at home. Without the high expectations of students through student-teacher relationships, students may begin to feel alienated which will develop into educational problems. In addition, students develop low social integration skills that can promote reduced positive outcomes, and students lack the perception of teacher support resulting in lack of engagement (Van Meale & Van Houtte, 2011). To improve upon student-teacher relationships, teachers and students should view each other with similar perspectives of school-appropriate behaviors, cognitive-motivational behaviors, and personal-social behaviors (Van Meale & Van Houtte, 2011). With the knowledge of student and teacher perceptions, developing a trustful student-teacher relationship assists in maintaining high expectations of students and students achieving the goals based on the high expectations.

Several factors are important to students achieving high academic standards. Those factors include career preparation, parental support, and teacher support. Career preparation provides the student with opportunities to experience personal career goals within the school environment (Perry & Pabian, 2009). Parental support is the expectations of how parents contribute to student success with students perceiving the support either positive or negative based on the amount of support and the expected support (Perry & Pabian, 2009). Similarily, teacher support has the possibility of negative or positive consequences based on expectations, trust, and perceived support (Perry & Pabian, 2009). The study suggests, based on diverse participants, that teacher support has the highest level of influence on student academic achievement, goal preparation, school engagement, and self-efficacy (Perry & Pabian, 2009). Increasing the amount of personalized support based on student expectations assists in students becoming socially and emotionally intelligent with a strong foundation in resiliency, identity, and autonomy.

School-Based Interventions

School-based interventions are strategies employed to assist students, families, and other stakeholders before, during, or after school. Schools incorporate interventions with a variety of strategies. Those strategies include monthly guidance sessions, extracurricular activities, parent evenings, Drop Everything And Read program, after-school programs, and before-school programs. Often school-based interventions at low-performing schools are too many and overwhelm teachers creating low school morale and high turnover (Simon & Johnson, 2013).

Middle school poses several changes to the adolescent such as biological growth, school change, cognitive growth, social development, family renegotiations, and development. In the context of the changes, academic performance and parental involvement declines. Teachers are in a limbo-like situation, deciding whether or not and how much to bring parents into their solitary home of the classroom. Involvement may lack due to several challenges parents face in a school. The school building may render itself a cause of intimidation (Hill & Tyson, 2009). In addition, students are seeking autonomy in their desire to play a larger role in their education and personal decisions (Hill & Tyson, 2009). Parental involvement in school-based activities improved student academic achievement by 19% and 39% for home-based academic

socialization (Hill & Tyson, 2009). Academic socialization accelerates student achievement due to the increased reading, outside engagement, educational experiences, and real-world application. On the other hand, home-based parental involvement does not improve student academic performance. It has been shown that parents who assist their children with homework decelerate and interfer with student achievement causing an 11% decline in student academic achievement (Hill & Tyson, 2009).This decline is possible due to the lack of knowledge parents have of the current standards that permeate the classroom curriculum. Overall, there are several strategies that parents are capable of implementing in school and outside of school to boost student achievement.

Social and emotional distress becomes a concern for adolescents. Developing a character development plan that is integrated into the curriculum promotes positive concepts that students are able to recognize and apply daily with morning announcements, parental involvement, posters, student pictures of success, and teacher lessons (Elias, DeFini, & Bergmann, 2010). Positively increasing students' social-emotional intelligence promotes the well-being of their academic achievement by removing stress-related factors that hinder their ability to focus and thus succeed. Social-emotional learning via character development also assists in improving students' resiliency providing several opportunities for learning from errors. Based on a school climate survey, students improved the most in peer and adult respect and enjoying the ability to share their environment (Elias et al., 2010).

Afterschool programs flourish in school districts and schools with the thinking that students will excel better in the classroom. Due to the diversity of afterschool programs, the promotion of sequenced, active, focused, and explicit programs provide students with the skill set necessary to achieve academically (Durlak, Weissbrug, & Pachan, 2010). Afterschool programs aim to accomplish positive achievement in feelings and attitudes, behavioral adjustment, and school performance (Durlak et al. 2010). Feelings and attitudes relate to the students increase of self-perceptions and bonding to the school environment (Durlak et al., 2010). Behavioral adjustments promote positive social interactions, conflict-resolution skills, and a reduction in drug use (Durlak et al., 2010). School performance incorporates achievement test scores, grades, and school attendance (Durlak et al., 2010).

Foundations

The needed foundations for students to develop into socially-emotional resilient learners include initial security, relational trust, and social-emotional intelligence. Without those three contributing factors working together, the adolescent may have difficulty with developing resiliency, engagement, and achievement inside and outside of the school environment.

Security is a fundamental necessity for everyone. Security provides the young child to the adult with a form of safety in their environment, whether known or unknown (Goleman, 2006). A secure foundation is vital to the success of the child in order to accomplish self-confidence and self-awareness. The parents create the first form of security outside of the womb with nurturing and protecting the child. In school, teachers, peers, and administrators further promote the sense of security. The healthy attachments based on security develop children and adults who become empathetic to other and knowledgeable of self (Goleman, 2006). Becoming self-aware allows the individual to become comfortable with success and failures.

Developing relational trust is a building block for developing and maintaining a secure foundation. Building trustful relationships, especially in a teacher-student relationship, involves the teachers' ability to individualize feedback given to student that is both positive and

constructive (Gueldner & Merrell, 2011). Developing a teacher-student relationship with strong trust involves the teachers' behaviors, standards, attitudes and beliefs, perceptions, and interactions with others (Van Meale & Van Houtte, 2011). Adolescents struggle in developing autonomy. As teachers, involving parents in the day-to-day activity may violate an unspoken trust agreement within the teacher-student relationship (Hill & Tyson, 2009). While developing their identity and autonomy, middle school students seek separation from their parents. The separation from parents causes the student to have a desire to seek another adult. That adult is the teacher. Teacher support has the highest level of influence than parental support or career preparation on student academic achievement, goal preparation, school engagement, and self-efficacy (Perry & Pabian, 2009). Improving our expectations of students, despite any bias an individual may have, while increasing the accountability of students should improve student achievement (de Boer & van der Werf, 2010). Student drive and motivation increases with trust and a strong foundation.

Conclusion

The application of social-emotional intelligence is aimed at developing and maintaining cognitive abilities, behaviorally stable, and affective students who are able to survive and thrive in any environment. Developing a social-emotional program prompts skills linked to cognitive development, achievement, and engagement that encourages students to become motivated and self-accountable individuals, improve teacher-student relationships, create school-family-community partnerships, and increase confidence (Zins, Weissberg, Wang, & Wahlberg, 2004). Developing students, schools, and communities that have respect and rapport for each other and learning requires acknowledgement and learning from mistakes, developing relationships, showing empathy, and managing emotions. Creating, enforcing, and promoting positive connections within the cognitive, behavioral, and affective environments of children, students, and adults will move secondary education to new levels of advancement for academic and technical skills and application.

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Assessments in the 21st Century: No more cheating during e- Examinations!!!

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Abstract

Education has now become more accessible and flexible via e-Learning. As newer technologies become less expensive and more learners want to study from the comfort of their homes, online learning environments are becoming widely used for teaching and learning purposes (Zhang & Kenny, 2010). With the introduction of e-Learning, online examination is a great option for modern life. However e-Examinations are not secure enough in most cases and require invigilation or proctoring mechanisms to enforce secure conduct of an examination. Thus, the future of e-learning is greatly attributed to the credibility of e-Examinations. Today, some of our 21st Century e-Learners travel to test centre to write their examinations, which defeats the purpose of flexible learning. The question for Open and Distance Learning institutions (ODL) is "Are we ready to administer cheating free e-Examinations from home?" so we are sure that these students just don't walk out with online degrees for examinations which they never sat. The problem this research will address is to find solutions to improve security for e-Examinations conducted from Home. Exhaustive literature review, observing test centers, interviews and questionnaires were used in identifying security threats facing e-Examinations and a secure e-Examination model is proposed. Continued presence verification of the candidate for the entire duration of the exam with strong biometric authentication mechanisms is suggested as key to curb impersonation.

Key Words: e-Learning, e-Examination, Authentication, Presence Verification

Introduction

Information and communication technological developments sweeping the globe are rapidly transforming every sector. Education Industry is no different and is getting bigger and brighter with e-Learning. According to Pappas (2013), students and employees are becoming more interested in earning their degrees through e-Learning. As a result, knowledge and skill acquisition is changing with modern use of technology. E-Examinations have become a new and popular phenomenon in Higher Education. The tools and techniques developed for e-Learning are providing learners with flexibility and a more effective medium for instruction.

A survey conducted informs that in the higher education institutions, about 35% of students take at least one online course. Furthermore, 65% of higher education institutions now say that online exam is a critical part of their long term strategy (Chen & He,2013). Security is one of the challenges for both the traditional and online examination system (Sarrayrih & Onyesolu, 2013). E-learning environments are increasingly common as can be seen with the numerous resources spread over the network. At the same time a rise in student cheating practices has been as identified. Institutions are expected to ensure that their students are not cheating and/or indeed the right candidate who should be writing the exam and for the entire duration of the examination. This is important for assuring credibility of e-Examinations, a major stumbling block in promoting e-Learning. One way to mitigate security breach during e-Examination is to identify, authenticate and continuously monitor candidates during the examination. This helps curb impersonation during e-Examinations. Impersonation refers to an act of dishonesty where one person pretends to be another for him/her to gain access to unauthorized resources/assets and this has been reported several times during examinations despite strict measures being put in place.

Identification refers to confirming "who you are?"; authentication verifies indeed "is it really you?"; and continuous monitoring would guarantee that "you are the right candidate who wrote the full examination without any support or assistance" (Sabbah,2011). Authentication factors include ownership (e.g., cards, passport, etc.,), knowledge (e.g., pin, password, security questions) and biometric (e.g., face, iris, finger print recognition) or behavioural dynamics (e.g., keystroke, mouse dynamics, etc.,). It is not sufficient to guarantee CIA goals (Confidentiality, Integrity and Availability) but also achieve PIA goals (Presence, Identity and Authentication) for administering credible examinations.

As much as moving to e-Examinations provide location flexibility to students, it also proves to be much more challenging than originally expected. Improving student authentication in e-Examinations in order to prevent fraudulent activities is seen to be highly important. ODL institutions are asked to guarantee examination standards irrespective of traditional or online medium, as exams continue to remain as primary means for assessing learner's knowledge and skill. This would require building more security into current examination systems. If examinations are designed and administered in such a way that they guarantee 4 types of security namely user security, data security, location and web security, then perhaps that would be a much more reliable online examination system for use in the 21st Century.

The purpose of this paper is to produce the related discussions in the literature, to present an in-depth analysis of the security issues facing online learning. The different threats facing e-Examinations were identified through questionnaire and risks from these threats ranked to see which threats have more impact on online examination. The online learning source can become proactive and knowledgeable as they diminish the security risks found in online learning. Current security for e-learning systems relay principally on the deployment of passwords authentication

system which will no longer stand test of time. Online learning systems need to identify with the state of the art in this energetic field. So as an effort in this direction and in response to increasing threats facing e-Examinations, researcher has come up with a number of counter measures and proposed through a theoretical framework.

Problem Statement

With e-Learning, E-Examinations seem to be a great option for modern life. However these examinations are not secure enough and poses some threats, it can be difficult to confirm true user authentication and prevent cheating practices during examinations. It is vital that quality standards be met for all examinations.

The problem this study addresses is to determine the various threats and challenges to e-Examinations and to develop a theoretical framework to minimize cheating by student/s during home based e-Examinations.

Research Questions

1. What are security threats and challenges to e-Examinations?
2. How can security be built into current online examination models?

Research Hypothesis

1. E-Examinations are prone to cheating by students.
2. Improving student authentication and continuous monitoring of e-Examination candidates minimizes cheating during the examination.

Research Scope

This research is confined to e-Examinations, the major threats were identified and a model is proposed which upon implementation will assist to administer cheating free home based examinations.

Significance of the research study

ODL institutions as much as they are interested in e-Learning they are still reluctant in seeking full-fledged support from e-Examinations for 2 main reasons

(i) e-Examinations are not secure and students cheat during these examinations

(ii) Effective invigilation involves huge proctoring costs.

Examinations continue to be the primary means of assessing knowledge and skills and hence the responsibility of every institution to assure examination standards are met .In the 21st century for institutions to go fully online it is important that research be carried out to build additional security into existing examination systems. No institution would want their students to walk away with online degrees for exams they never appeared, dishonesty should be curbed at its roots for a sound education system. This research would benefit education sector by allowing students to write examinations from the comfort of their home. The goal of credibility of e-Examinations will have to be achieved at the end of this research study.

Literature Review

Computer-based testing uses information technology for conducting assessments. The aim of these assessments is fair, faster and reliable examinations (Oluwatosin & Samson, 2013). According to Sabbah(2012), much has been said about the "lack of secure and trusted e-

assessment models as the prime reason for failure of e-Learning" . Student Authentication is the key to ensure exams are given by fair means (Alotaibi,2010).

"Traditionally, authentication systems are required to verify a claimed identity only one time at the initial login. However, the Security of online summative assessments goes beyond ensuring that the right student is authenticated at the initial login. More is required to verify the presence of an authenticated student for the duration of the test" (Apampa et al.,2010).

There are various assessment authentication schemes, some of which are currently researched whilst some have been implemented and with others experiments are currently ongoing. (1)Local/Remote Proctored only scheme. (2)Uni-modal biometrics (3)Bimodal biometrics(4) Multimodal authentication (5)Video monitoring ,these present wide scope for research and promises some possible solution for improving security of e-Examinations.

Sabbah(2012) discusses the following types of Impersonation threats

"(1) Type A impersonation, which might occur in two cases, either the proctor could not detect it, or he allowed impersonation by force, sympathy or bribery.

(2) Type B, which occurs when a student passes his security information to another, who uses them to answer the exam on his behalf. Username-password pairs fall in this type.

(3) Type C, which occurs when a student just login to an exam, letting another to continue on his behalf. Non-shareable attributes such as biometrics fall in this type.

(4) Type D, a new threat where a student logins and answer the exam but with an assistant giving him the answers".

According to Sabbah's (2012) model a combination of automatic video matching and continuous bimodal biometric authentication using fingerprint and keystroke dynamics should be used. This ensures that the examinee is the correct person throughout the e-examination without a need for a proctor. A novel blob based presence verification (BlobPV) system which adopts a video blob analysis operation to detect and classify the changes to a student's presence status in the test environment. This helps identify the student that is currently using the system (Apampa et al., 2010) Another biometric solution proposal is to use fingerprints during the examination login and later constant monitoring of the student through the use of a webcam. If any abnormal behavior is found the student is then prevented from writing the exam (Ramim et al., 2009).

A multi model system for authentication of students during examination was discussed in (Asha & Chellappan, 2008). This technology uses a combination of finger prints and mouse dynamics. Finger prints of the student are taken at the beginning of the login. The mouse movements made by the student during the examination period are recorded and later verified for tracking student behavior. According to Fayyoumi & Zarrad (2014), security for an online exam is provided by using face recognition technology to authenticate learners for attending an online exam, the system continuously (with short time intervals), checks learner identity during the whole exam period in order to ensure that the learner who started the exam is the same one who finished. Moreover, this minimise the possibility of cheating by looking at an adjacent PC or reading from an external paper. Another model was based on finger print based biometric system for identification and distributed firewall techniques to monitor candidates and control network packets of all machines incorporating the traditional username and password for authentication (Onyesolu et al., 2013).It was discussed in (Sarrayrih & Ilyas, 2013) to use 360° camera and finger print recognition device for authentication and presence verification. Unauthorized interference of other users in the network is restricted by creating a domain IP addresses, which are different will be prohibited.

Many experiments have been carried out so far and numerous biometric solutions are being researched every year; though newer and better models are evolving to address security challenges facing e-Examinations. There is no fool proof model that guarantees secure cheating free online examination, because of this it is still difficult to trust e-assessment within an e-learning model. This research aims to improve security for e-Examinations by identifying various threats and developing counter measures to mitigate the risks posed by these threats to e-Examinations. A robust e-Examination model is needed and must confirm PIA goals in addition to CIA goals for assuring credibility of e-Examinations.

Research Methodology

This is a mixed methods research where both qualitative and quantitative data were gathered to answer different research questions. Major findings from both strands were subsequently synthesized to inform future action.

The research questions helped the researcher to choose appropriate research styles in order to seek answers that will guide the research in the right direction. [RQ –Research Question]

RQ(1)- Participatory research was used

(1)Visit test centres and interview test coordinators

(2)Administer questionnaire to students, lecturers, technical and distance learning personnel

(3) Interviews with assessment personnel and exam coordinators who volunteering shared their experiences about student's cheating and different threats to e-Examinations.

Once threats were identified, RQ(2) was aimed at building additional security for current online e-Examination models, this was based on constructivist theory to come up with a framework for secure e-Examination models

The outcome of this paper is a theoretical framework and in future the model will be implemented, tested and evaluated for effectiveness. This is a work in progress and quasi experimental approach will be used in subsequent section of research work to implement the model and the intervention will be reviewed using participatory approach. The findings from future stage will be presented as part of subsequent research papers.

Population and Sampling

Population used for this study included

(1)Exam coordinators

(2)Assessment department personnel

(3)Proctors and Invigilators

(4)Students

(5)Test center administrators

(6)Technical and Distance Learning department personnel

Purposeful and Random Sampling was used in selecting appropriate samples for this research. Researcher chose a random sample of cases from above population (probabilistic) that has already been carefully drawn from a purposive sample (non- probabilistic).

Reasoning for purposive sampling

1. To access knowledgeable people(those with experience in e-Examinations)

2. Random sample without purposive sampling could bring up participants who might be ignorant of issue and hence may not be able to comment on matters of interest to researcher
3. Acquire in depth answers to research questions and better outcomes
4. Typical cases well represented through chosen sample

Instruments and Procedures

Instruments included questionnaires, semi structured interviews and visit to test centre. Access to participants was challenging and needed planning ahead. Careful questionnaire design was critical to seek responses that would guide research and hence questionnaire was internally validated for content and construct by 4 knowledgeable colleagues and pilot run prior to distribution to participants. Though most questionnaires were returned yet not all were returned and some were partially completed and hence could not be included in analysis. Interview and observation schedules were planned early in association with willing participants. It was important to adhere to appointment; however researcher was faced with challenges of cancellation of appointments by some interview participants and was later rescheduled to another date.

The future of this research relies in successfully implementing the proposed model, testing and evaluation. Prototype design will make use of UML and Java coding to develop the prototype. Evaluating effectiveness of prototype and feasibility for use in real time will be carried out by administering home based examinations under controlled conditions for a limited number of participants.

Data Analysis, Findings and Discussion

The review of literature has suggested that security is still not achieved in e-Examinations. In order to confirm this, a visit/s was made to a test center where some students were writing online exams. Observation and interview with test administrators in the center helped to gain insight about the probability of cheating, the various cheating practices and security mechanisms installed in the test center to mitigate risks of student cheating in exams. The security mechanisms put in place to ensure security during online accounting exams was quite strong; however, they were complex systems, expensive and requiring trained personnel to use them and regular maintenance.

Following the visit, semi structured interviews were scheduled with assessment personnel this further revealed cheating exists and there was discussion on various cheating techniques that were normally used by students to cheat during examinations. Botho University has a blended and distance learning (BDL) department which facilitates courses being offered online in order to cater for the needs of a diverse population. The cheating violations which were raised by the assessment personnel during interviews were captured, carefully analyzed and included in the questionnaire administered to students, technical, BDL team and lecturers at Botho University.

Questionnaires

It was not easy to come with the questionnaire, lot of thinking was needed, once the draft was ready it was validated for content to confirm indeed it will assist in fetching answers to research question 1, then it was validated for construct to see if it is was carefully designed relevant to population chosen and then for grammatical mistakes. There were a number of valid suggestions passed which were incorporated and questionnaire was pilot run ,again few corrections were needed prior to administering to chosen sample(Final questionnaire is included

in the Appendix). Though researcher was interested in large sample from various institutions, due to time constraints and commitments it was restricted to Botho University, for the future questionnaires there is a plan to administer at other institutions as well to get a broader perspective.

The validated and pilot run questionnaire was distributed to 100 participants chosen from the population. Purposeful and random sampling was used to identify the sample participants, of the distributed questionnaires. 72 questionnaires were returned (several follow ups were required) of which only 60 had all questions answered, 10 returned were partially answered and 2 had several check boxes ticked and hence were treated void and was not included during data analysis. Below is data analysis and findings from 60 questionnaires considered for the purpose.

Data Analysis

Below are the results of the questionnaire Section A, which provides general information about the research participants

ITEM CATEGORIES	**COUNT**
GENDER	
MALE	34
FEMALE	26
AGE	
<25	1
25-35	34
36-45	14
46-55	8
>55	3
INSTITUTION-BOTHO UNIVERSITY	1
OCCUPATION	
LECTURER	54
STUDENT(students were on their semester holidays)	3
TECHNICAL STAFF	1
DISTANCE LEARNING STAFF	2
FAMILIARITY WITH E-LEARNING AND E-EXAMINATIONS	
NOT FAMILIAR	2
MODERATE	12
GOOD	21
VERY GOOD	18
EXCELLENT	7
NUMBER OF E-LEARNING COURSES YOU HAVE ATTENDED	
NEVER	7
ONE	13
TWO	10
THREE	10
ABOVE FIVE	20
NUMBER OF E-LEARNING COURSES YOU HAVE TAUGHT	
NEVER	33
ONE	12
TWO	7
THREE	1
ABOVE FIVE	7
ANY EXPERIENCE IN STUDENTS CHEATING DURING TRADITIONAL OR E-EXAMINATIONS?	
YES	30

NO	30
This question was also enquiring on number of times cheating was caught, not all respondents indicated scores and for those who had mentioned, it was not clear whether this cheating was caught during traditional or e-Examination as no comments was included by some participants, this made it difficult. This has pointed out the need to researcher to revisit questionnaire to see how best this question could be rephrased to get accurate answer.	-
ANY CHANCES FOR CHEATING DURING E-EXAMINATION?	
IMPOSSIBLE	2
MODERATE	12
LOW	6
HIGH	23
VERY HIGH	17
IS THERE A NEED FOR PROVIDING SECURITY FOR CHEATING FREE E-EXAMINATIONS?	
NOT NECESSARY	3
LOW PRIORITY	4
IMPORTANT	20
HIGH PRIORITY	26
URGENT	7

Table 1 General information of participants

There were 34 males and 26 females who responded to the questionnaire, age wise count has been furnished in the above table. As can be seen, most were lecturers by occupation and falling in the age range of 25-35. With regards to their familiarity with e-Learning and e-Examination, 21 scored it good and 18 very good which is quite impressive. There were 40 out of 60 participants who have attended 2 and more e-Learning courses. There were 20 participants who have said they have attended more than 5 courses which is good for a middle income developing country like Botswana. However, not many have taught e-Learning courses except for 27 participants out of 60. 33 have never had the opportunity to teach an e-Learning course. 7 claim they were fortunate to teach more than 5 online courses. The question addressing the participants' experience with cheating students during examinations brought about interesting results of 50:50. A significant number of participants (66.6%) feel there are chances for cheating during e-Examinations and 88.3% see the need for providing improved security during e-Examinations. This questionnaire was very insightful and has clearly confirmed that cheating during e-Examinations exists and there is need for a robust and secure e-Examination model for administering cheating free home based e-Examinations. Literature reviewed, Interviews and visit to test center also was confirming the same to the researcher and was an additional evidence strongly motivating this research.

Section B – Ranking Cheating violations during e-Examinations

The second part of the questionnaire was intended to seek answers to the first research question, which was to identify threats to e-Examinations. Here the participants weighed each of the cheating violations by weighing the risks on a scale of 1-5, where 1 stood for lowest risk and 5 was for serious high risk. The below table presents consolidated findings and helps to identify major threats to e-Examinations.

No	CHEATING ACTION	Risk Rating: Count(n)					Total
		1	2	3	4	5	
1	Impersonation(someone replaces the candidate)	8	7	11	11	23	**60**
2	Someone offers to help with answers(sitting beside or nearer to candidate)	6	5	13	17	19	**60**
3	Notes and other material in possession	2	4	15	16	23	**60**
4	Using search engines eg.Google	8	7	14	15	16	**60**
5	Support using mobile devices(sms,call)	5	13	16	16	10	**60**
6	Paid expert help during exam(FB and other web pages)	10	13	15	14	8	**60**
7	Looking for answers from notes stored on PC or Laptop	8	10	16	15	11	**60**
8	Re-directing webcam	16	17	11	10	6	**60**
9	Looking around or moving head away from webcam	14	12	20	10	4	**60**
10	Projecting questions and seeking help	15	13	13	10	9	**60**
11	Login by another student from different IP address for same exam	17	14	13	7	9	**60**
12	Using Rest room as an excuse	3	9	18	16	14	**60**

Table 2 Risk rating for various identified threats

The highlighted numbers indicates what the risk level is or impact of risk that majority of participants see for each of the listed cheating action. Risks are ranked to identify major threats to e-Examinations which is answer to research question 1. Below table ranks the 12 cheating actions in the order of risk predicated. The main risks are threats: impersonation, use of notes and other materials, and help from others.

No	CHEATING ACTION
1	Impersonation(someone replaces the candidate)
2	Notes and other material in possession
3	Someone offers to help with answers(sitting beside or nearer to candidate)
4	Looking around or moving head away from webcam
5	Using Rest room as an excuse
6	Login by another student from different IP address to continue same exam
7	Re-directing webcam
8	Using search engines eg.Google
9	Support using mobile devices(sms,call)
10	Looking for answers from notes stored on PC or Laptop
11	Paid expert help during exam(FB and other web pages)
12	Projecting questions and seeking help

Table 3 Risk ranking to identify major threats to e-Examinations

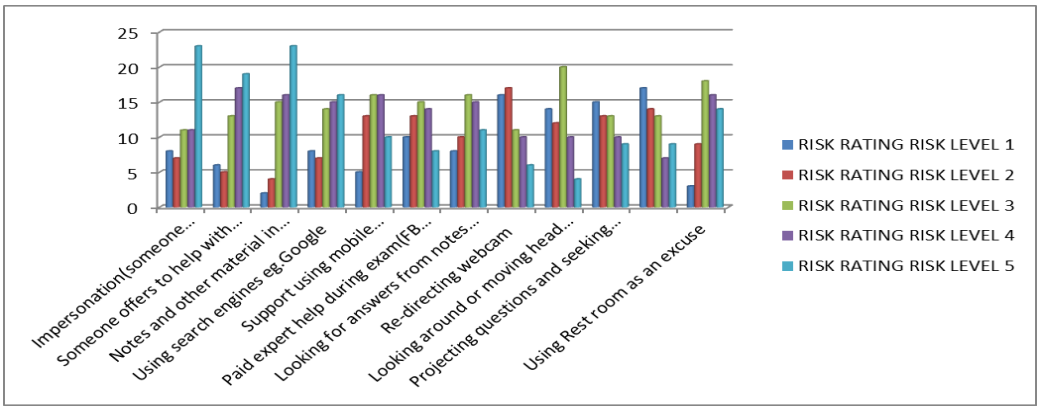

Figure 1 Risk rating by participants to identify major threats to e-Examinations

X axis indicates cheating actions and Y axis number of participants. The blue and violet bars for a cheating action/threat implies a higher the risk of cheating during an e-Examination.

Research question 2 focused on developing counter measures to identified threats and the outcome of this research is a theoretical framework proposed in the next section which will address all of the above listed 12 threats and will provide security for credible e-Examinations meeting security standards. This is work in progress and the proposed model is yet to be developed, pilot run and evaluated for effectiveness of use in real time examinations.

Proposed e-Examination Model

Education is transforming quickly and no doubt there are more and more adult learners who are juggling between commitments but who still want to pursue higher education for professional growth, knowledge and other reasons. Online and distance learning is prospering as a result of the demand from these learners but at the same time diminishing as security standards for e-Examinations are not yet fully achieved. There are numerous threats that have been discussed in previous sections and these are challenging online education.

Research question 1 helped in finding the various threats to online examination and Research question 2 assisted in finding counter measures for each of the identified threats. All threats regardless of major or minor needs to be paid attention as even small loophole can break the trust stakeholders have on e-Learning and e-Examinations.

No	CHEATING ACTION	COUNTER MEASURE
1	Impersonation(someone replaces the candidate)	Multifactor Authentication (Photo verification, Finger Print Authentication and challenge questions)
2	Notes and other material in possession	Video Monitoring
3	Someone offers to help with answers(sitting beside or nearer to candidate)	Video Monitoring
4	Looking around or moving head away from webcam	Video Monitoring
5	Using Rest room as an excuse	Jumbled questions released one at a time
6	Login by another student from different IP address to continue same exam	Domain login allowing one IP address per student
7	Re-directing webcam	Video Monitoring
8	Using search engines eg.Google	Blocking all ports and Browser except for exam window
9	Support using mobile devices(sms,call)	Video Monitoring
10	Looking for answers from notes stored on PC or Laptop	Laptop is locked and allows access only to examination window
11	Paid expert help during exam(FB and other web pages)	Blocking all ports and Browser except for exam window
12	Projecting questions and seeking help	Blocking all ports

Table 4 Countermeasures for each cheating action posed as a threat

Having identified the counter measures to various threats, a theoretical framework has been proposed in this paper. The aim of developing this framework was to minimize and if possible eliminate cheating completely during e-Examinations. This proposed theoretical risk driven model uses Multifactor authentication: Login-Password, Finger print, Challenge questions and believes in use of video monitoring, blocking of ports , restricted IP addresses to provide adequate security during e-Examinations. The activity flow of the proposed model is

shown below and indicates the steps a student needs to go through prior to successfully starting the examination.

Identification, Authentication and Presence verification are extremely important to assure right candidate is writing the entire exam. The proposed work ensures both PIA and CIA goals are met in developing a secure and robust e-Examination model.

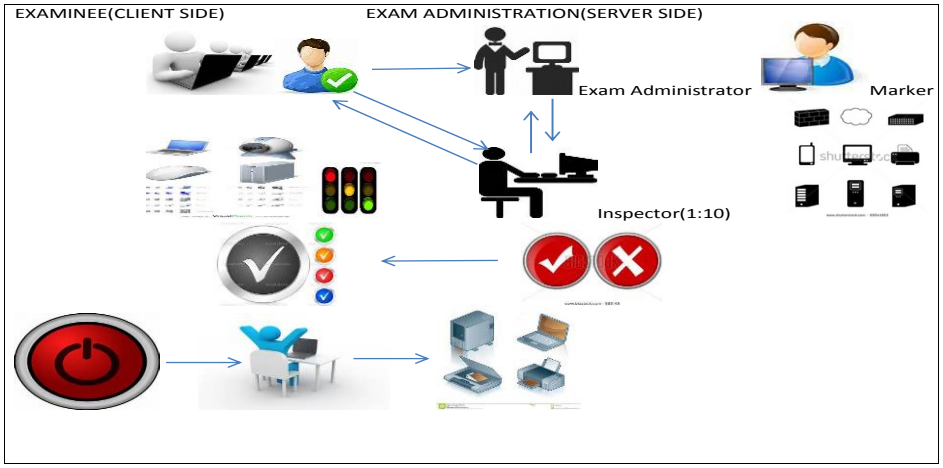

Figure 2 Proposed e- Examination Framework

The online examination in the proposed model is based on client server architecture where students are expected to connect to examination server controlled by the exam administrator. He/ She verifies Inspectors (also called proctors or Invigilators) and grants them permission to access the media server through which student exams will be relied to these inspectors for monitoring purposes.

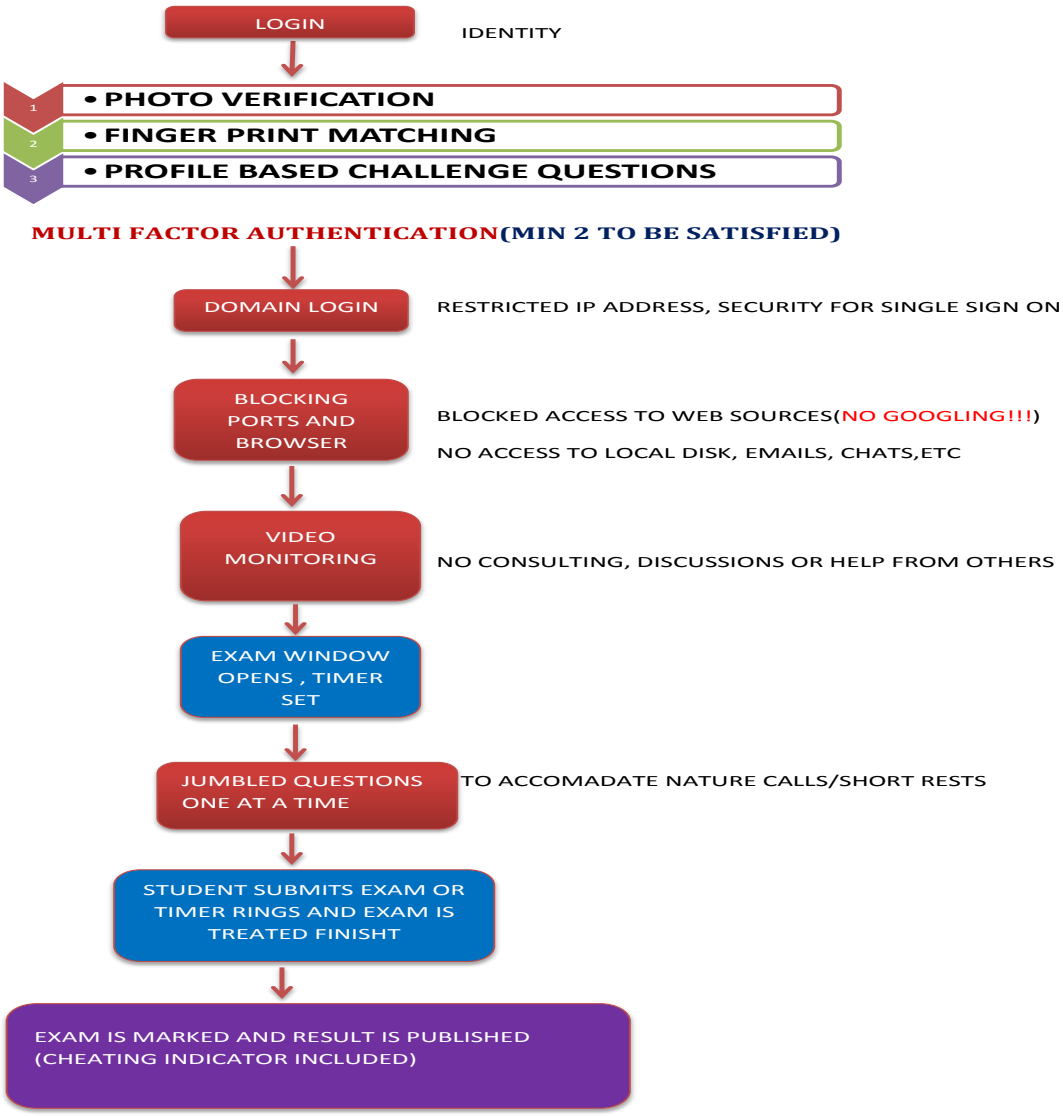

Figure 3 Activity flow for the proposed model

Students connect to the server by entering a username password for identification. Upon successful login, the webcam is turned on and photo verification takes place followed by a finger print which is captured using special device called finger print mouse and matched against a database. Once completed, each student will be asked some challengeing questions for further verification. Finally a traffic signal indicates red-most/all incorrect answers, green-allowed to proceed and yellow-few questions alone answered.

If two of the authentication mechanisms is successfully cleared then the student is granted permission by the inspector to enter the domain using inspector password where only students from valid IP addresses will be granted access to exam server. Upon entering the exam domain, all ports in the laptop and browser are de-activated so the student can only see their examination window. Moreover, students will not be able to google nor access materials stored on the laptop.

During the exam, video monitoring is started and a timer ticks which signals the student to begin exam. Jumbled questions are displayed one at a time. Should a student need to use the rest room he is expected to use a tool that indicates this to the inspector. After submitting the current answer, the student is allowed to use the rest room, while the timer continues to tick. The student is required to return in a defined period of time. When the student returns, he presses the tool again and is now allowed to proceed to the next question. The student will not be able to navigate back. In addition, there is no possibility for a student to know the next questions when leaving to rest room as the questions are randomly jumbled and pop up on the screen one at a time. At the end, the student either submits the completed exam, or a timer rings and the exam is finished.

The exam is automatically marked where possible, or else it is sent to a marker. The cheating indicator is used during marking to award appropriate marks to student where it could range from reducing few marks to zero marks turning exam void if student attempted seriously to cheating in exam. Thus the above is a very secure e-Examination model which will provide for a brighter and prosperous e-Learning medium to our future students.

Conclusion and Future Direction

E-learning is growing like wildfire mainly because many institutions are becoming interested in e-Examinations. As a critical component in assessing student's knowledge and skill, there is clearly a need to provide adequate security for e-Examinations. It is important that regardless of whether examinations are traditional or online and be it written in a quality assured test center or home, it is important to ensure examination standards are being met.

The researcher in this paper has proposed a secure theoretical framework for administering cheat-free home based e-Examinations. Implementing this model can assist students with writing their examinations from home while institutions are assured of exam credibility. This research is primarily focused on strengthening student authentication as a means to secure e-Examinations and could be extended in future to dimensions of improving security for our online examination servers in order to secure exam question papers, biometric images used for student authentication, untampered results/grades, web security, etc.,

Academic dishonesty needs be curbed at its roots, and as educators, we need to assure only students with necessary knowledge and skills graduate so that they are able to find employment or create new businesses. As such, this is an important way through which a nation can flourish from quality education.

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Commodity Forward and Futures Contract: An Innovation in Islamic Derivatives

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Abstract

This paper attempts to analyze the innovation in Islamic forward and futures contracts of crude palm oil in Malaysia. Commodity forward and futures contracts are the most common types of derivative instruments, whose value depends on the value of the underlying assets, namely commodities. The emergence of forward and futures contracts resulted from the advancement of financial engineering that is based on conventional finance. Therefore, this study is significant in order to identify the extent to which conventional commodity forward and futures contracts meet the principles outlined by the *shari'ah* in the discipline of Islamic finance. Initially, this study analyzes the *shari'ah* issues in commodity forward and futures crude palm oil and subsequently, it proposes a set of potential *shari'ah* principles in the contracts. This study uses a thematic analysis approach in analyzing the data obtained from secondary sources and interviews with several selected respondents who are involved in this industry. The result has shown that the contract raised several *shari'ah* issues such as *gharar*, speculation and gambling. Finally, this study recommends the application of the principle of *wa'd* and *bay al-murabahah/musawamah* as an innovation in *shari'ah* compliant commodity forward and futures contracts.

Key Words: derivatives, forward, futures, *wa'd*.

Introduction

Futures and forward contracts are the most common types of derivatives. Derivatives are generally used as instruments to hedge risk, but can also be used for speculative purposes. Forward and futures contracts are the production of financial innovation resulting from the increasing need of a business world that is becoming more complex and challenging. This contract is used in conventional finance for the purpose of hedging and speculation. Crude palm oil is generally traded in the forward and futures market in addition to the cash market. In order to avoid the risk of changes in crude palm oil prices and the risk of supply shortages, forward and futures markets are the best alternatives to the cash market. The objective of hedging is permissible in Islam, so the way to achieve the objective of the hedge has been refined so that the use of forward and futures contracts is not open for speculators to dominate the market by gambling on prices. On the other hand, the conventional commodity futures and forward contract has been rejected by some Muslim scholars due to some prohibited elements such as uncertainty *(gharar)*, speculation and gambling. However, due to the need for risk management tools, the use of commodity futures and forward contracts should be accepted with some modifications by applying *shari'ah* principles. Islamic financial institutions are facing the same risk and challenges as conventional ones. Hence, Islam, as not only a religion but a way of life that emphasizes moderation, justice and fairness, plays a significant role in providing a set of principles and guidelines for risk management. Thus, it is capable of managing the balance between risks and desires of profit making, so that the profits obtained are commensurate with the risks incurred.

This article is organised into five phases. In the introductory section, the importance of commodity futures and forward for hedging purposes in Islamic finance is highlighted. The second phase briefly explains the methodology used in this study, while in the third phase, the *shari'ah* perspectives on conventional forward and futures are elucidated. The fourth phase analyzes the innovation in forward and futures contract based on *shari'ah* principles, and the final one provides some concluding remarks.

Methodology

This study employs a qualitative approach based on primary and secondary sources through the method of document analysis and interviews. The interview was carried out to understand the real *modus operandi* and *shari'ah* issues in the forward and futures contract. The key persons interviewed comprise of an expert in Islamic jurisprudence, a *shari'ah* advisor and practitioner in crude palm oil industry. They are Ahmad Suhaimi Yahya (Head of *Shari'ah*, Kuwait Finance House (Malaysia) Berhad), Aznan Hassan (Advisor of Malaysian Exchange, Malaysian Exchange) and Mazlan Yahya (Head of Operation and Risk Management, Malaysian Exchange).

Shari'ah Perspectives on Conventional Forward and Futures

A forward contract is an agreement of purchasing or selling a commodity at a certain future time for a certain price. A forward contract, therefore, simply amounts to setting a price today for a trade that will occur in the future. The details related to the price such as goods specification, price, quantity and underlying quality of asset are determined. In this matter, the

agreed price could not be changed regardless of whatever circumstances happening to the price when the transaction has taken place.

A futures contract is a standardized contract between two parties to purchase or sell a specified commodity of standardized quantity and quality for a price agreed upon today (the *futures price* or strike price) with delivery and payment occurring at a specified future date, the *delivery date*. The contract is negotiated at a futures exchange, which acts as an intermediary between the two parties. Some scholars have rejected the idea of forward and futures contracts due to the *shari'ah* issues in these contracts (al-Saati, 2003). Amongst the *shari'ah* issues are *gharar* (uncertainty) and gambling that will be explained further.

Gharar (uncertainty)

There are various definitions of *gharar* given by a majority of Muslim scholars. This is triumphed by the difference in opinions of many previous scholars in defining *gharar*. This difference in definitions is also manifested by present scholars. The consequence of this requires the determination of the status of the contract, since not all contracts containing the element of *gharar* are nullified. Based on scholars' opinions, it can be concluded that *gharar* is an element of uncertainty of a contract giving effect to the parties involved. The presence of uncertainty can be fraudulent to the outcome of a contract. This element of uncertainty may well be exploited by one party to cheat the other by the mere reason that the contract is mutual and has been initially agreed upon. As such, it is thus clear on the wisdom of prohibition of *gharar* that is to protect the rights of the contracting parties and to ensure that the objective of a contract is achieved (Nadhirah, 2014). Analysis will be done on the issue of *gharar* element in forward and futures contracts. The analysis will be divided into nonexistence (*bay ma'dum*) and delay in delivery of goods and deferment in payment (*ta'jil al-badalayn*). The issue of *bay' ma'dum* occurs when the subject of the contract, which is the crude palm oil, does not exist at the time of contract. The issue of delivery of goods and payment (*ta'jil badalayn*) occurs when the price and goods will be paid or delivered in the future (Abdul Kader, 2005; Khan, 1995; Ahmad Rayyan, 2003).

The issue is mainly for commodity underlying assets, which requires for the goods to be delivered upon the signing of a contract. One overriding rule to be fulfilled in a buy and sell contract is that the goods or item must exist or be seen by the contracting parties, or if it is not visible, it must be indicated in detail in terms of quality, quantity and price. An example of *bay' ma'dum* found in the hadith is in the contract of fruit whilst the buddings have not yet appeared on the trees. Almost all scholars are collective in their agreements on the invalidity of such a transaction. In forward and futures contracts, the requirement to validate a contract is only the detailed specification of goods such as quantity, size and weight, without having the need for the goods to be present and visible at the time of signing of a contract. Therefore, some scholars classify forward and futures contracts similar to *bay' ma'dum*, which is forbidden in Islam as the contract may cause conflicts and expose losses to the buyer due to the non-availability of goods.

Forward and futures contracts involve deferment of payment and delay in the delivery of goods (*ta'jil al-badalayn*). Delay and deferment associated with the issue of *gharar* is the uncertainty of payment receipt and acceptance of goods delivered. Contracting parties are also unsure of whether the contracts will be carried out. This may lead to disputes between them. Furthermore, looking at the *gharar* definition stated by the scholars, most relate to the delivery failure of goods and the uncertain outcome of a contract.

Nevertheless, there is a minimum level of *gharar* in futures contracts regarding *bay'ma'dum* and *ta'jil badalayn* issues. The element of *gharar* in the contract is reduced by the presence of a clearing house, which regulates the contract in terms of delivery. The presence of a clearing house in the futures market is to assure that contracting parties comply with the terms of the contract. In fact, there are mechanisms used by the clearing house to avoid default such as margin payments. Therefore, the element of *gharar* does not dominate futures contracts.

Gambling

Gambling issue occurs when there is no real trading activity occurring in futures contract. It involves paper trading, where those who wish to hedge simply wish to lock in the price, while speculators and arbitragers intend to generate a profit from the difference in the sale and purchase price. In Malaysia, physical delivery in futures contracts is less than 3%. It is contrary to the purpose of the contract (*muqtada*), which is to receive and deliver the goods (Ahmad Suhaimi, 2011; Aznan, 2011). Aznan (2011) argued that this contract may lead to harm, compared to the benefits that can be derived from it. Although futures contracts can be used as a hedging tool, it should be independent of the elements of betting. Elements of betting, involving a zero sum game, occur when the contracting parties are only interested in price changes when closing the contract before maturity (close out) and a margin calculation based on the market price (mark to market) (Chapra, 1988; Khan, 1988; Obaidullah, 2001; Usmani, 1999). In this process, the contract price will be matched with the current price to calculate any margin in the trading accounts in order to determine whether the contracting parties generate a profit or loss (Durbin, 2006). Therefore, the elements comprised in futures contracts are in conflict with the objectives of *shari'ah*.

The primary purpose of a futures contract is to provide an efficient and effective mechanism for the management of price risks. However, it is also accompanied by speculators and the arbitrage to earn profit (M. Fazilah, 2006). Mechanisms in futures contracts not only allow hedging activities, but also allow contracting parties to earn profits from speculation and arbitrage. Most scholars argue that there are elements of speculation in futures contracts when there is no intention to engage in physical delivery. Sellers do not have the assets and the buyer is only paying for the margin. Both parties are only interested in price changes when closing the contract before maturity (close out). This reveals that market participation by speculators is solely to obtain a profitable gain from the price difference. The number of commercial trades in derivative contracts that are in excess of the actual value in the cash market support this opinion (Nevi Danila & Jeffers 2009; Wafica Ghoul, 2008).

There are also mechanisms in futures contracts that allow close out activities, where contracting parties can close out the contract by changing the position from long to short and vice versa. Therefore, the contract is not limited to transactions in the primary market only, but it is also traded on the secondary market. However, if the contracting parties did not close the contract before maturity and crude palm oil or palm oil is received, the transaction is only in the primary market. Nevertheless, the primary market or physical delivery only occurs less than 3% in Bursa Malaysia (Mazlan, 2012). It shows that the activities that occur in secondary market transactions dominate futures contracts.

The practices in futures contracts are not in line with Islamic law and mechanisms, such as mark to market and close out. It allows more opportunity for speculators to make profits and has diverted from its original purpose. Thus, futures contracts are not in line with Islamic law because the mechanisms that exist in this contract will lead to conflict from the *shari'ah* law.

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Innovation in Forward and Futures Contract

Islamic Forward Contract

Since the concept of risk management and its importance is recognized in Islam, the instruments and measures to achieve it are encouraged as long as they are within the legal scope that is permissible by the *shari'ah* (Azlin Alisa & Mustafa 'Afifi, 2014). Therefore, an innovation in forward and futures contract as an alternative method of hedging need to be recommended. The principle of *wa'd* is one of the most relevant and suitable method to be adopted due to its flexibility and easy application in forward and futures contract.

The Islamic commodity forward based on the *wa'd* structure involves a unilateral promise involving two parties, where the first party promises with the counter-party to buy/sell commodity for settlement on a forward value date at the rate and amount agreed today. The party who makes the promise is obliged to honor the contract, however the other party is not obliged to do the same.

Under *wa'd* structure, only one party promises to buy or sell as the case may be wherein he is bound by that promise. The other party is not bound by that promise, however has to proceed with the promise undertaken by the promissory. Since *wa'd mulzim* from only one party is not deemed under Islamic law as a contract, this can facilitate Islamic commodity forward contract. The concept is illustrated in the diagram below:

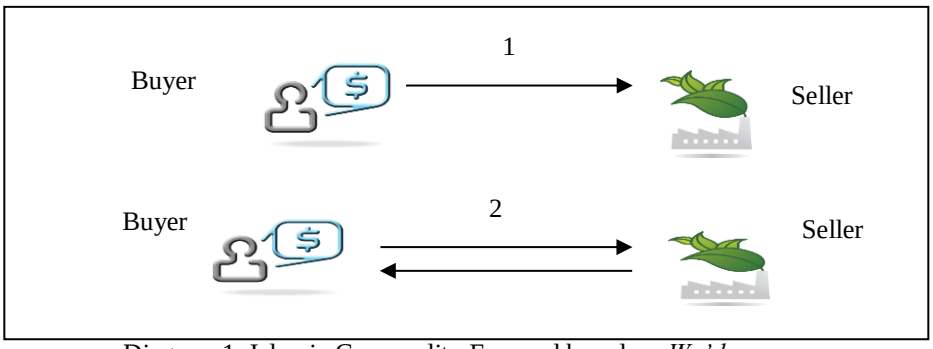

Diagram 1: Islamic Commodity Forward based on *Wa'd*

The discussion based on Diagram 1 is as follows:

1. On 1st January 2015, the buyer promises (*wa'd*) the seller to purchase crude palm oil a total of 5,000 tons at RM3, 200.00 per ton on 1st June 2015.
2. On 1st June 2015, the sale and purchase of the contract between the two parties take place. The buyer pays the seller and the seller delivers crude palm oil as promised on 1st January 2015. The seller would sell to the buyer as promised without taking into consideration the price of crude palm oil in the cash market at the time. Based upon this, on 1st January 2015, no contract was signed between the two parties. In fact, it is just a promise to make a sale and purchase contract in the future. The actual trading of commodity takes place on 1st June 2015 when the contracting parties agreed to make a payment and delivery of the commodity.

Islamic Futures contract

Shari'ah principles that are applicable in the futures contract are *wa'd* followed by *bay 'al-murabahah/musawamah. Wa'd* principles or promises are used at the beginning of the

contract. *Wa'd* serves to lock the price of crude palm oil at a certain price in the future. As a futures contract, the buyer will give *wa'd* to buy crude palm oil from a seller in the future at a price agreed upon when the promise was made.

The difference between futures contract with a forward one is that there is a clearing house that will regulate the contract between the seller and the buyer. The clearing house also acts as a guarantor of the contract and this function is not contrary to *shari'ah* principles as in *kafalah*. As a guarantor for all registered contracts, the clearing house will ensure the delivery and payment by the contracting parties. In conventional futures contract, margin payments act as a security or guarantee from a breach by the contracting parties. Every day after the end of the trading session, the clearing house will carry out a daily settlement (daily settlement) and the margin will be adjusted according to the market price or market to market. In this process, the contract price will be matched with the current price to calculate the margin status of the account, either profit or loss.

Islamic futures contracts are structured using *wa'd*, therefore, there are no margin payments that act as a security or guarantee. Calculations based on mark to market are eliminated in *shari'ah*-compliant futures contracts. When none of these calculations, the speculators are not going into futures contracts to gain profit from price adjustments based on the mark to market. In fact, the results are in line with the opinion of scholars, stating that these calculations can lead to gambling when generating profits and losses that are not expected by the contracting parties. The close-out element, the contracting parties can cover their open positions by offsetting before or on the due date in futures contracts. This is because the contract is built on *tabarru* contract ', and the promise that binds only promise to perform the contract in the future. Thus, the close-out element is not applicable in this contract because there is no position to be closed or changed position.

An Islamic futures contract can only be strictly used for hedging. Therefore, this study found that the elements leading to speculation of gambling should be removed, although there is the view that speculators play a role in providing liquidity in the futures contract. On the date the contract will be performed, the contracting parties have the option to receive crude palm oil or make a cash settlement (set off). Cash settlement mechanism does not violate *shari'ah* principles, taking into account that the contracting parties or the hedges that do not require the crude palm oil, but only to hedge by locking a certain price. Cash settlement can occur by using the same value of the commodity, in which the seller pays the buyer the price agreed in the agreement before. This concept is illustrated in Diagram 2 below:

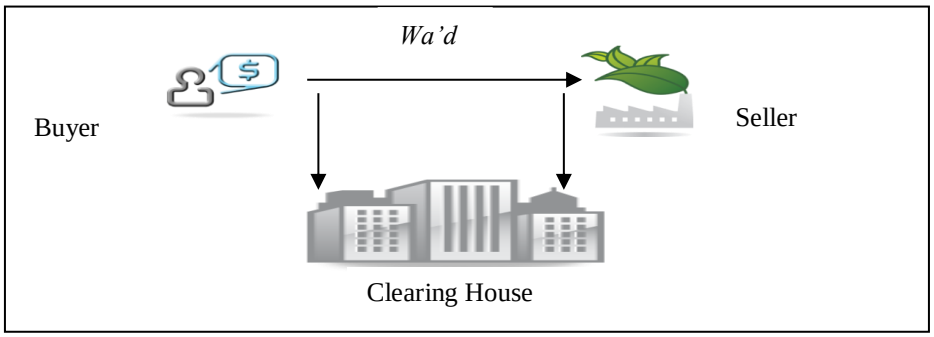

Diagram 2: Islamic Commodity Futures based on *Wa'd*

The discussion based on Diagram 2 is as follows:

1. On 1st January 2015, the buyer promises (*wa'd*) the seller to buy 5000 tons at RM3, 200.00 per ton on 1st June 2015. Clearing house acts as a regulator of the futures contract and the guarantor of both contracting parties.

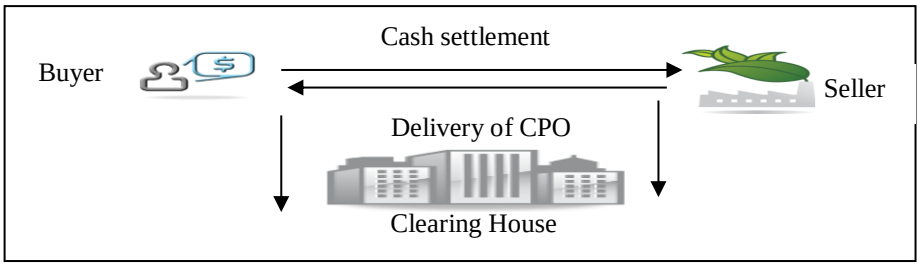

Diagram 2: Islamic Commodity Futures based on *bay' al-murabahah/musawamah*

2. On 1st June 2015, the sale and purchase (*bay 'al-murabahah/musawamah)* of the contract between the two parties take place. However, the contracting parties may choose to receive and deliver crude palm oil or opt for a cash settlement. If they choose cash settlement, there is no physical delivery and the seller has to pay the difference between the price agreed when the contract agreement was made with the current price.

Conclusion

Forward and futures contracts, which are commonly practiced in conventional financial institution, are against *shari'ah* principles due to prohibition of *gharar* and gambling, thus *wa'd* structure can be used as an alternative to Islamic Finance industry to offer *shari'ah* compliant hedging products. The discussion on the application of *wa'd* and *bay 'al murabahah/musawamah* shows that the principles can become a viable principle for Islamic hedging in facilitating Islamic financial institutions to manage their business risk effectively.

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Re-Thinking Language and Culture in Education for Thai Schools: Case Studies of Myanmar Migrant Students in Public Schools in Thailand

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Abstract

The study aims to explore an approach for Thai schools to promote linguistic and cultural diversity as an educational resource in the community for both Thai mainstream students and ethnic minority students. Ethnographic investigation is used to examine teaching and learning in Thai schools including two schools with a mainstream student concentration and a school with Myanmar ethnic student concentration.

Results indicate that linguistic and cultural diversities are not promoted in Thai schools. The public schools still emphasize the mainstream value of Thai-only medium and high status of English as a foreign language. However, ethnic minority languages in the community are not much valued. The public schools do not recognize that ethnic minority languages and culture in their communities are an educational resource for both groups of students. The ethnic students are not encouraged to speak their native language in Thai schools. In addition, the insufficient knowledge in bilingual practice and the lack of bilingual resource contribute to a monolingual education. Several issues found in this ethnographic research are underrepresented in previous bilingual research.

In conclusion, the findings indicate that a language policy for education in terms of a medium of instruction needs to be reconsidered to promote linguistic and cultural diversity of the ASEAN community. More importantly, to promote an understanding of cultural diversity, regional understanding and working in harmony in the region, language education should be redesigned to emphasize the aspect of multilingual competence.

Key Words: Language and culture in education, Myanmar migrant students, Public schools in Thailand

Introduction

Language and culture in education need to be taken into consideration when student populations speak a first language that differs from the school language. Linguistic barriers can reduce their chances of studying in schools or comprehending class instruction through second language medium. Most public schools in Thailand allow only the national language as a medium of instruction for all students in order to promote national identity. However, in the age of globalization and ASEAN becoming one community, it is necessary to re-think language and culture in education in Thai public schools. Linguistic and cultural environment in schools are expected to suppor the learning of all student populations including not only Thai mainstream students , but also non-Thai and students of various ethnic backgrounds .

Literature Review

Language Policy

Language policy is a means to promote national identities in many countries including Thailand. A language policy that only values the national language while devaluing minority languages, does not promote linguistic and cultural diversities. Thailand has almost 80 minority languages spoken in the country, but Thai (Standard Thai) is the only language accepted as an official national language (Rappa & Wee, 2006). The Thai national language policy has had a significant impact on the existence of minority languages and ethnic languages in the country.

National language policy in Thailand has long been used to strengthen Thai national identity. In addition, the policy results in assimilating other languages and cultures which have been practiced until now. Therefore, regional languages and minority languages other than Standard Thai are not allowed to be used as a medium of instruction in all educational levels in Thai public schools. The loss of language and cultural identity has occurred in some minority and ethnic groups due to this assimilation policy. When mother languages are not allowed to be spoken in schools, it can be expected that younger generations of some minorities become Thai monolingual speakers who are unable to speak the language of their parents.

Language in Education

Language of instruction in schools has significant effects on academic achievement, especially for ethnic minority students whose mother language (first language) is different from the language used at school for instruction. A language policy that prohibits other minority languages for the medium of instruction in public schools has shown to negatively impact literacy development among linguistic minorities in Thailand. Ethnography of education in immigrant children shows that these children encounter many more learning difficulties than the children of mainstream society because of the language barrier and insufficient academic background (Vidali & Adams, 2006).

School language proficiency and learning experiences are critical for learning achievement. However, immigrant children often lack academic experience in schools at their primary years and are unable to read or write in their mother languages which effects high order of thinking skills and literacy in school language (Adams & Shambleau, 2006). The fact that close to 80 minority languages are spoken in Thailand and half of the Thai school population in Thai schools are not native Thai speakers means the students of ethnic minorities have to study at school through a second language medium.

Kosonen (2008) and Smalley (1994) found that the low proficiency in second language or school language among ethnic minority students tend to cause the significant problems in their

education. According to the researchers, many linguistic minority students have difficulty in understanding instructions in Thai as early as their primary school years. This comprehension problem results in low academic achievement, grade repetition, and dropping out from schools. The survey of ethnic minorities in remote areas in Thailand in 2006 shows that these children have low proficiency in Thai and do not comprehend the class instruction in Thai as much as native-Thai students do (Sitragool, Petcharungsa, & Chouenon, 2009). Consistent with the survey findings, the Office of Basic Education of Thailand investigated schools along the country's borders and found that students and teachers speak different languages and the teachers' instruction are incomprehensible for the students (Sitragool et. al, 2009).

Literacy development in first language and school language are important for academic success. However educators who lack awareness of learner diversities and the importance of first languages do not promote literacy in Thai or in mother languages for these students. The annual standardized tests conducted by national testing institutions show that the students have low achievement in both literacy and content subjects. This suggests that language in education should be taken in to consideration. According to Kosonen and Young (2009), mother tongue-based education is one approach for linguistic minority children. However, this language education is still a new concept for schools in South East Asia.

Immigration and immigrant children education

Thailand has seen a high influx of immigrant workers from ASEAN countries, especially Myanmar, Cambodia, and Laos to meet the critical labor shortage in certain industries in the country. Immigrant workers and their families are becoming a new population which is increasing rapidly in Thailand. Adams and Kirowa (2006) point out that more than half of the immigrants are children. These researchers suggest that educators working with immigrant children should be made aware of their difficulties living in a new society. As immigrant children are becoming a new population in Thai schools, educators may face new challenges; more over the education system needs to be adjusted.

Diversity in languages and cultures, plus these school population changes raise the question of language in education policy, and the potential to promote multicultural and multilingual education to best suit Thailand and ASEAN countries. For a qualified education process to take place, it is necessary that schools, teachers, and school personnel become more flexible. More importantly, there is a need for critical change in the teacher's curriculum. This change is important if teachers are expected to provide teaching service with knowledge, skills, attitude, and a belief that all children deserve and have right to education with quality.

Myanmar children education in Thailand

The number of Myanmar children population in Thailand is unidentified due to the undocumented immigrant children. This causes the problem of educational management for this group of children. Education is one means for developing immigrant children so that they have knowledge and healthy life skills (Vungsiriphisal, 2010). In 1992, the Ministry of Education allowed immigrant children to study in Thai schools but at that time there were only 20 Myanmar children in Thai schools (Muangmee, 2005). It is estimated that less than 10 percent of registered immigrant children study in Thai schools (Vungsiriphisal, 2010).

This number is consistent with ethnography research conducted by Phonlabutra (2011) concerning Myanmar children education in Phetchaburi province. The researcher found that less than 10 percent of the children registered in small public schools. Although some immigrant

children in Samut Sakhon province, a region with the largest population of Myanmar workers in Thailand, are able to be educated from non-formal education, religious institutions, the number of immigrant student is relatively low compared to Myanmar children population in Thailand (Amaraphibal & Worasaen, 2010).

The study

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Rationale of the study

ASEAN countries will officially become one community in December 2015. It is necessary for Thailand to prepare schools and school personnel to provide a culturally and linguistically responsive teaching and learning environment for a diverse student population. This is a pioneer study aimed at re-thinking language and culture in education in Thai schools for ethnic minority and immigrant students.

Objectives

1) To explore learning and teaching in Thai public schools including a school with a predominately Thai population and a school with a predominately ethnic student population in the Samut Sakhon province

2) To find an approach for Thai public schools to promote multicultural and multilingual environment for teaching and learning

Method

This study is qualitative. Data collection is conducted through observations in schools and classrooms, in-depth interviews, and documents and student works collection.

Research context

Samut Sakhon has the highest population of Myanmar migrant workers. The province's main product is seafood. There are many frozen seafood export companies in this province. The industries have been watched by international organizations that are concerned with the quality of the laborers' life and child labor. To protect the industries' reputation, some companies help promote the education for immigrant children. The research schools are located in Mon ethnic communities (ethnic minorities from Myanmar). Both schools were former Buddhist temple schools and are located in temple compounds.

The participants

Participants for this study were selected from reliable sources and on voluntary basis. The informants include the following groups.

1) School administrators
2) School teachers
3) Immigrant students
4) NGO staff

Data collection and data analysis

This study collects data from a Thai majority school and an ethnic majority school in Samut Sakhon. The analysis method for the study is content analysis. The data for the analysis is documents, interviews, field notes, official record, students' essay, and other relevant material. The data analysis leads to the following themes and sub themes.

Findings

Education Policy

Child Right to Basic Education

Despite the government's guarantee that all children receive basic education at no cost, the number of immigrant children registered in public schools is remarkably small, which may be due to a lack of family readiness to send their children to Thai school (Samut Sakhon Primary Educational Service Area Office 1, 2014)

According to the Ministry of Education, there were 260,000 immigrant children in Thailand in 2010. However, this number is inconsistent with the Non-Governmental Organization (NGO) estimation around 200,000 – 400,000. Moreover number of children who enter public schools in Thailand is just about 20-40 percent (Samut Sakhon Primary Educational Service Area Office 1, 2014 **)**. A researcher team from Dhurakij Pundit University investigated the number of immigrant children in Samut Sakhon province and found that the children age 5-15 are 9,689. However, only 1,500 of them were registered in public schools which, represent 15 percent of the children population who are attending a school (Samut Sakhon Primary Educational Service Area Office 1, 2014**)**

Educational personnel's understanding of the policy

Although children rights to basic education are guaranteed by the National Educational Act, the number of immigrant children registered in public schools is remarkably small comparing to the actual child population. It is necessary that school personnel understand the policy and the practice because it affects the access to study in schools of this group of children. The following aspects influence the chance to register immigrant students in public schools.

1) Immigration law and registering in school

Most immigrant children (non-Thai children) do not have official documents such as certificate of residence registration which is necessary for registering in public schools. Some school personnel falsely believe that by registering non-Thai children without official documents is an illegal action against immigration law; therefore, they are likely to refuse to register these children (Samut Sakhon Primary Educational Service Area Office 1, 2014). In fact, registering non-Thai children, making students record and their academic report, and providing education for them are rightful action which is not against immigration law.

2) Official documents for school registering

In fact, the Ministry of Education allows flexibility in regulations for schools to register non-Thai children, so that the children can have access to school education. Many immigrant children do not have a birth certificate, certificate of residence registration, academic records from previous school, or even parent identification documents. Most Thai schools including schools in Samut Sakhon refuse to register immigrant children without official documents in accordance to this regulation. However, to enhance the opportunity for immigrant children to attend, the Ministry of Education has informed schools that they can get such documents by filling the necessary information in the form provided by the Ministry. The information about the child can be asked from the third party who knows the child (NGO staff or adults who take the

child to the school). Schools in Samut Sakhon that register many Myanmar students follow these flexible regulations.

3) Budget and support from the Ministry of Education

Some school personnel, responsible for student enrollment, are not aware that once a child is registered, Thai or non-Thai, school receives budget for each child includes school supplies, uniforms, school lunch, milk, snack, etc. However, some communities have more immigrant children population than such schools resources are able to accommodate. These schools require extra support from the Ministry of Education otherwise they will keep refusing to register immigrant students. The two schools in this study were very effective in registering the immigrant children into their school system because they have received extra support from their communities and industries in the communities.

4) Teachers, curriculum, and teaching

Typical Thai public schools lack teachers who have experience in teaching non-Thai students who lack Thai language skills. Even though the two schools in this study are successful in promoting education for immigrant children, they insist on accepting only those children who can communicate in Thai. This means that many immigrant children in Samut Sakhon are left behind. The Thai majority school that gets extra support from business sector has preparation class for immigrant students who do not speak Thai. They have to show development in communicative skills and literacy skills before they are admitted into regular classes. At present Thai schools in Samut Sakhon do not have teachers or curriculum to respond to culturally and linguistically different students.

The continuity of implementation

In order to promote education for immigrant students in public school effectively, just the policy is not enough. Schools need practical guidelines and continuous support for implementation. The ethnic majority school was selected as the first school in Samut Sakhon to register non-Thai students. According to Samut Sakhon Primary Educational Service Area Office 1, the school has implemented Mother tongue-based approach for non-Thai students since the beginning of the policy. However, the school does not practice this approach any more.

School context

The research schools including an ethnic majority school and a Thai majority school are both located in Mon ethnic communities in Samut Sakhon. The Mon ethnic populations in these communities are minorities who migrated from Myanmar many decades ago. This section illustrates how language and culture in education is represented in these schools. The following are the subthemes.

Ethnic majority school

Ethnic majority (Em) school provides both pre-school education and primary education. Each level has 48 and 223 students respectively and 14 teachers. According to the school size standard in Thailand, EM is a small size school. The school locates in Mon ethnic temple's compound. This Buddhist temple was founded by Mon ethnic abbot. Since the government has affirmed child right to basic education, this school was selected as the first school in the province to provide education for non-Thai students.

1) School population change

In the past, EM had more Thai students than non-Thai students. However, because the transportation has been developed very fast recently, most Thai families send their children to study in the city where there are more famous schools. Therefore the school population has changed from a Thai majority school to an ethnic majority school. The ethnic students include Mon, Myanmar, Laotians, Cambodians, and Karens but the highest majority is Mon ethnic.

2) Linguistic and cultural environment in Thai schools

Although more than 90 percent of the students of EM are non-Thai students, mostly Myanmar and Mon, the school environment does not represent language and culture of the students. There are only one welcome board in Myanmar and a small piece of wood written in color campaigning for cleaning teeth and hands. All of the school information in the school campus is written in Thai. This primary school is annually evaluated its quality assurance according to the criteria set by the Ministry of Education. According to the criteria, each school has to choose its own identity and uniqueness that suit its local context.

EM claimed its identity as a school of ethnic costume and language conservation. Students are encouraged to ware their ethnic costumes, instead of the school uniforms on every Tuesday. Therefore, there would be no cultural representation of students' identity for another four school days. For the language, the school gets support from one Myanmar NGO who volunteers to teach a class called "education guidance". In fact, there is no Myanmar language class. The volunteer can teach whatever he thinks the students want to know. Regarding the uniqueness of school, EM chooses to be a "Healthy school" focusing on students' health care and clean environment of the school. One reason for choosing this uniqueness is because of the government's policy to strictly protect the spread of contagious disease that may come from immigrant communities.

3) Curriculum

Despite the fact that more than 90 percent of its students are non-Thai, EM's curriculum does not promote language and culture education for the students. Its curricular subjects are based on core curriculum designed by the Ministry of Education. Even though the Ministry of Education gives free choice for each school to develop its own additional subjects and activities for their student that suit its own local context, EM does not provide any class relating to language and culture of their students.

In order to prepare the school, teachers, and the students for participating in ASEAN community which will officially begin in 2015, EM has provided additional class called "English for communication" for all students of grade 1 to grade 6. This indicates that ethnic languages such as Myanmar and Mon spoken by the students and their families in the community are not recognized as educational resources by the EM school.

Thai majority school

Thai majority (TM) school provides education from pre-school to secondary school level. It is a medium size school. TM has 599 students and 25 teachers. At present, TM is the school that registers the highest number of non-Thai students. The school has about 300 non-Thai students. The ones who have communicative skills in Thai will are registered in the school system and study in regular classes with Thai students. The ones who cannot speak Thai and do not have literacy skills are placed in an academic preparation center located in the school. The preparation center was founded and supported by industries in the community.

1) School population change

TM actively registers non-Thai students because of the low birth rate of Thai children population which results in the decrease in student population enrolling in the school. Therefore the government's policy has the potential to increase the student population from immigrant communities in the province. Moreover, many frozen food companies in the province that rely on immigrant workers, support their workers by collaborating with NGO and the school so that the children can study in Thai schools.

2) Linguistic and cultural environment in Thai schools

Although almost half of the student populations of TM consists of mainly Myanmar children, the school does not have cultural and linguistic representations of students in campus. There is only one welcoming sign written in Myanmar. As the schools register many immigrant children who do not speak Thai nor have an literacy skills, they place the students in an academic preparation center which is sponsored by the industries in the communities. The industries have donated a beautiful modern building and pay for teachers to instruct these students. Therefore, the whole building is used for teaching Thai language and basic reading and writing for this group of children. However, all information and signs in the whole building and every classroom are written in Thai and English.

3) Curriculum

The school's curriculum is based on a core curriculum provided by the Ministry of Education. The immigrant students in grade 1 to 6 study in regular classes just as Thai students do. Until 2013, there were no additional classes or activities that introduce ethnic languages and their cultures. The school began to have Myanmar classes for students in the regular program after the industries hired Myanmar teacher for the school in 2014. The school has made a clear statement of its vision as a school of opportunity for learningand has accomplished this vision in terms of the number of immigrant students in the school.

Different from immigrant students in school system who study in regular classes, the students in an academic preparation center are taught by the school made curriculum. In addition, there is no official school curriculum for the center. The curriculum for the students in this center depends on how teachers in the center apply the pre-school and grade 1 curriculum to suit the students in the center.

Teachers

Ethnic majority school

1) Role and experience

Teachers at EM have faced a decrease in student population at their school. For this reason, they actively inform the employers of immigrant workers about the benefits of children attending opportunities in school. Experienced teachers understand the policy and successfully apply to suit their school context. However, just registering the immigrant children is not sufficient because if the students quit the school in few days, it hence wasting school supplies and uniforms provided by the government. Therefore, experienced teachers must be properly informed of the practice by the third parties (unauthorized learning centers) who take the students to register at school in order to receive the government aid for their own sake.

2) Teaching

The school used to have a preparation class for non-Thai students which was cancelled in 2014. Since then, the children are placed in a pre-school level or grade 1 appropriate to their age. The school does not place non-Thai children in regular classes above grade 1 if a student does not have previous academic records. For pre-school children, the school hires a Myanmar

teaching assistant to help with communication as Thai teachers do not speak Myanmar. The following subthemes concerning teaching non-Thai students are from in-depth interviews with several teachers in the school.

A. No preparatory class

The teachers think that it is a waste of time to keep children in a preparatory class for a year instead of placing them in regular classes immediately. This is because the characteristics of non-Thai children have changed from the past. They are mostly Thai born ethnic children. Although Thai is not their mother language, they can communicate in Thai and they start learning from kindergarten or grade 1at school. For newly arrived immigrant children, teachers adapt their teaching styles by slowing down their speech, repeating, asking peers who speak the same mother language to translate what the students do not understand. Also, from the teachers' experience, non-Thai students acquire school language by playing with their Thai friends in class and on school campus. This helps them in developing communicative skills in Thai.

B. Teaching content in Thai

Previous research in bilingual education and immigrant education found that students who speak a language that is different from the school language tend to show low academic achievement due to language barriers and academic readiness or background knowledge. However, teachers in the schools who teach all content in Thai for non-Thai students report that they do not experience this problem. This is because the students have to start from kindergarten or grade 1 and most new immigrant children have already had academic readiness from Myanmar. Some of them almost finished primary school or even finished primary school in Myanmar before they migrated to Thailand. Therefore, the students are much more mature than Thai students at the same grade level and tend to perform as well as, or even better in almost every curricular subjects.

C. Teaching for Thai educational system

Even though the school has more non-Thai students than Thai students, the school's performance is evaluated by same standard like other schools without immigrant students, such as quality assurance and students' achievements in several standardized tests etc. Therefore, teaching in this school is heavily focused in Thai literacy and core curricular subjects to meet the standard. Ethnic language and culture has a limited role in this school except when it comes to presenting ethnic costumes. The teachers do not perceive that language and culture of students are a valuable resource in the classroom. They think that non-Thai students can learn their mother language and their culture at home, or at an ethnic learning center in their neighbor that tends to be organized by a NGO. It appears that many of these students are becoming Thai monolingual speakers who are unable to communicate in their mother tongue.

D. Myanmar volunteer teacher

As Myanmar language and culture has no role in the school, the Myanmar volunteer teacher is asked to teach in counseling activity classes. As the class is not language class, the Myanmar volunteer does not focus on teaching language proficiency or literacy, but rather is expected to help in counseling the students in various topics. The interview revealed that some students frequently ask for the meaning of Thai words they do not fully understand, or the words that do not have equivalent meaning in Thai and Myanmar. Several topics in this class include life skills, child rights, Thai manners, future careers, dos, and don'ts in Thai culture, or anything the students would like to know.

3) Thai teachers' attitude toward non-Thai students

A. Children from caring families

Thai teachers report that they have a positive attitude toward ethnic students, especially to those families whose care contributes to the well-being of the child. The teachers in EM point out that due to a fear of contacting diseases, some Thai families are afraid to enroll their children in a school with non-Thai children. However, the teachers explain that the non-Thai students from labor families are well taken care because they live with both parents. Not all Myanmar workers can afford sending their children to Thai schools, but the ones who can; they highly value education for their children. Typical Myanmar families are serious in home discipline and the child well-being. On the contrary, most Thai students in the school have divorced parents and live with their grandparents or other relatives. Therefore, some of them may not receive sufficient caring comparing to non-Thai children taken care by both parents.

B. Culture for success in Thai school

Most non-Thai students are Mon ethnic and Myanmar who have strong beliefs in Buddhism. Their Buddhism culture is highly respected by the school and Thai community. Teachers believe that all good nature of the students are influenced by their Buddhistic culture including being polite and respectful to teachers, humbleness, kindness, hardworking, and service minded. These characteristics are what Thai teachers expect from students. Teachers agree that the non-Thai students meet their expectationss which helps the students succeed in learning in a Thai school, despite the linguistic barriers.

C. No discrimination and assimilation

Teachers in EM see that non-Thai students are like Thai students in terms of appearance and culture in general. Although they claim that they treat non-Thai students similarly to Thai students, the claim lies in contrast with the national language policy and school policy that cause ethnic students more difficulties for being successful due to their background. As the teachers do not see any differences, they do not recognize that linguistic and cultural diversities the students have can be rich resource for learning for both non-Thai and Thai students.

Teachers believe that the ethnic students have already been assimilated into Thai lifestyle and the only differences are ethnic costume and ethnic food. They point out that the Mon ethnic community around the school has already been assimilated into Thai society for a long time. Today, there is a shortage in Mon ethnic people who can transfer Mon cultural heritage to younger generations. Unfortunately, young generations of Mon ethnic speak less Mon and become Thai monolingual. However, teachers comment may not reflect reality. Ethnic families have been struggling in maintaining their ethnic identities not just ethnic costume and ethnic food. Moreover, the fact that ethic students become Thai monolingual does not mean that they fully assimilate into Thai mainstream society.

Thai majority school

1) Active Role in collaborating with private sector and the community

TM is the only public school in the province that has an academic preparation center for immigrant students. The school administrator and teachers think that the preparation center is necessary because there are more immigrant children than school facilities and teaching staff can support. When the number of the students increases to a few hundred, but the number of teachers are the same as every year, this results in large classes. Placing the immigrant students who have limited communicative skills in Thai and no academic readiness in the same class with Thai students may not help them learn, especially in a large class.

Therefore, the teachers have to take an active role in collaborating with private sectors for a large sum of donation for building a preparation center and salary for 6 teachers. All of these

expenses are beyond the budget provided by the Ministry of Education. Because of the government policy of children rights to basic education, no public school is allowed to reject immigrant children, but not all schools actively welcome them especially big name schools in the city. Therefore, most immigrant students enrolled in small temple schools without sufficient facilities and teachers. Teachers in TM are very successful in working with big companies for the financial support, and collaborating with NGO in enhancing opportunity for learning among immigrant children.

2) Teaching

A. Teaching in preparatory class

The immigrant students in an academic preparatory center have significant differences in terms of Thai language proficiency, academic readiness, and student ages. This center is for preparing them to be able to communicate in a Thai class, academic readiness for grade 1, and socialization in a Thai school. Students are divided into 3 classes based on their Thai proficiency, academic readiness, and age. There are different ages between 6 to 15 years old. After one year in the center, the students will be tested if they are ready to transfer into regular program starting from grade 1of the school system. The center does not have its own curriculum, so the teachers apply kindergarten and grade 1 curriculum for teaching literacy and content subjects. Teaching literacy for beginning level in these classes focuses on words sound, spelling, reading, and writing. The teaching method based on Thai native speaker model is very challenging for ethnic students, especially Myanmar and Mon speakers. Thai is a tone langue full with vowels and consonants. These components differentiate word meanings. The immigrant students are struggling with the literacy lesson, partly because of the influence of their mother languages. The teachers found that their literacy development is very slow for several reasons. First, the students cannot differentiate sounds which results in word misunderstanding and misspelling. Second, their parents cannot help with their homework as they cannot read and write in Thai. Last but not least is that they learn by copying what the teachers write on whiteboard as the center does not have textbooks. The teachers suggest that teaching in this class is still ineffective for several reasons. They need curriculum, textbooks, material, and media that support the learning for the immigrant students in the preparatory class.

B. Teaching in regular class

Teachers said that teaching in regular program, classes that mixed between Thai and non-Thai students and classes exclusively for non-Thai students, are not different. They use the same teaching method. However, they have awareness that non-Thai students are not native Thai speakers, therefore teachers need to effectively communicate with the students and regularly check their understanding of the content. The problems about tones mispronounce and words misspelling still exist but they do not hinder content learning. The longer years the students are in the school system, the better academic achievement they have. Most teachers agree that their academic performances are equally well or even better than some Thai students.

The teachers believe that the effective of teaching starts from accepting the fact that each individual student may have different level of academic readiness and skills. Then, teachers have to promote academic development in each students based on their needs. This teaching style can help non-Thai students who speak first language different from school language gradually develop their literacy in Thai. However, the words mispronounce and misspelling problem still exists and need the right instruction.

According to the class observations, teaching a small class size actually affects how teachers interact and pay attention to each individual student. The higher grade, the less non-Thai students are in classroom. Some of them quit school due to several reasons such as financial issue of their families. For example, fifth grade class has only 16 non-Thai students. Most of them are born in Thailand and their Thai proficiencies are almost native level with Myanmar accent. The homeroom teacher of this class believes that her non-Thai students will perform well in Ordinary National Educational Tests (ONET) because they are older than typical Thai 5th graders, they learn fast, and they work hard.

3) Teacher attitude

A. Learning culture and family support

All teachers in TM have positive attitudes for their non-Thai students. Despite the fact that the non-Thai students in this school have linguistic barrier but teachers think that they have academic readiness because of their hard working culture. Teachers believe that working hard and being responsible for school work are valued in Myanmar family. Also, there are many reasons why the non-Thai students have good academic achievement. For example, families' support, their maturity which is a few years higher than Thai students in the same class, and their understanding of the value of education and opportunity to study in the school.

B. Respectful culture for success in Thai school

The non-Thai students are highly admired in several cultural aspects by the teachers which make them progress successfully in Thai school. Thai teachers, especially teachers who teach in a temple school influenced by Buddhism culture, expect students to be polite, humble, kind, and being considerate person. The teachers at TM agree that their non-Thai students, especially Mon ethnic and Myanmar students meet their expectations.

As the school was a temple school before being affiliated with the Ministry of Education, the school always supports the temple in all ceremonies, and cultural events. The school can rely on Mon and Myanmar students' service. They actively help in preparing the ceremonies, welcoming the guests, serving beverages, and cleaning after the ceremonies or events. They do not hesitate to serve even in their weekends. Teachers admire that they have strong belief in Buddhism, their service mind, and sense of responsibility on all task due to their maturity.

C. No discrimination and assimilation

Although the teachers admire several cultural values of the students, they don't perceive that the ethnic students have linguistic and cultural resource worth for learning in school. In fact, they think that assimilating the students without discrimination is an effective way to help them live and study in the community with less resistance from Thai local people and reduce fights between Thai and ethnic students. Teachers see Thai proficiency with Thai accent as an indicator of assimilation which the students still do not completely assimilate. Therefore, mother tongue and school language have different roles. Thai is for learning at school and mother tongue is for communication at home.

Students

Immigrant students in both schools are only a small percentage of immigrant children population in Samut Sakhon. They are fortunate ones selected to study in Thai public schools. Although all immigrant children have right to basic education in Thai public schools, but not everyone is ready to take the opportunity. The following themes result from in-depth interviews with the students and their essays from both schools.

1) Maturity and readiness for learning

The non-Thai students are a few years older than their Thai classmate in the same grade level. Most of them have learning experience in ethnic learning center organized by NGO or their ethnic community which are not authorized by the Ministry of Education. Some of them almost finished their primary education or secondary education from Myanmar before followed their families to Thailand. However, when they register to Thai school, they have to start from grade 1 or in academic preparatory center because of the lack of Thai proficiency and Thai literacy. However, once they can communicate in Thai, they can learn fast because they have academic skills in their mother tongue.

2) Family values

Most immigrant students live with both parents. Although the parents cannot help with homework but home discipline, financial support, and moral support from their families contribute to their success in schools. Myanmar and Mon ethnic students respect their family very much. They appreciate their parents support and want to succeed in school and find good jobs to return their gratitude to their parents.

3) Positive attitude toward learning and school

Although the schools do not include the ethnic language and culture as resources for learning in school curriculum, the schools' promoting the wearing of ethnic costume once a week makes the student feel proud of their ethnics. The students have positive attitude in leaning in the schools and the school environment. They believe that their education in Thai schools will contribute to their good jobs in the future. This is their motivation for studying hard. The students enjoy coming to school every day as they have many friends in school. They love school environment which is clean, beautiful, and safe for them. Many students said that schools are their second home.

4) Teachers are second parents.

The students respect their teachers as much as they respect their parents. They share similar value with Thai people in terms of respecting teachers as second parents. This value and the practice are still ingrained in the ethnic students. Therefore, they study with respectful manner, listen to their teachers, follow the instruction, and work hard to meet their teachers' expectations. This attitude based on their cultural value helps them get good attention and special care from their Thai teachers. Therefore, the students have good learning experience in Thai schools. They said that they love their teachers.

Conclusion and Recommendations

Both ethnic majority schools and Thai majority schools are successfully promoting learning opportunities for immigrant children in Samut Sakhon. The teachers kindly help them develop Thai proficiency, Thai literacy and academic achievement. However, this educational opportunity based on assimilation policy as all ethnic students must study through Thai medium and their mother language and culture have a limited role in their learning at schools, except their ethnic costumes.

The fact that the Thai majority school has limited resources including numbers of teachers and facilities in schools, it tends to register immigrant children who can communicate in Thai and have some academic readiness to regular classes. The students who lack both Thai proficiency and Thai literacy are less likely to be registered into school system but they are more likely to be placed in the preparatory center exclusively for immigrant children.

Although language and culture of the ethnic students have a limited role in their learning in Thai schools, their academic achievement are equally well or even better than some of their

Thai classmates due to several reasons. They are, for example, the immigrant students' previous academic background, their maturity, their family support, the cultural value, their positive attitude toward school learning and teachers, small class size, and Thai teachers attention and caring for them. However, the increasing number of ethnic students population in schools and ethnic communities around the schools do not contribute to multilingual and multicultural education which is essential for ASEAN community.

The following proposals are for promoting linguistic and cultural diversity as an educational resource for both Thai students and ethnic minority students. First, the Ministry of Education, Samut Sakhon Primary Educational Service Area Office 1, and involved organizations should support the schools to provide mother tongue-based education. This approach will be the first step for schools to need to use ethnic language and culture as resources for learning. This direction will promote collaboration between Thai and ethnic communities which is the value of ASEAN community. Next, the schools need support and guidance for developing school curriculum, teaching methods, and appropriate teaching materials that suit the mother-tongue based education for their ethnic population. Last but not least, is that the program evaluation and quality assurance should be different from typical Thai program but emphasize in both mother language and school language development, and academic achievement. This approach can contribute to the development of multilingual and multicultural environment for Thai schools.

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Aligning Student Learning Outcome with their Societal Culture: The Case of Global Campuses in the Arab World

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Abstract

While the value of western education is highly prominent in the Arab world, recent literature has reported that instructors need to critically consider students' national culture when selecting teaching styles/methodologies to facilitate students' learning outcomes. The problem is that due to the differing national/societal cultures between Arab students and Western students, Arab students find it difficult to interpret, or learn from, certain teaching methods, which would typically be welcomed by Western students. Even though learning outcomes reflect the teaching methodologies, such choices of teaching methods should be further customized and localized within the context of the students' national culture. Such a research topic is new and rarely investigated in Arab countries. Hence, the aim in this conceptual paper is to profile current research to justify the importance of recognizing and to a degree accommodating students' national culture with respect to learning outcomes. A literature-driven theoretical framework was proposed in this article and is viable for future empirical assessment. Also implications and limitations have been mentioned in this paper.

Key Words: Students' national culture; Learning Outcome; Teaching Methodology; Husted's framework.

Introduction

In order to understand the importance of such a research topic, it is first important to comprehend why such a topic was of particular interest to the authors. As faculty of the New York Institute of Technology (NYIT), both authors had teaching experience at NYIT's New York - USA, Vancouver – Canada as well as Bahrain campus (New York Institute of Technology, 2015). It was observed that the instructors in NYIT's Bahrain campus incorporated varying teaching styles. This was mainly because some instructors were hired locally within the national culture where the campus resided, while others were sent from NYIT's western campuses to teach at its global campuses. As observed, instructors who aligned their teaching methods with the national cultures of their students received higher student satisfaction versus those who taught using teaching methods incorporated within NYIT's western campuses. To comprehend why such was the case; this paper draws upon the review of its literature and presents its critique as follows: (1) Section one offered an introductory critique of current literature. (2) Section two framed a critique of reviewed literature to define students' national culture and students' learning outcomes. (3) Section three justified the relationship between students' national culture and their learning outcomes in order to propose this paper's conceptual framework. (Figure 2), (4) Section four outlined the research methodology by describing the kinds of resources we considered eligible in order to conduct the literature review critiqued in this paper and (5) Section five described the importance of this research topic, concluded the future of such a research topic and outlined the limitations and implications of this study.

Literature Review

The authors observed NYIT instructors arriving at NYIT's global campuses from western campuses, and attaining lower student evaluations than compared with the local faculty within those global campuses, even though both, local and global faculty, held substantial academic teaching experience. Such common cases were also observed and reported in other academic campuses. For instance, Prowse and Goddard (2010) reported that there is a lack of research to assess the impact of western education on international students. It should be noted that culture sensitivity is an important consideration when designing learning outcomes. This is why western instructors have a challenging time when they try teaching from western oriented syllabi without considering the effect of students' culture on their adapted teaching methodology. Furthermore, even though there is ample research describing the development and delivery of teaching quality, training and education, there is a dearth of literature assess the effect of teachers' in-class training (their knowledge, behavior and their teaching practice) on their students' learning outcomes (The DFID Human Development Resource Centre, 2011). This is not surprising considering that there is no clear definition of effective teaching (Adams, 1997). To further critique literature; the next two sub-sections (1.1 and 1.2) furbish a detailed definition of students' national culture and students' learning outcomes.

Defining National Culture

Images, ideas and practices are fundamental in societal culture. This is not a new theory but an idea, also stated by Plato. Culture can be defined from an anthropological perspective, i.e. a culture is a merger of in inborn knowledge, values and ideas to formulate a social action. On the other hand, Plato also considered the material characteristics from the concept of a societal culture, e.g. the society's artifacts, buildings, landscapes, etc. According to Plato, material culture is reflected through style, which is an expression of a one's soul. Plato discourages his students to follow style, i.e. our styles of furniture, embroidery, etc. According to Plato, style is bad taste and he advised youth not to pursue such qualities so to

perform proper tasks. He also recommended grace in material culture in order to positively affect one's soul. Hence, culture can be classified in two categories: hearing and seeing, where music and poetry can be related with hearing and painting or architecture or furniture can be associated with seeing (Burnyeat, 1999).

Further on, in order to understand the concept of the national culture, one should try to analyze the theory of culture from the perspective of innovation; especially when one wonders why some countries are quick, while others are slow, at adapting innovation. National culture is composed of four dimensions, using Hofstede's framework: (1) power distance index (PDI), (2) uncertainty avoidance index (UAI), (3) individualism index (IDV) and (4) masculinity index (MAS). Further on another dimension can add value to Hofstede's frameowrk, i.e. the culture classifications from Hall's culture classification (Van Everdingen & Waarts, 2003).

Societal culture has been deemed important for a while. Culture is a set of beliefs and values which underpin the structure, practice, processes and the structure of a group of people. Such a group can be an organization, e.g. an academic institution reflecting the notion of an organizational culture or a nation reflecting the notion of a societal culture. Societal culture has received greater preference in the academic based literature. From an organization's point of view, culture is considered from the perspective of management and leadership (Dimmock & Walker, 2000).

From the national culture's point of view, the Hafstede's PDI reflects decision structures, e.g. countries with high PDI have highly centralized DM structures with authority and rules where hierarchy dictates information sharing. Countries with high UAI tend to resist innovation and are highly formulated by management with low risk taking and thus show a low rate of innovation adaption. Countries that are individualistic, i.e. high in IDV, tend to have individual DM rather than countries with low IDV, i.e. being collectivist countries that conform to group norms and perform collective decision making. Countries with high IDV have a higher rate of innovation adaption. A country is either characterized as masculine or feminine. A feminine characteristic is reflected by social relationships, equality, etc while masculinity is reflected through competition, focus orientation, competition, etc. A masculine characteristic harbors innovation. Countries with Hightower LTO are more positively focused towards the future and show persistence while short term orientation tend to focus in the past with less resection or change. Countries with high LTO more likely adapt innovation. Furthermore, Hall's culture classification is first based on high or low context culture and second on monochromic or polychromic culture. Context of culture is portrayed by how messages are communicated. A high context culture communicates more through contextual cues, like Japan, China or Italy attain information through trusted sources, while a low context culture is more reliant upon explicit communication through words, like US, Germany or Switzerland attain information from reports or journals (Van Everdingen & Waarts, 2003).

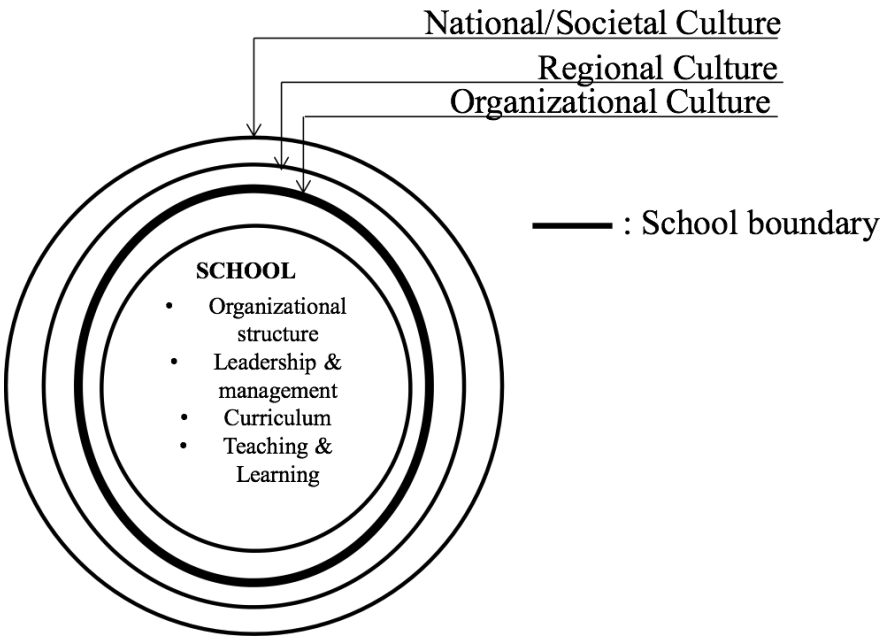

Figure 1 Cross cultural school oriented model.Adapted from Dimmock & Walker (2000)

Within the academic sector, Figure 1 depicts a cross-cultural comparison model, where the school is an academic institution built on supporting factors being: (1) organizational structure, (2) leadership and management, (3) curriculum and (4) teaching and learning. The organizational structure reflects the physical and financial resources along with the organizational policy based framework. The core of the school is the curriculum to form the purpose based skills, and knowledge setup to deliver to students. Teaching and learning are activities pertaining to methods and approaches based within the understood context of the national, regional or organizational culture of an academic institution. In this study the national culture was based on six dimensions: (1) power concentration/dispersion modeled after the Hofstede's framework, (2) group/self-orientation, where a group oriented culture has strong ties with people while self-oriented culture is individual performance and accomplishment oriented, (3) aggression/consideration, which was modeled after Hofstede's framework, (4) fatalistic/proactive, which was also modeled after Hofstede's uncertainty avoidance dimension, (5) generative/replicative, where a generative culture thrives innovation while the replicative culture is more towards adapting innovations and (6) limited/holistic relationship, meaning that a limited relationship culture tends to make decisions based on strict rules while a holistic culture will manipulate decisions based on obligations in relations (Dimmock & Walker, 2000).

Defining Students' Learning Outcomes

For universities to attract local and international students, their curriculum design should be focused on their learning outcomes, i.e. abilities attained by students reflected through their attained knowledge and skills after they have graduated from their academic institution. In other words; an organization hiring the student will judge his/her learnt outcomes (Asgari & Borzooei, 2013). To attain and sustain an academic institutional effectiveness learning outcomes are a norm. Learning outcomes are a product of a process of learning based on cognitive as well as affective outcomes (Asgari & Borzooei, 2013). Such learning outcomes, also, are the focal point for children schools (United Nations Childrens FundUNICEF & Save the Children, 2014).

Learning outcomes can occur at an: (1) individual level such as a student attaining knowledge and skills or (2) organizational level, i.e. an employee being cumulative or

adaptive (Froehlich, Segers & Bossche, 2014). There are three aspects to learning outcomes: (1) cognitive outcomes, (2) behavioral outcomes and (3) affective outcomes. Through cognitive outcomes an instructor can harvest knowledge and skills creation while non-cognitive outcomes simply focus on improving the individual's attitude and values. Learning outcomes are reflected through attained skills like critical, analytical, problem-solving and creatively thinking skills. Such forms of learning outcomes stem from a student's psychological and behavioral outcomes. Learning outcomes can further possess four more dimensions: (1) vocational, i.e. cognitive learning outcomes, (2) personal development, (3) general educational and (4) intellectual advances. Personal development, general educational and intellectual advances are geared towards behavioral and affective learning outcomes (Asgari & Borzooei, 2013).

Rowe and Rafferty's (2013) study aimed to assess the effect of students' self-regulated learning on their learning outcomes. Rowe and Rafferty reported that students' learning outcomes are affected by various factors of students' self-regulated learning, i.e. management of time, setting of goals, reflection and self-motivation, possessing the ability to modify learning strategies, ability to seek help, regulating feedback and able to learn through the use of resources. In this context, students' self-regulated learning refers to a student's actively constructive procedure to set learning goals and monitor their cognition and motivation and behavior in accordance to reach his/her learning goal/s. Also, Mansson (2014) reported that students' participation affects their learning outcomes. Student interactions are important to students where interactions could relate to a: (1) student's in-class comments, (2) student's interaction out of class and (3) student's motivation to communicate with their instructors. E.g. students prefer to communicate with their instructors when they express their concern for failing or not doing well in a course. Hence, Bhandari (2012) recommended that in order to improve students' performance, the students' evaluation should also providing his/her instructor feedback on how to customize an individualized instructor-student interaction. A student's satisfaction is effected by the product s/he received from his/her academic institution through the quality of the non-educational, i.e. economic consideration or social matters, and educational attributes, e.g. setting of clear goals in teaching in an academic setting (Asgari & Borzooei, 2013).

The earlier mentioned three aspects of learning outcomes are positively associated with the student-instructor motivation/reason for communication. Furthermore, every academic course presents "*academic service learning experience*" (ASLE) where each ASLE varies depending on students' emotional responses and their level of goals achievement as well as instructors' identified learning outcomes for each ASLE. An example of ASEL is students' practicum experience, etc (Corso, 2008). ASLE occurs outside the class room where students can participate by providing a service at an organization, e.g. during a practicum, to further understand the content of their course while applying critical thinking, problem solving and interpersonal and intercultural communication skills (Yang, 2014). The relation of service learning with learning outcomes is important to appreciate since service learning is an educational tool, which is an integration of the community (i.e. public service) and the classroom (i.e. the planned academic outcomes through academic work). To assure the success of ASLE, course content should to directly integrated with the students' reflection component, i.e. their accomplished service based experience gained by students through their voluntary community work. This way, students can get a chance to test and apply their in-class attained theories at a work/site setting to improve students' social-growth (Shastri, 1998). The idea of ASLE can be analyzed from the perspective of how an organization can assess the role of workplace learning outcomes on organizational performance, as conducted by Park and Jacobs (2011). Workplace learning can be evaluated through three factors: (1)

competency at work, (2) self-assessment of one's own enthusiasm to improve and (3) productivity of the labor force (Park & Jacobs, 2011).

It is not enough to just propagate knowledge in our current innovation oriented knowledge society where knowledge and intelligence have shown significant changes since the past twenty years. From the perspective of learning collaboration and creativity were reports most essential to sustain a quality oriented teaching methodology. While intelligence is based on the physical and social problem-solving environment, and is no longer a stable commodity, teaching methodology needs to adapt a more creativity-inspiring social, rather than a simple knowledge transmitting environment to form a sociocultural approach to share knowledge. This occurs through the inquiry of information, mediated by the cultural norms. From the social perspective the outcome of learning is the act of storing newly created knowledge in students' minds, through students' self-inspired thinking, while they collaboratively participate within the contexts of their cultural norms during their learning activities (Vedenpää & Lonka, 2014). Student participation facilitates learning. It is up to the instructor to keep students' culture diversities in mind so to assure facilitate understanding so to raise each student's level of creativity and innovation. One way is by appropriately utilizing e-learning technologies, e.g. chat room, discussion boards, etc., for teaching purposes (Davies, 2014).

AACSB accredited business schools aim to brand their curriculums as international, i.e. global, thus making culture an important factor when structuring learning outcomes with such curriculums. From the point of view of the learning outcomes, such institutions prefer to adapt applied teaching and learning strategy where students gain experience to learn in group assignments (Green & Farazmand, 2013). Bearing in mind that the 21st century market demands socially skilled knowledge workers, workers who are able to think analytically and critically and to innovate, the significance of designing effective learning outcomes within curriculums becomes even more important (Asgari & Borzooei, 2013). The research area on learning outcomes is not a research topic only within the academic world of schools and universities but also recently has picked up attention within the culture of an organization, i.e. informal learning as a byproduct of an activity, i.e. implicit learning during socialization within a working environment. This is more efficient than seminars or trainings (Froehlich, Segers & Bossche, 2014). Recently research expressed a rise in attention towards organizational informal learning (Froehlich, Segers & Bossche, 2014).

National Culture & Learning Outcome Relationship

There is a need for research to assess the relationship of students' national culture on their learning outcomes. There is current but scarce literature critiquing the relation between students' learning outcomes and teachers' training. Further, the literature indicates a need for empirical evidence to provide a robust suggestion as to what actually is the effect of teachers' training, i.e. teachers' evaluation of their teaching practice – as the case of this research context, on students' learning outcomes (The DFID Human Development Resource Centre, 2011). Since a while now, there have been practical initiatives, e.g. where 15 years old students were assessed for their learning outcomes, from fourteen non-"organization for economic Cooperation and Developing" (OECD) countries. The aim was to assess the scientific, mathematic and reading literacy of such students. Such assessment was further compared with the data collected from OECD countries in the year 2000 (Katherine, 2003). The DFID Human Development Resource Centre's (2011) expression of the need to assess the relationship between students' learning outcomes and teachers' training tallies with this research since it is the authors' view that the provided training for an instructor should bear the sensitivities of the culture within which s/he is implementing the academic course/academic program. After all, it is the students' evaluation, as well as other

stakeholders' evaluations, such as that provided by their parents, governments and employees, that will play a mediating influential role between students' learning outcomes and their perception of the academic program, in which they are enrolled in (Asgari & Borzooei, 2013). Henceforth, it is important to transform the culture of an academic institution where an instructors' role becomes important. It boils down to the instructor who should, hence, change their beliefs, values and attitudes towards their processes of instructing in order to improve students' learning outcomes (Cavanagh & Waugh, 2004).

Another rationale behind the importance of understanding the role of students' national cultures on their learning outcomes is when considering the unfortunate academic incident recently reported in literature, e.g. various factors, like "*apartheid*", low morale among teachers, parents, and students; absence of discipline; negative attitude towards academics, etc. collectively degraded the learning and teaching culture in South African schools. Such a drop in learning and teaching culture reflected through the declining results of matriculation exams. Even though recent studies have focused on the academic performance of students in schools, these studies have been ignoring the outcomes of their learning culture to change the students' behavior so to make them willing to acquire knowledge to improve academic performance (Weeks, 2012).

Learning outcome as a theory can also be understood from the perspective of distance learning. Al-Harthi (2005) reported that distance learning is better adapted by those students who are from individualistic cultures, rather than students from a collectivist culture. E.g. Asian students, like Arab students, would struggle in distance learning programs where they would feel isolated from their instructors. There is lacking history of distance learning in the Arab world where the first generation of distance learning, during the 1960s, was introduced in the Arab University of Beirut. The second generation of distance learning, during the 1980s, was the initiation of open universities, e.g. Arab Open University. The third generation of distance learning was introduced when electronic media tools supplemented courses where there is face-to-face students-instructor interaction. Such tools were incorporated in the Zayed University, University of Bahrain and Sultan Qaboos University. An added difficulty with distance learning is that English is a second language for such students. With Arab students coming from a high femininity index, their participation is lower than American students since in high power distance culture students tend not to question the course material or participate if they do not have a substantially important point to contribute.

The role of national culture on learning style is further important since it is the way that the training is conducted within a particular location has a lot to do with the culture of that location, i.e. where communication and implementation of a training program is the well-focused requirement in meeting customers' needs. This study reported that learners from different cultures have differing interpretations and empathies of what they were exposed to. Also it was reported that international programs should introduce room for learning based on localization of the cultural context within which the course is taught (Chang, 2004). In conclusion, research to assess the impact of western education on international students is lacking. It should be noted that culture sensitivity is an important consideration when designing learning outcomes. This is why western instructors have a challenging time when trying to teach from western oriented syllabi without considering the effect of students' culture on their adapted teaching methodology (Prowse & Goddard, 2010). Prowse and Goddard's (2010) case study research, conducted in St. John's Newfoundland and Labrador's Canada and Qatar campus, aimed to assess cultural context of a transnational training program offered in the Canada and Qatar campus. Hence, findings suggested that (1) Canadians are not sensitive of saving their face or maintaining traditions, (2) Qatar students tended to not stay on schedules with their assignments or showing up in class made

instructors change their teaching styles, like penalizing late assignment etc, to discipline Qatar students, (3) flexibility was asked for instructors teaching Qatar students since Qatari students required more guidance than Canadian students.

Culture plays a significant role in students' learning outcomes since culture influences their learning style. Some students learn from practical, social and collaborative involvement with other people when working on a project and thus attain experience. This is a concrete experience approach. Such students do not prefer to learn theories well. Other type of students who can learn from theories can analytically think out the theories and learn from attained intellectually explored and rationally thought out ideas. Such learning style is referred as abstract conceptualization. Since learning style is developed based on the cultural context of the society within which a student comes from (Black & Kassaye, 2014), the learning outcomes of the academic programs need to be tailored with the societal culture of those students of the program.

Henceforth, based on the critiqued literature argued in this and the previous sections it is evident that in regard to the first proposed theoretical framework, depicted in Figure 2. As per authors' observation, recently only Froehlich, Segers and Bossche (2014) empirically assessed the moderating role of organizational culture between: (1) learning approach and learning outcomes and (2) leadership style and learning outcomes wherein the context of organizational informal learning work environment. Al-Kloub, Salameh and Froelicher (2014) quantitatively and qualitatively assessed how students' background culture affects their self-direct learning where the target population, i.e. nursing students from clinical pediatric course, adapted problem based learning (PBL) teaching strategy to attain student centered small-group based self-directed learning. It should be noted that Al-Kloub, Salameh and Froelicher assessed the impact of, not students' national culture but, cultural background on a teaching style, and not on students' learning outcome. This is why the authors stated that the theoretical framework proposed in Figure 2 is one of the first to propose that there is a positive and significant effect of students' national culture on their learning outcomes.

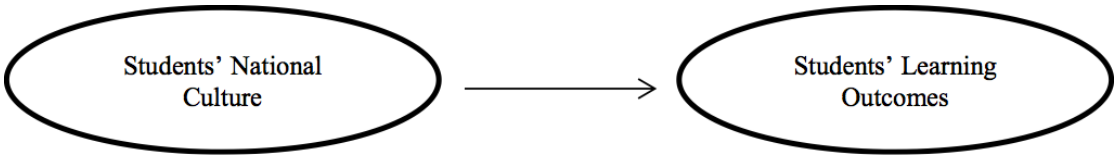

Figure 2 Role of Students' National Culture on their learning outcomes within an academic institution

Research Methodology

Only peer-reviewed conference papers, reports and journal articles were considered for critiquing the review of literature for this paper. Online databases, like Proquest, Emerald, EBSCO Host, ERIC Institute of Education Sciences, etc., were considered to search on national culture, learning outcomes and the relation between both of these constructs, as depicted in Figure 2. An exhaustive research was conducted to review all papers within this research area to pin-point all relevant articles to support the theoretical framework. Then only, did the authors propose the theoretical framework depicted in Figure 2. Reviewed literature was not only limited to academic related education research based papers but also to those pertaining to culture and learning outcomes in other sectors like healthcare, banking, etc.

Discussion & Conclusion

Based on the just mentioned argument and justification, the critiqued literature in this paper successfully evidenced that culture sensitivity should have been a central focus in in NYIT's global campuses so to avoid substantially capable Western faculty from attaining lower student evaluations than those faculty who were locally hired in NYIT's global campuses. Furthermore, innovation in the education sector is based on four categories: culture, structure, personal innovation and leadership. Little study has been conducted in the area of innovation management and innovative processes in international or education related research (BÜLBÜ, 2012).

It is also the authors' observation that the Arab world aims to incorporate an academic system similar to that in the West. This is a response to a general complaint that their students are more inclined towards rote learning while rarely emphasizing creative\ity or problem solving. This view is similar to the one observed in Taiwan, Hong Kong, Korea and Japan (Dimmock & Walker, 2000). While rote learning is referred to as a surface approach to a students' learning process, critical, analytical and creative problem-solving based thinking is a deep approach to the students' learning process (Vedenpää & Lonka, 2014). Considering that research lacks in assessing the effect of culture on students' learning styles (Charlesworth, 2008), it would be interesting if future research could assess the mediating role of students' learning style between their national culture and their learning outcomes. This is important for assessment since students from one culture may find a particular teaching technique or learning style preferable, than students from another culture may not. For example, a passive teaching technique is one in which lectures provide a low instructor's control since the students are left to learn on their own. Other examples of passive learning techniques are textbook readings, guest speakers, in-class presented videos as well as computer based learning assignments. An example of an active learning style is students problem solving for their projects that are composed of highly controlled learning objectives, e.g. case study, research based projects, group projects and classroom discussions. While the Western culture appreciates exploration and self-discovery; the Asian culture expects a leading teaching technique where learning points should be indicated by the instructor (Charlesworth, 2008). Furthermore, as Lizzio, Wilson, & Simons (2002) mentioned that students who prefer a deep approach tend to express a higher level of course satisfaction they are enrolled in.

This study has limitations. The reviewed literature of this study could have been conducted deeper, such that the authors could have performed research profiling to critique all culture models rather than just few main ones. Also literature review was restricted to only current publications, i.e. publications from 2005 to 2015. Only those intellectual contributions which were cited as most valuable and relevant to this research topic were considered if they were published before the year 2005. The authors' future research aim is to critique a deeper research profile of literature review to later empirically assess this paper's theoretical framework.

Furthermore, it is not surprising why this paper only cited less than 35 studies. The authors' experience of pinpointing relevant publications for review and critiquing was along the same lines as Burston (2015) who evaluated 291 studies in the "mobile-assisted language learning" (MALL) area, since the past twenty years, and concluded that only thirty five studies met the minimum standards, to determine the learning outcomes for applying MALL.

An instructor will appreciate the importance of learning outcomes if his/her teaching methods are evaluated from the lens of the students who are going to learn via such teaching methods. Every country is pursuing itself forward academically for national development by pushing forward its education reform, where policies focus on quality education, aiming to

attain higher achieving students in schools (Yun, 2007). Henceforth, to understand the theoretical and practical implications of this study's theoretical framework, the implications begin and end with an instructor who should responsibly re-think and apply the essence of this framework in his/her teaching methods and get inspired by the realism of the learning outcomes. Henceforth, this theoretical framework is a wake-up call for instructors to realize that their traditional role, i.e. delivering classroom instructions is of equal importance in addition to other duties, i.e. development of a curriculum, active researching, team leadership and development of staff. A school is not a factory where exams will have multiple choice questions but a productivity based institution with a sellable student to available employees (Yun, 2007).

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Synchronous Adaptive Mobile Learning

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Abstract

To get the right education from the right people is the basic right of the learner/student. Due to lack of teachers or geographical limitations of the teachers, computers have been used as a medium in education. Starting from the use of Information and Communication Technologies (ICT), smart class to flipped classroom and flipped learning, many theories have been tried by many people. In Gujarat, more than 2000 schools had installed smart class technology till the year 2009. Blended Learning or Flipped Classroom model is a learning approach that enables the blending of technology based (self-paced student) learning for the core concept, followed by in class doubt solving, group discussion, etc. The teacher acts as a guide / coordinator, unlike traditional learning environments, where all forms of teaching takes place in a crowded group. The teacher's involvement in showing course video materials to the students is very important and that has to be implemented for the whole class and is only applicable for certain courses; teachers have to create their own videos; and content should be only in video format. It is therefore important for teachers who plan to implement this instructional approach to be aware of its positive aspects, and potential negative misunderstandings should be understood in order for them to be avoided. The students should be continuously motivated for learning. And that's how adaptive learning came into my mind. The content delivery system for adaptive learning is very important. Synchronous Adaptive Learning aims to establish adaptive learning practices in the space of real-life teaching environment (classroom, webinar, online group teaching, etc.). This innovation allows group sentiment analysis to happen in real-time; teacher to student (s), student(s) to student(s) and student(s) to system engagement occurs through learning. All the streaming data are analyzed and then feedback is generated for teachers to align delivery, activity, assessment, and/or support immediately. The best part of this innovation is the delivery method and analytic solution to work on 2G network covering need of emerging nations.

Keywords: Blended e-Learning, ICT in school, Flipped Learning, Adaptive Learning

Introduction

In Traditional Face –to-Face Learning (TF2FL), there is a lack of the geographical reach of the teacher. After being taught in class, there is a possibility that the students might face difficulty in revising the portion. If the student remains absent in a class, there is no chance that the student is taught the same thing again by the teacher. The use of ICT in the classroom was also started in the whole state of Gujarat as well as in other parts of INDIA since 2006 but many school principals, teachers and students were not happy with it. We started the offline delivery model in Kaparara village and experienced the difficulties faced by the students, which in turn inspired us to think again of something better. Then we came up with the new project of Blended Learning Program at Bilimora. After observing for almost 18 months, we came to know at what different levels, should we integrate the traditional teaching and technology, and even there, after observing problems, we came up with the adaptive learning.

Regular Classroom Teaching

My mother and my grandfather were teachers in a school in a small village near Ahmedabad. Since my schooldays, I have been passionate about teaching. After obtaining my education degree, I joined a school in the year 1993. Since then, I have been teaching Mathematics to students studying in grades XI and XII. Being in the educational field as a teacher, I realized many things and tried to come out of the traditional system.

I used to constantly think and implement new methods in education, but I always felt as if somewhere something is lacking. One thing that I frequently surveyed was that the teachers used to face lots of distractions in the classroom on a daily basis. There were times when they would have to deal with uninterested students or the absence of parents' support. Younger students often show an ignoring and neglecting behavior as they are not yet mature enough to understand the importance of education. Such uninterested and demotivated students cause frustration in teachers and are a real challenge to them. Technology has become an essential part of education, so classrooms today are equipped with computers. Computers are provided to students to avail help and knowledge online and work on their assignments. But again, the problem faced by teachers here is to monitor the students strictly while working in the computer lab.

Busy lifestyle and lack of interest in traditional learning methods among students pose many challenges for the current generation of teachers. Such students find it difficult to concentrate on the lecture and appear bored. Lethargy and exhaustion may be caused by many factors, one of which is doing a job in parallel with studies. To solve this problem, teachers need to talk to students and their parents as well.

Teachers have a great responsibility and to meet this responsibility, they need help and support. Parents and the school administration should communicate properly with teachers for the betterment of students and class discipline problems. But geographically, teacher's reach is minimal and there are economic constraints as well. To get the knowledge from the right people is the basic right of the learner or student.

Being a teacher in this field since 24 years, I am continually finding new ways to fulfill these answers.

Use of ICT in Schools

The rapid developments in technology and the related cost reduction has resulted in a structural change in society. We all know how helpful it is to remember something that is taught visually to students rather than the one that is read through just orally or pages after pages. Just imagine, how beneficial would it be for students to understand a chapter visually

in class. The concept of smart class education is indeed a blessing to the students of the 21st Century. In a social framework surrounded by technology, it is inevitable for the educational environment to be affected by the same. While life goes on during a time of such striking change, it is not possible in the classroom to prepare the students for the real life using traditional approaches. Educational environments should help students to become independent individuals, and to be able to apply what they learned to real life. Thus, classrooms should be integrated with developing technologies and should be used efficiently. The Information and Communication Technologies (ICT) revolution is acknowledged as the next great thing in India's primary and secondary education sector. ICT education companies — led by tech-savvy entrepreneurs — are swamping the market with teaching-learning equipment such as interactive display boards, laptops, curriculum-mapped digital content, school management, teaching and assessment software, Science, Mathematics and language labs and numerous other products and services.

The marketplace for ICT in education in India was estimated at Rs. 285,000 crore ($50 billion) in June 2012 and is expected to grow to Rs. 570,000 crore ($100 billion) by 2014-15. In India, 52.75 per cent of schools do not have electricity, 12 per cent are single-teacher schools and 42.75 per cent do not have libraries.

And hence from 2006 to 2009, many educational content provider companies came into the picture. And they started to approach to different schools of Gujarat and even India. In 2006, I can say it was the "SMART CLASS ERA" in Gujarat. Every school management wanted to install the smart class system in their schools and at that time schools took pride in having the smart class technology. I even signed a contract with Educomp for my school in the year 2011.

Following are the names of some of the nationwide companies that supply the smart class technology to schools and educational institutes.

Educational Company	**Entered in the market**	**2011**		**2014**	
		No. of Schools in India	**No. of Schools in Gujarat**	**No. of Schools in India**	**No. of Schools in Gujarat**
Edurite	2004	500	80	400	80-100
Educomp	2006	10500	1200	6730	300-350
Mexus	2009	4400	600	1200	Closed
ExtraMarks	2007	500	125	600	150-175
TeachNext	2010	400	300	1100	230-250
HCL	2012	Data Unavailable	Data Unavailable	Closed	Closed
TATA	2010	Data Unavailable	Data Unavailable	Closed	Closed
EducationKranti	2007	120	0	Closed	Closed

A big hype was created in the society and everyone felt that the absence of smart class will lead to the students being deprived of quality education. Prominent digital content provider, Educomp Solutions' roller coaster ride over the past few years seeing growth followed by huge slump through 2012 can be an eye-opener to educational institutions as well as corporate across the country. The company that once created the hype around its Smart Classes and other smart moneymaking opportunities in school education, is now making headlines – mostly for the wrong reasons. Even the Government of Gujarat tried to

tie-up with these companies. In Gujarat, there are 3500 schools where students are studying from grade VIII to grade X.

Educomp is a clear example of a company that tried its hands in too many things and lost focus. There was a lack of strategy leading to its fall, observes an industry expert keeping her identity anonymous. This was evident from the fact that the company's net profit margin has fallen 61% since 2009 and the net cash generated by its operations has declined significantly in 3-4 years and most importantly, its overall liabilities in 2012 were over twice its revenues. According to a report that appeared in Forbes, the company's market capitalization has fallen from Rs 7,000 Crore in November 2009 to just Rs. 771 Crore as of March 2013. Educomp ventured into the business of Smart Class range of digital classroom aids that allowed school teachers to use interactive multimedia content to supplement the standard textbook-and-blackboard approach. Smart Class concepts mushroomed in a few years and by 2012, Educomp had in its kitty nearly 7000 schools from less than 100 schools in 2006. Schools affiliated to the CBSE, ICSE, and the State boards passing on lakhs of rupees to avail online learning content solutions alleged that the company failed to deliver its promises. Govt. Of Gujarat tried to tie-up multimedia content development project for 3,500 schools. Educomp's ICT division, Edureach, has bagged a multimedia content development project from the Government of Gujarat. Educomp has bagged a similar project from the Government of Assam also. In this regard, the Commissioner of Schools, Education Department, Government of Gujarat has awarded a letter of intent (LOI) to Educomp Solutions Ltd.

Under the project, the company will now develop and install a 2D/3D based multimedia content across all schools of Gujarat and development of web portal for learning management. The project has been for five years, including updating of content as per the change of state syllabus. The scope includes development of multimedia learning content in Gujarati medium for grades VIII to X covering core subjects including English, Mathematics, Science and Social Studies in around 265 learning areas, and development and conversion of content in MS Windows and Open Source platform. Spanning across 3,500 schools, the project also entails the development of a web portal with interface for using the multimedia based learning content as well as upgradation of the developed learning content with the change of syllabus. According to Educomp, the education solutions provider will also build up the capacity of school teachers on the usage of ICT application to be developed for seamless transaction of the classroom teaching learning process.

In Assam, Educomp has signed an agreement with "Sarva Siksha Abhiyan" Mission, Government of Assam for providing computer aided learning solutions in 2199 middle schools of the state. Educomp will develop, supply and install multimedia based educational content for computer based education in Science, Mathematics and English in three vernacular languages-Assamese, Bodo and Bengali.

The multimedia learning contents will be developed on 60 learning areas identified for grades VI and VII. Educomp will also build up the capacity of school teachers on usage of the multimedia learning content and its transaction during the classroom transaction process. But before introducing the smart class, the school needs to be fully equipped with the so called smart teachers who are aware of the changing trends. Even the companies who delivered the content were unable to train the teachers in the SMART USE of the SMART CLASS and thereby it failed.

I started to use ICT in my school Divyapath from the year June-2011. Having been in the educational field since last 24 years, many times I have observed that students find difficulties while revising the portion at home, which was taught at school. After learning in a regular school classroom, they become helpless if they have any doubts. They will have to

wait one or two days till the school teacher is available and they get to meet them to solve their doubts. As a solution of this, I thought what if they are given a specific system for revision where they are free to use it anytime and anywhere. As a result of it, the concept of Blended Learning came to my mind two years ago.

I introduced the Educomp Smart Class system in my school in ten classrooms with the thought to convert all the classrooms (whole school) into this system. But I was not happy with the content as well the delivery structure. Initially our whole staff, including parents and students were happy to have the smart class system in school. We changed the timetable and students were being taught through Smart Class including regular classroom teaching.
Here is the data mentioned, taken from the year 2012 by Divyapath School.

Grade	Total number of Students (2012)	Regular Classroom teaching (Yearly Hours)	Teaching through Smart Class (Yearly Hours)	Result (Results noted monthly and then here is the average results)
Grade-I	98	650	100	Unsatisfactory
Grade-II	110	650	100	Unsatisfactory
Grade-III	105	650	100	Unsatisfactory
Grade-IV	102	650	100	Unsatisfactory
Grade-V	88	650	100	Unsatisfactory
Grade-VI	90	640	200	Unsatisfactory
Grade-VII	85	640	200	Unsatisfactory
Grade-VIII	80	540	300	Average
Grade-IX	106	540	300	Satisfactory
Grade-X	110	540	300	Average
Grade-XI	280	540	300	Average
Grade-XII	190	540	300	Average
Total number of Students	**1444**	Total no. of Hours	2400	

The overall performance of smart class was average in my school. The students and teachers had been given a questionnaire and feedback form and that became the turning point of my research. In Gujarat, almost 1400 schools have adopted Educomp/Edurite/HCL/TeachNext/TATA/ExtraMarks etc. And in India, there are many schools that are in search for good options in the future for their kids, the future citizens. In addition, students stress that the technological resources provided in classrooms are often insufficient and they expect to utilize more technologies in learning activities today (OECD, 2012). Prensky (2011) named these students as digital natives.

Offline Delivery Model

After the failure in my school, I thought in a different direction. If a local teacher teaches the student in local language in the same accent, then it will become easier for the student to understand and to remember. So with the help of the technology, we recorded video sessions of experts' teachers from grade 9 to grade 12. It was not an easy job for us to explain the teachers our concept, and because many experts, experienced and aged teachers are not tech-savvy, we faced difficulties to engage them for this type of content creation.
We started with sixty two teachers and out of them, forty three teachers completed the whole task. Teachers' continuous motivation was very important to finish the work. After the video recording, our IT team, which included thirty five members, edited 5500 hours of data and converted to easy viewable mode and prepared the DVDs. We had selected market segments for the project. Marketing team members started to visit the schools in different parts of Gujarat.

AREA	**Cities/Villages**	**SCHOOLS**	**Number of students contacted**	**Number of students who had used DVD for more than 8 months (Actual Users)**
Urban Area	16	52	3500	225
Rural Area	62	127	8500	480
Total Number of Students contacted at 8 months			**12000**	

The management of distributing DVDs became a tedious job for all of us. Foremost of all, the school students were to be explained this concept and then the students' as well their parents' motivation was very much needed and important for swallowing this.
Truly saying, we didn't get the best experience. Teachers, principals and students liked our content a lot, but in some way we were unable to change over into actual users. And then, in a small village named KAPARARA, we tried our pilot for 1 year. It was a government tribal school where there were no Mathematics and Science teachers and the students studied through our DVDs and we received serious answers. **Moreover, I felt that people were not fully satisfied with this...**
Again, this led me to believe something more innovative: Blended Learning.

Blended Learning Model

Today's generation is known as digital natives using technology; spend most of their time with these puppets, and deliver access to totally different procedures in order to gain and process information, compared to former generations. To raise students, who have different qualifications than the students of previous generations, as members of a qualified workforce, the current educational technologies should be utilized efficiently. When the progress in education technologies, the need for a qualified workforce as a requirement of the information society, and the learning preferences of digital natives are considered, the needs for new learning approaches become inevitable. Flipped learning is an alternative learning approach that could offer solutions to these very problems. Flipped learning provides a different solution to teaching-learning processes, which are usually realized through a one-way communication from the teacher to the student and under the influence of behaviorist

theory, as a learning approach that supports the constructivist theory. Since its origin, it has drawn the attention of educationalists and its role has become more and more widespread.

Dutton and Loader (2002) mentioned that the institutional providers of Traditional Face To Face Learning (TF2FL) classroom education should adapt to the virtual learning methods in order to survive in today's modern education industry. Blended Learning (from here on BL) is considered to be one of the modern virtual learning methods and is emerging as the new paradigm of alternative education. BL is a mixing of practical learning and TF2FL methods, as it brings the advantages of both learning worlds. Throughout the virtual learning literature, BL is proven to be one of the best learning methods, as it improves learners' motivation internally and externally. Moreover, several studies from various domains have tried to explore the BL in motivating learners in higher education (Chen & Jang, 2010). There is a need to pay full attention to identifying the exact opportunities and challenges of BL.
Blended Learning combines online delivery of educational content with the best interaction and live instruction to personalize learning which also allows thoughtful reflection.

Two Models of Blended Learning

Pull / Self-paced Learning

This model provides structured & indexed digital learning material(s) delivered through a web / mobile portal in a planned manner. The objective is to mostly provide the learners with supplementary educational material to be consumed in their own time and pace.

The key advantage of this model is access and availability of the quality resources, anytime, anywhere learning opportunity, and self-paced delivery.

The known issues with respect to learning in this model include motivation, cohesiveness, and same content and delivery structure applied to all. We have implemented a few elements to minimize these issues for example leader board to motivate / reward learners, planned / hierarchical structure to build cohesiveness, and adaptive learning activity integration to serve different learner's need.

Technology assisted Instructional based Learning

Educational content tailored for the classroom/group based delivery is offered**.** The objective is to complement classroom learning with lecture / content from the subject experts weaved conveniently into curriculum learning delivered by the local teacher.

The advantage of this model is to help plug key competency / resource gap at regional level. The content is mixed with classroom delivery and activities in order to deliver holistic learning to students.

Synchronous Adaptive Mobile Learning

Project Vision

Enable personalized education to reach masses through mobile / connected devices. Enable top educationist (senior expert teachers) to conduct live teaching sessions for masses helping education to reach last mile.

The Project Objectives

The objective of this application is to make live teaching available to the students on their android mobile / tablet at 2G speed. TruTeach shall use predictive presentation technology to enable "very low bandwidth" delivery possible. TruTeach is a bi-directional delivery platform allowing access of data transfer at both the end.

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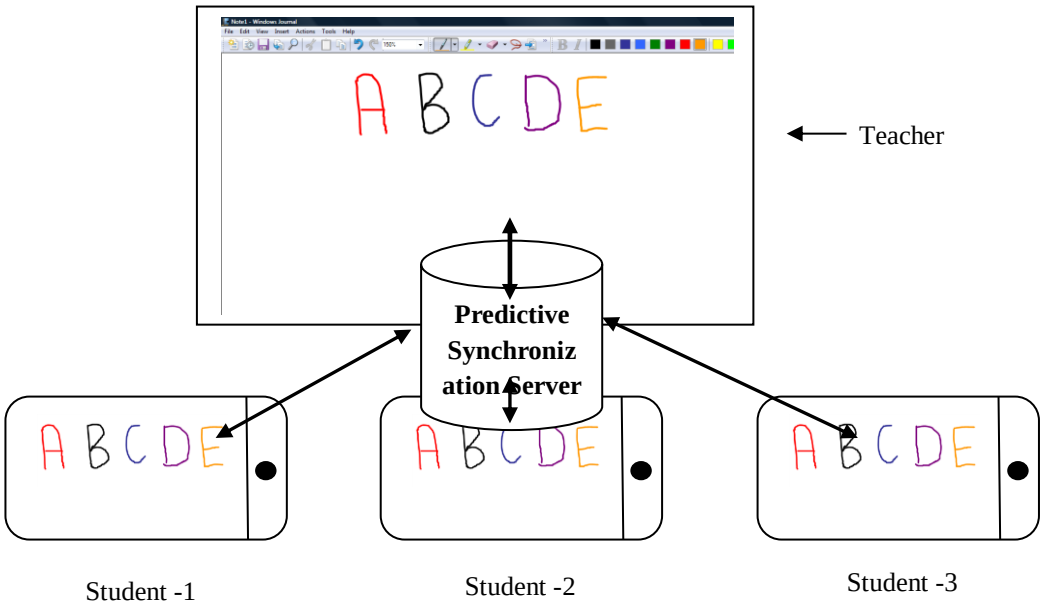
Illustrations and Use:

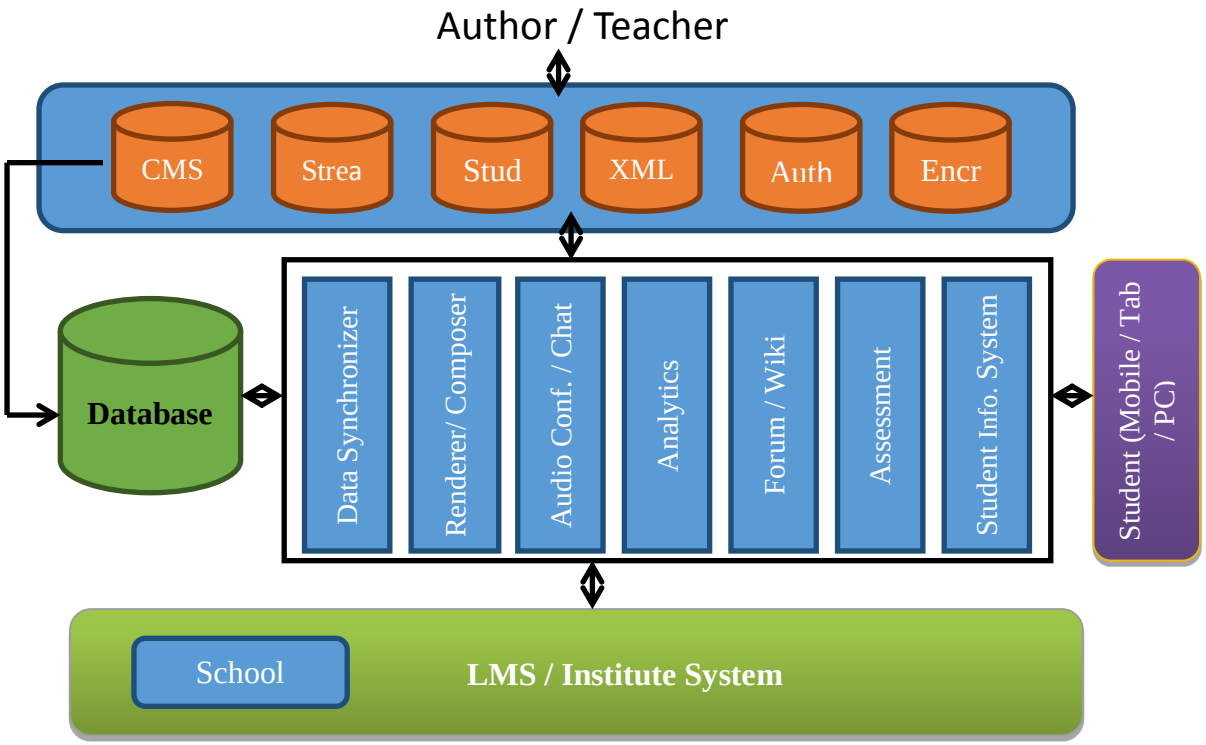
1. A teacher using whiteboard only:



2. Scenario 2 can enable teachers using presentation material limited to PPT / PDF / Images and using annotation on it.

Technology Overview:

The TruTeach system consists of scalable Model-View-Controller framework enabling Author / Students to engage in adaptive learning experience in real-time.



The key component of the system includes:

- CMS: Content management system. Content access / storage / topology management / indexing.
- Streamer enables real-time and offline exchange of the author's teaching (including all forms of multimedia and other data).
- Studio: Content Creation and Delivery System, the subsystem include planner and presentation modules.
- XML / Doc Tagger: All author's data are packaged and tagged for reusability, re-purposing, and analytics.
- Authentication Module: Manage credentials, log-in management, single sign on feature, etc.
- Encryption: All data are encrypted with 128 bit AES / DRM or similar encryption logic.
- CEDS compliant Relational Database.
- Unstructured Data storage.

TWO core pieces of the system:

The low bandwidth lecture transmission protocol / mechanism shall consist of three sets of encoding and decoding libraries, and one set of multiplexer and a demultiplexer.

Audio encoding

Use FFMPEG open source library to encode PCM (Mic captured audio) into 4.75 kbps, mono, 8 Hz AMR-NB audio. The objective is to be able to stream live audio within 5 kbps (Quality 3.8)

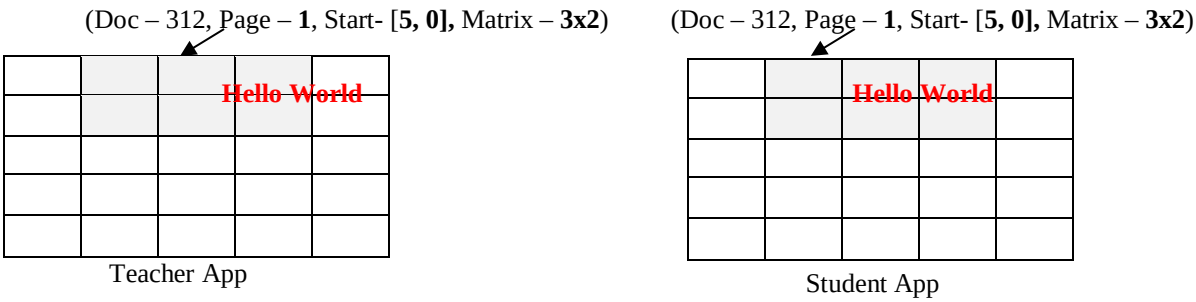
Whiteboard / annotation activities

The synchronization is done by sharing mouse / key event in real-time. The white board activities both in whiteboard only mode and in the presentation mode (annotation) shall be relayed to the learner's app as predictive key events. Predictive key event sequences are well defined in good whiteboard APP, including the bigbluebutton (www.bigbluebutton.org <http://www.bigbluebutton.org>) and opensankore (<http://open-sankore.org/>), both are the open source project.

Screen Synchronizer

The screen synchronizer in the presentation mode shall allow the teacher's screen to be replicated at the student's mobile app sharing doc_id, page_id, and matrix info of the focused screen section. The info on the dirty rectangle can be found from reading the frame buffer.

For example:



Multiplexer

The stream, including audio, mouse events, and / or screen synchronizer needs to be multiplexed with minimal overhead (encryption and timestamp) for delivery over the web to all student App. These can be sent through UDP (noncommittal transmission) and the session and signaling can be managed through SIP. A multiplex stream along with a base document / images can be played back through our proprietary player.

Demultiplexer

This is implemented at student app level and shall allow both live streamed data and stored multiplexed data to be de multiplexed and played back through App. Demultiplexer shall have de-encryption and synchronization logic built in along with using a reference image / doc to relay real-life replication of teacher's session.

Transmission

Websocket or any low latency and low data footprint transmission mechanism is required, which can be supported over IP and by mobile APP (Android).

TruTeach objective is to enable a large number of students to learn from top teachers, but as an individual and adaptive pace, hence the platform shall offer several analytic hookup to analyze user / system data and personalize the experience.

The objective of below flags (group sentiment analysis) and personal interaction analysis is to allow teachers to adjust lecture delivery (real-time), optimize lesson planning (offline), additional / supplement material provision to individual (offline).

The below given flags / data collection points are not exhaustive. All the below flags / interaction points shall be recorded per session, per student, per teacher, per course, per geographical location (GPS and/or student profile), and per institute.

Got-it: Thumbs-up, got it move ahead. This can be clicked by students when asked by the teacher.

I am lost: Thumbs-down, did not get it. This can be clicked by students when asked by the teacher. Based on cumulative response teacher and repeat or explain in alternate method.

Have a Doubt: Raise hand to ask livequery – voice / text / scribbling on the board.

Make a comment: Comments are classified and has prerequisite classes – e.g. I didn't get Line [6]

Not paying attention: The system can approximate the student eye time on the session by dimming the screen on decreasing order if no interaction is recorded, touching the screen shall bring it back to the full display condition. An automatic ping / buzzer message goes from teacher to student.

Check me (Teacher administered): MCQ given by teacher during class. Student answers them by selecting option available on the screen.

Test me (System administered): Periodic /Scheduled MCQ test as per course planning.

My Submission: Written submission / OMR sheet based submission which can be clicked by camera and uploaded to appropriate assignment area.

How am I doing / My Dashboard: The report showing several recorded and analyzed data, including, lecture attended (segmented chapter wise), score (in-class), score (scheduled exams), performance (among the group), Gap area, etc.

How is my class doing / Teacher Dashboard: The teacher dashboard can provide data per course – number of lectures, total duration, content quality, delivery quality, student improvements, etc. as analyzed by above data capture.

How is TruTeach doing / Overall Dashboard: Total course, the total number of hours of lecture, total numbers of students, number of tests, cumulative score improvements, etc.

TruTeach Mobile App shall allow users to register as student, browse through courses listed under various categories, register for interested course(s), attend live lecture, collaborate with teacher / student both through online & offline session, view offline / archived content of the registered course, administer assessment, and analyze performance.

- The student shall get timetable attached with course regarding, live lecture schedule, exam schedule, course completion schedule, etc.
- The student can set himself a calendar reminder for scheduled events. The student shall get email / message / announcement of upcoming events and/or other course related matters.

Conclusion

In an emerging nation like India, finding the proper skills in majority of semi-urban and rural component to conduct effective doubt solving and Group discussion is challenging tasks. Once children come to school with doubt and are unable to seek assistance due to lack of support they lose interest in further study.

The idea of synchronous adaptive learning emerged from this personal experience. We expect students to go through pre-designed concept video and in building assessment during self-study time. While the student works through his lesson at his convenience, system identifies and accumulates doubt areas, group weakness, most sought out topic, interest area, etc. This information in real-time is analyzed and used to create a proper lesson plan for teacher to use for synchronous adaptive teaching.

The teacher uses the platform to deliver doubt solving and knowledge enhancement session in real-time to learners connected via classroom or via personal mobile devices over a 2G or better network infrastructure. Teachers are guided through the session about various real time attributes of students, including understanding, not understanding, bored, focuses / not focused, quick learner / slow learner, etc. to pace their interactions accordingly. Lastly the system at the end of the session automatically sends supplement and complementary learning / intervention / assessment material for individual students based on their performance.

The good news is that the government is also focusing on digital education pan India. The Indian Government is taking initiatives such as the Right To Education Act, Sarva Shiksha Abhiyan and allocates of nearly US $1 billion in the 11th Plan for the National Mission on

Education through ICT. The National Policy on ICT in School Education of the Union Human Resource Development ministry contains a roadmap for implementing ICT literacy in all schools, and we are hopeful this technology will become a reality in education sooner or later.

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21st Century Academic Forum Conference Proceeding
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Wandering Between Two Worlds: The Humanist in the Digital Divide

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Abstract

Everything informational and important to the lives of individuals will be found for sale, or for the taking, in cyberspace. -Michael Benedikt "Cityspace, Cyberspace, and The Spatiology of Information" (1993)

"If the humanities are to thrive and not just exist in niches of privilege, they will have to visibly demonstrate the contributions to knowledge and society they are making in the digital era." (Digital Humanities). Really--shouldn't "technology" have to prove its value to us? Today the humanist instructor finds herself anxiously "wandering between two worlds"(as poet Matthew Arnold in 1855 described his limbo between the pastoral and industrial ages): the undead print and the thriving newborn digital. I explore the special situation of the humanist in the digital age via assumptions that underpin education's technology-ecstasy, and I overview ways "technology" is rewiring our theory and practice for better and worse. Neil Postman has warned that our tendency to ignore both technology's meta-force as cultural change and pop culture's pervasive toxicity can lead to "*culture-death.*" The humanist, especially as educator, has the special charge to meet, with not only healthy skepticism but also constructive practice, this dire but not unreasonable threat. Today as more technology is pushed as remedy for pressing education problems, its intersections with economics, creativity, critical thinking and above all, its force for change in the way we live, individually and culturally, must be defined and interrogated.

Key Words: digital, digital divide, technology, humanism,

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Introduction

The title here, half-borrowed from Matthew Arnold confronting the cultural paradigm shift of industrialism almost two centuries ago, reflects my experience and feeling as both a "print native" and an English instructor today—with one big difference: Arnold called his worlds "one dead and the other powerless to be born," whereas the humanist instructor's print world is far from dead—in fact, the bulk of our district syllabus for all courses still heavily calls for print literacy—and the "digital" world is a thriving (and demanding) adolescent already.

Not only wandering between but also compromising these two worlds is daunting and wearying along with challenging and exciting; any humanist should agree that if it's a human enterprise, it falls within our scope and duty. As a humanist, I accept the charge and even the claim digital rhetoricians (2006) assert that "…all writing [today] is computer mediated; all writing is digital," or at least potentially and perhaps even ideally so in our current *zeitgeist*. "Writing today means weaving text, images, sound and video—working within and across multiple media, often for delivery within and across digital spaces." This reads like the frequent professional-development sessions I must attend in which I am urged to "address all the learning styles," "go where my students already are," and "keep them engaged." What better way than taking them to the digital arcade? "And, perhaps now more so than ever before, writing requires a deep attention to context, audience, and meaning-making across the multiple tools and media available to us as writers" (DigiRhet.org). These are all familiar terms to English instructors, and the implied hermeneutical-cybercircling is well within our powers.

English instructors tend to believe that most problems are essentially semantic. We must figure out just how far "humanism" can stretch before it no longer has much to do with being "human"; one of the early techno-apocalyptics, Mark Slouka (1995), issues dire warnings about the cyber-dehumanization of mankind: "Like shined deer, we seem to wandering en masse onto the digital highway, and the only concern heard in the land, by and large, is that some of us may be left behind" (Slouka, 9), pointing to our wholesale buying-in to what he eventually calls "the hive": one single cyber-mind with no tolerance for individuality, creativity or critical thinking—the classic humanist *desiderata*. Slouka echoes his obvious master, Neil Postman (1986), who threatens, "To be unaware that a technology comes equipped with a program for social change, to maintain that technology is neutral, to make the assumption that technology is always a friend to culture is, at this late hour, stupidity plain and simple" and apocalyptically prophesies that in a nation addicted to a continuous and undistinguished mainline of online trivia, disguised as "information," "culture-death is a real possibility" (Postman, 68).

Social change, friend to culture, and the unveiled call to preserve whatever the "social" and "culture" are (presumably print-literate-logic, judging by the rest of Postman's argument) are surely the humanist's vocabulary and arena. In fact, a host of techno-apocalyptic humanists (either out or on the down-low) from Postman to Nicholas Carr seem to draw energy if not purpose from a traditional dualist us-them mentality, with the humanist responsible for saving mankind from the cyber-borg even though, as we all know here, resistance is futile. However, books are sold and careers sustained as a humanist resistance fighter, at least so far, and this very critical battle front can reinforce a techno-besieged humanities platform with sufficient *raison d'etre* to guarantee survival for a while, one imagines if not hopes.

But a more compelling definition challenge is that of "technology" itself: what can the humanist make of such as "technology," "digital natives," the "digital divide"? After overviewing some of the main arguments against it, we shall, in good academic fashion, finally

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define "technology" a bit later. First I want to look at the phrase "digital native." I myself am not supposed to be one, having only ramped onto the I-way in the last two decades of my six-decade existence whereas my students, for the most part, had a device of some sort stuck in their hands as soon as they could consciously make a fist. And this putative distinction creates the new definition of "digital divide," which usually means **access** to computer technology whereas I want to define it now as conscious buy-in to the digital world. My students are supposed to be consciously, purposively digital-age disciples, and thus desiring and expecting all their learning to be offered on it; their instructor, on the other hand, is a dinosaur whose "sage-on-the-stage" teaching method bespeaks her obvious mental desiccation and need to go, to paraphrase Joyce's Molly Bloom, "out on the paper-and-podium ash-heap."

Neither model works in the everyday reality of the classroom. Neil Postman sees little, if any difference between television and the internet: aside from speed and saturation, the same phenomenon of video simulacrum of reality, in that its images are reproducible and dependent on perceiver manipulation/interpretation, but just more continuously available and stimulating. Having grown up with television and thus addiction to the video simulacrum, I am a lot more at-home in cyberspace than the dividers might want to admit. And my students pretty much refuse to do their assignments any more readily on their smartphones than they would on paper; however unknowingly, they agree with Postman's belief that the video simulacrum is healthiest when it is pure entertainment, so that is what they use the internet for: "following" each other's antics endlessly on social media. To conclude this nod to humanist educator antiquity, this semester I gave my students the choice of whether to use their smartphones in class or keep them put away during our predominantly lecture-discussion classes. And guess what—a good majority voted for reality straight-up, the rest benignly conceded, and all now report a better class experience overall resting from their cyber-marathon for at least that hour. (For an in-depth discussion of the smartphone classroom, see http://blog.cengage.com/smartphones-in-class-learning-tool-distraction/ and also technology educator-guru Clay Shirky's arguments for a smartphone-free classroom (Strauss). See also "Confronting the Myth of the Digital Native," in which Megan O'Neil (2013) describes "a picture not of an army of app-building, HTML-typing twenty-somethings, but of a stratified landscape in which some, mostly privileged, young people use their skills constructively, while others lack even basic Internet knowledge" (Chronicle). Ms. O'Neil illuminates here a class dimension of the technology push, in my experience and observation one overlooked by administrations doing the pushing. Kentaro Toyamo (2015) sensitively develops this class challenge in the techno-boom's wake, in his to-the-point "Why Technology Will Never Fix Education" (Chronicle).

I am not here to answer whether smartphones are good for learning although I believe that this is a valid concern for humanists, at least inasmuch as we like all questions of epistemology, and tools used for learning must be subservient to the phenomenon of the learning itself. I am here, I think, to overview some serious concerns that humanists have, or should have, about the so-called Digital Age, and especially about what we as educators are being asked to swallow, not to mention do, about "technology" in our practice.

Discussion

Under ever-increasing pressure to introduce more and more technology into our teaching, are we really being driven by the exigencies of better learning? This must certainly be a question for humanist interrogation, given some related concerns. I propose three fronts for today's

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interrogation: politics, practice and promise—that promise we humanists want to keep to our students, that is. I agree with Neil Postman, who as early as 1969 argues that it is the educator's task to guard our students' right to learning, not just "information" and job skills but also how best to adapt, live and thrive in their still-human world with all of its unquantifiable complexities and random challenges. And he especially recommends that educators attend to "the media" as primary and meta-cognitive curriculum: "…we suggest that media study become an integral part of all your classes. No matter what 'subject' you are teaching, media are relevant" (*Teaching*, 204; see also especially the chapter 13, "Strategies for Survival"). If permitted to understand "media" not only as the mass ones but also the technologies that are taking over our classrooms, not to mention departments, then I will proceed with warnings but conclude with some constructive recommendations.

Technology and Capitalism

Warning #1 will be no surprise to today's educators: the collusion between technology and late capitalism. Borrowing from Fredric Jameson's theory (1991) I use "late capitalism" to describe a system in which all global systems are organized if not unified under the profit motive, profit becomes the only valid consideration and "progress" a function of maximizing it above all other, shall we say more humanistic considerations. We could veer off now into a day-long coverage of capitalism's assault on higher education, transacted on various fronts: STEM lionization; Kevin Carey's (2015) currently popular economics-based assault on the traditional universities (he calls them, scornfully metaphorizing their putative archaism, "cathedrals of knowledge"); the push for converting universities into vocational schools; "the fall of the faculty" as Benjamin Ginsburg describes the replacement of education with profit-motivated administration (who suck up a great deal of these profits at the expense of providing their students with fulltime, well-compensated faculty); the student-loan bubble and consequent purging of every academic aspiration outside of job training--and much more.

Institutions and educators feel continuous pressure to innovate, update and expand technology-based learning; think of hybrid and "flipped" classrooms, MOOCs, online proliferation in general, and the threat to faculty jobs and salaries brought by mass-education forums not reliant on physical presence, classrooms, utilities, experienced and knowledgeable instructors and other expensive collaterals of face-to-face instruction (see Kevin Carey for a hypertrophied explanation of this threat). "At its most pragmatic, digital humanities has less to do with ways of thinking than with problems of university administration," Adam Kirsch goes so far as to assert. Ever-prodded by the profiteering technology industry and fiscally-prudent administrations, educators can lose sight of the critical question: is all this technology really helping us teach better? Information technology gives us for sure three things: faster speed, greater access, and improved data aggregation. How do these facilitate the kinds of learning that humanists in particular rely on and encourage? Does the digital revolution give us new ways to think, and create--or only new ways to collect and catalogue what we "know"? Neil Postman addressed the problems of conflating scientific and humanistic methodologies; both are valid inquiry, but dollars come with data, not philosophizing. As Kirsch (2014) insists, "The humanities cannot take place in seconds" any more than they can thrive in the ecstasy of aggregated data gleaned from "everywhere," unchanneled by the critical processes so often unfriendly to Big Data.

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Humanists might also attend to more dystopic speculations about our technopoly. As "data-driving" drives most education nowadays, so does the demand for "efficiency," as non-educator legislators and administrators must make policy profitable. As Aldous Huxley put it in his Preface to *Brave New World* so well seventy years ago, "in an age of advanced technology, inefficiency is the sin against the Holy Ghost." For the sake of efficiency, he argues, and thus more committed and faster data-driving, technopoly slaves must love their enslavement, and "to make them love it is the task assigned . . . to ministries of propaganda, newspaper editors and schoolteachers." The mass access, saturation and speed available through technology can reach, engage and inform more students than ever previously imagined--but at the potential cost of not only sacrificing intellectual rigor but also redefining education as instrument of capitalist indoctrination, antithetical to the humanist devotion to skepticism and critical analysis. Henri Giroux (2014) has pointed to a "full-fledged effort through the use of the pedagogical practices of various cultural apparatuses . . .the new media and digital modes of communication . . . to produce elements of the authoritarian personality while crushing as much as possible any form of collective dissent and struggle." Along with perpetual access to mindless and even toxic popular culture, Giroux argues, information technology functions as a "distraction and disimagination machine in which mass emotions are channeled towards an attraction for spectacles while suffocating all vestiges of the imagination, promoting the idea that any act of critical thinking is an act of stupidity and offering up the illusion of agency through gimmick like voting on American Idol" (Interview)--or, say, the classroom clicker.

Technology and the Learner

Lewis Lapham, in his introduction to Marshall McLuhan's biblical *Understanding Media*: *The Extensions of Man* (1964), points to the basic kinship of writing itself and the technologies that convey it. Comparing print and electronic writing, McLuhan half-condemns, half-embraces the "sovereignty of the moment" promised by the electric media that, as a significant corollary, finally "ends subjects in the world of learning" (346).

In a higher education economy increasingly hostile to the individual, either as "sage-on-the stage' instructor or lone, non-"engaged" learner--we might closely consider the end of the learning *subject*. With the panopticon potential and lightning speed of the internet, are our learners to be blended into the ecstacy of everywhere, at the expense of their individual autonomy? Kevin Carey certainly thinks so within his utopian vision of a world of uniformly (in spite of his "learning-style" hype) prepared, able and avid cyber-learners out there, ready to acquire MIT-level knowledge with just their laptops and WiFi. Sherry Turkle (2011) points to psychological hurdles online, observing that "we fill out days with ongoing connection, denying ourselves time to think and dream," and warns of the hollow payoff of "simulation: the exhilaration of creativity without its pressures, the excitement of exploration without its risks" (224). In simulation, the gamer or surfer actually occupies a new identity, presumably one superior to the awkward biological mind and body so prone to error and underachievement in Real Life (see Mark Slouka for a thorough history and analysis of cyber life vs. "RL"). Aimed at digital heaven, a man's reach exceeds his grasp, indeed, but at the expense of his hand.

A strange irony emerges in digital-literate culture: the "have-it-your-way" mentality of everything today from MickeyD's to the classroom. Dan Tapscott, author of "The Eight Net Gen Norms" (2008), observes that "Young people insist on freedom of choice. It's a basic feature of their media diet…The search for freedom is transforming education as well. Learning for them

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should take place where and when they want it" (73-6). They will no longer accept the role of passive recipient to a sage-on-the-stage dictator. In fact, the very idea that such a "sage" could have anything valuable to say has been fairly nuked, in spite of the fact that the geniuses that debunk this role were largely informed and trained, via print literacy, by such sages. But little longhair Logan, the "hackschool" superstar with his Pez dispenser of 14-year-old experience and obvious ethnic and socioeconomic status indicators, rules the world of TED-talk pedagogy "lite" devoured today by higher ed. However unknowingly channeling Wordsworth and Whitman (whom he might not ever stumble across in his online freestyling), he tells his young audience to throw away their textbooks and creatively explore the vast Everywhere with their pricey technology and Starbucks internet hookup.

What will this confident young autodidact eventually give the world? We hope, a better Picasso, a more complex Joyce, an instant cure for Ebola, a better mousetrap. Free of the onerous constraints of informed direction, without tedious elder-sage guidance, under his own creative auspices and with his trusty devices, he is the great hope of the digitized future. He might even succeed in quickly making himself obsolete, obviously a goal of the digitechnicons.

So why isn't everyone, "everywhere," ecstatic? McLuhan prophesied the future, perhaps temporarily (as an evolutionary stage) but nonetheless ensnared in the intersection of *somewhere* and *everywhere*. Nicholas Carr (2010) writes of the neuroscience of "multitasking," and the news isn't good for our students' ability to reason clearly and argue effectively. Already we see our right to individual privacy and autonomy--the hallmark of print culture with its solitary and self-engaged act of reading--eroded or even obliterated, as collateral damage to our self-expansion into collective consciousness. And McLuhan had early on predicted the anxieties that plague our classrooms as well as our society at large. Could these anxieties be inevitable to the "electric circus"? Our students, raised on TV as we were but also the Internet, cannot "take refuge in the zombie trance" of print linearity and detachment; and thus they and their instructors panic as "we all become Chicken Littles, scurrying around frantically in search of our former identities, and in the process unleash tremendous violence. As the preliterate confronts the literate in the postliterate arena, as new information patterns inundate and uproot the old, mental breakdowns of varying degrees--including the collective nervous breakdowns of whole societies unable to resolve their crises of identity--will become very common" (McLuhan, *Playboy* interview,126). Any honest instructor today will admit to moments, if not semesters of such panic if not breakdown.

What Is the Thing Called Technology?

Warning #3 comes with hope because educators are very good at this kind of hope. We must attend to our students' "terrible anxieties" while optimizing their learning experience in the Divide. Turkle argues what we already know so well, "We have to find a way to live with seductive technology and make it work for our purposes. This is hard and will take work." She is cautiously optimistic, believing that "When we are at our best, thinking about technology brings us back to questions about what really matters" (294-95). Note how she echoes Martin Heidegger (1953) in his famous take on technology: "In this way we are already sojourning within the open space of destining, a destining that in no way confines us to a stultified compulsion to push on blindly with technology or, what comes to the same thing, to rebel helplessly against it and curse it as the work of the devil" (The Question, 25).

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As I have belonged to the latter camp, I am especially attracted to Heidegger's most careful definition of what "technology" actually is, fundamentally. Not the latest invention by Apple or the latest online Cengage lab--nor TED talk, YouTube nor Twitter nor Google nor whatever latest commodity fad. "Technology is a means to an end…[and] a human activity. These two definitions of technology belong together. For to posit ends and procure and utilize them is a human activity." For him "technology" is a means for humans to draw from what he calls the "standing-reserve" of "world" and to shape, "unlock, transform, store and distribute" the standing-reserve of phenomena. These are some of the "ways of revealing"--and it can be no surprise that "this revealing never comes to an end" (The Question, 4).

Heidegger delivers a strong message about our relationship to technology as educational practice. We must adopt what I am calling a "metapedagogy of technology" in our classrooms. That is, we must always perform the metacognitive act of calling our students' attention to both the definitions and the non-instrumental entailments of the technologies they use. To avoid or evade doing so is not only to shut off one of the rich pathways of revealing their being-in-the-world, but also to create great individual and cultural danger for them: Heidegger explains that "we shall never experience our relationship to the essence of technology so long as we merely conceive and push forward the technological, put up with it, or evade it. Everywhere we remain unfree and chained to technology, whether we passionately affirm or deny it. But we are delivered over to it in the worst possible way when we regard it as something neutral" (4). It is my claim that "the worst possible way" appears in the classroom in which technology is imposed by cultural and administrative fiat and without the (at least current) exigency of critical inquiry and metacognitive practice.

Conclusion

"What is clear is that, to date, computer technology has served to strengthen Technopoly's hold, to make people believe that technological innovation is synonymous with human progress" (Postman, Technopoly, 1992). Nowhere is this more evident than in education. A collusion of seductive market forces, state funding requirements, cultural lapses, eroded literacy and the demands of globalism has frightened educators into grasping at short-term solutions including a hasty and uncritical embrace of technology. We have tended to fall short of, even to fear asking critical questions about not only what technology does, but even what it is. Yes, it is a "tool" that we bring in to "supplement" our human instruction, say the hopeful. However, as I have indicated here, there is a menacing *telos* within the technology-push, one that bodes ill for the physical classroom and human instructor who, after all, tend to be expensive. (At this time we will not look into how the techno-utopists plan to wean humankind from its species-long profiteering addiction, to the point where the the University of Everywhere is as freely provided, both in access and cost, to the world as promised . . .)

Within the deluge-push of technology, we want to avoid "selling our birthright for a mess of apps" (Kirsch, 2014). It is likely the true humanists among us who will fight this fight, which is most basically to keep the human element strong in education. In spite of what profiteering education technology, state legislators, budget-conscious administrators and starry-eyed instructors want to believe--our students are still human and overwhelmingly prefer, not to mention succeed in, face classes with their human contact, support and personal mentoring. They do love their devices for social media, which is a great use for these. These can even be brought productively into play in metacognitive assignments in which students study not only the subject at hand but also how technology supports both learning the field and practicing it nowadays. But

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everyone needs to keep a close eye on how these media and devices constitute a radical reshaping of our world, a paradigm shift unparalleled since the printing press, and also on the fact that the advantages these technologies bring are calculable in terms of efficiency-- the totalitarian state's first mover, according to Orwell--and even more ominously, cost-cutting and bottom-line profit.

Almost two decades ago, Ira Shor (1999) defined "critical literacy . . . as 'learning to read and write as part of the process of becoming conscious of one's experience as historically constructed within specific power relations' (Anderson and Irvine, 82). I am arguing today that it is the humanist educator's destiny, challenge and responsibility to interrogate these power relations, remedy an unhealthy neutrality about technology's promise, and bring our students as critical thinkers into the argument.

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Applying Learner Perspectives in Foreign Language Education

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Abstract

This paper proposes a framework for foreign language teaching intended to better suit the background knowledge, perspectives, and preferences of language learners. Given current theory and research that emphasize the importance of the contributions that learners can make in the language classroom, this paper posits that the status quo of textbook development is insufficient to make language learning more learner-centered. Furthermore, it is only a symptom of broader top-down narratives in language education that place the educator and higher stakeholders as the sole arbiters of how target foreign languages are presented to learners. If the main objective of language education is to create an environment conducive to fluency in foreign languages, all other content considerations must be deemed secondary to an approach that favors curriculum and materials development informed by the perspectives of language learners. After detailing the relevant literature, this paper will provide a set of pedagogical guidelines for language educators, which are built around materials development that take the perspectives and background knowledge of learners into consideration. Finally, practical and theoretical implications for such a framework will be discussed.

Key Words: language education, materials development

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Introduction

Dubin and Olshtain (1986), in a treatise on language course design, posited that thematic content selection plays a major role in curriculum and materials development, believing that content cannot be separated from language in materials development. They wrote, "Along with language content, or structures, grammatical forms, etc., familiar to all, language courses have included thematic and situational content as well" (p. 45). The decision-making processes regarding content selection can, in turn, have significant effects on learners with respect to motivation, comprehension, and identity. Despite this, the decision-making process in determining what content is used to complement the language knowledge being taught in the language classroom remains a largely top-down endeavor, in which educators know not only what grammar and vocabulary should be taught, but also what content should be presented. This approach seems outdated and arguably conflicts with contemporary goals in language education aimed at emphasizing learner-centeredness and student empowerment.

In contrast, a deeper consideration of the goals, preferences, and dispositions of language learners can play a profound influence on materials and syllabus development. Contemporary education would, therefore, do well to shift from a top-down view of thematic content selection to an approach that includes the knowledge that learners bring to the language classroom. This paper lays out the theoretical rationale for such an approach, proposes a process for curriculum and materials development that emphasizes a greater focus on learner perspectives, and invites discussion on the pedagogical and philosophical implications language educators must consider in adopting such a process.

Background

Bachman and Palmer (1996) provide an adequate conceptual foundation for the theory described in this paper with respect to the treatment of knowledge in the language classroom. In their treatise on language assessment, they conceptualized language use as requiring *topic knowledge*, which involves *what* a language user should say in order to successfully complete any communication, and *language knowledge*, which involves *how* a learner should say it. Language knowledge includes basic elements of language such as grammar and vocabulary, and higher elements such as organization and mechanics. Another element of language use is *affect*, which is made up of a number of cognitive, emotional, and physiological factors that may influence, negatively in most cases, how a language user produces language.

To highlight this conceptualization, many textbooks that teach English as a foreign language (EFL) include a scope and sequence that details what is learned in each unit or lesson, namely the language that is learned and the thematic context within which that language is taught. The textbook *Communication Spotlight: Starter* (Graham-Marr, et al., 2013), for example, is divided into units according to thematic or topic areas, and focusing on the relevant vocabulary and grammar for each theme or topic. One unit teaches prepositions of places within the context of places within a city (i.e. grammar that produces output such as "The bank is between the post office and the restaurant").

Defining discrete elements of language use is necessary because neither topic knowledge nor language knowledge is sufficient by themselves. Schema theory in language education holds that a language user typically interacts with target language by employing their background knowledge (Brown, 2001). This background knowledge is often influenced by their local context,

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which is likely to differ from the culture or cultures of the target language (Carrell & Eisterhold, 1983). It is in the disparity of topic knowledge between the language learner, the language educator, and the materials employed in the classroom where a great deal of comprehension and production deficits in the target language is found.

Conceptualizations of the language learner

Traditional models of education necessitate, or at least favor, a top-down approach to language teaching and learning in which educators not only teach language knowledge, but choose the topic knowledge they feel is most appropriate in facilitating mastery of language knowledge. This approach is based on assumptions that learners are otherwise unaware of perspectives of the world different from their own if not for formal education. Indeed, this assumption that prescribes "raising awareness" among learners is prevalent in narratives regarding English as an international language (EIL) (Matsuda, 2003), World Englishes (WE) (Miyagi, Sato, & Crump, 2009), and global education (Cates, 1990). A top-down approach can also be considered "necessary" for practical purposes. Foreign language textbooks provide educators with a set of materials for the language classroom that they would otherwise need to spend time and effort creating.

It is typically the responsibility, then, of language educators to adjust the activities found in such textbooks to the particular circumstances of their classrooms. Even so, the status quo model of textbook development, followed by the selection and adaptations of textbooks by educators is still very much a top-down endeavor. Absent other measures, educators still run the risk of undervaluing the knowledge and goals that language learners bring to the classroom. Formal education is a minor influence in learners' lives compared to outside influences (Bransford, Brown, & Cocking, 2000), and preliminary research on Japanese EFL learners (Sybing, 2013) appears to show that learners enter the language classroom having goals for language acquisition that are more personal than global. These goals may conflict with the content goals prescribed by educators as they are informed by various sources of target language outside of the classroom (Sybing, 2014). Further research also indicates that language learners do not necessarily conform to their teachers' goals even when their awareness is raised. For example, a survey study conducted by Omi and Fukada (2010) indicated that learners, despite having a greater appreciation for non-standard English varieties when they are made aware of them, tend to maintain their preferences for more standard varieties of English.

Learners are not merely unresponsive to content goals that conflict with their preconceived worldviews or fall outside of their chosen interests. The current literature appears to show that students respond positively when presented with content knowledge that appeals to their preferences. Cheung (2001), for example, posited that the inclusion of popular culture in EFL education in Hong Kong was potentially effective in motivating students in their English study. In establishing a contrast between content teachers believe is relevant to learners and content that learners find appealing, he noted that "[t]o many youths, what Beavis & Butthead (the popular TV cartoon characters) have to say is more important than lessons taught by teachers using extracts from literature" (p. 59).

Moreover, research seems to indicate a strong correlation, if not causation, between learner motivation and learner achievement (Masgoret & Gardner, 2003). Certainly, such research seems to support established notions in language education that raising learner motivation is key to fostering language acquisition. Content selection is, of course, not the only

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factor in motivation and learner interest, which can be affected by a variety of other intrinsic and extrinsic influences. However, if the ultimate goal of language education is to foster acquisition in a target language with minimal learner anxiety and maximum motivation, it has to follow that learners can make significant gains in target language fluency with content selection that best matches their content knowledge.

It should be noted that, in specialized domains such as language education for academic or professional purposes, an approach where educators and higher stakeholders such as administrators and policymakers are the sole arbiters in choosing topic knowledge may be appropriate. Education in such contexts emphasizes awareness of and training for specific tasks, and do not emphasize language learning for its own sake. In the abstract, there are limited circumstances in which language learning that emphasizes a specific content goal has an appropriate role in formal education. In the area of general foreign language education, however, where learners have their own disparate goals and dispositions, an approach to topic selection that isn't mindful of the pre-existing knowledge of learners creates unnecessary obstacles of learner affect and anxiety. This paper, therefore, recommends an approach to content selection informed by the preferences and perspectives of learners in general foreign language education. Consequently, it is necessary to discuss a framework in which teachers become aware of such learner perspectives and incorporate that knowledge into curriculum and materials development.

Proposed pedagogy

The methodology reference produced by Cambridge University Press (n.d.) defines two types of language learning tasks. Tasks that emphasize *accuracy* focus on a specific set of grammar or vocabulary that students are asked to learn, while tasks that emphasize *fluency* are open exercises that encourage learners to experiment with the target language learned inside and outside the classroom. Both types of learning tasks work in tandem when fluency tasks provide opportunities for learners to build fluency in the language that is taught in accuracy tasks.

The teaching of language knowledge in the context of the topic knowledge presented by learners is the central aim of the proposed approach. Goals regarding what language knowledge should be learned in a language course should be set by educators and higher stakeholders responsible for fostering language acquisition. Accuracy-building activities foster language acquisition toward these goals, but require context best provided by content with which students are familiar. Fluency-building activities, in turn, provide teachers with that content through the spoken or written output of their students.

As with the development of textbooks, the creation of a scope and sequence of any language course should be divided into units, each of which aims toward a certain goal of language acquisition (e.g. "Students will be able to use the past participle form of English verbs" or "students will be able to write descriptive paragraphs") taught in the context of a specific theme (e.g. vacations, special occasions). What this pedagogy proposes is that thematic content should, in the abstract, only be determined after reflection of learner output from fluency-based activities.

Accuracy-based activities.

Cambridge University Press (n.d.) defines accuracy tasks as those "in which there is only one correct answer." Cloze exercises, for example, are sets of example sentences with words or phrases removed, requiring students to choose the best word or phrase from a set of choices, if

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choices are provided at all. Cloze exercises tend to assess either a learner's vocabulary or grammar ability.

Major elements of the presentation-practice-production (PPP) approach to language education provide sufficient example of classroom activities developed for accuracy (Sato, 2010). The PPP method calls for the teacher to provide explicit teaching of the target language, followed by practice in the target language before any open-ended communicative tasks. The aim of the activities that precede open-ended communication is to allow students to internalize the language knowledge and ensure accuracy in output. Examples of such activities in Sato's paper include "pattern practice, drills, and answering questions using a specified form" (p. 195).

An accuracy-based activity should:

1. direct learners toward a specific aspect of the target language,
2. elicit a specific output with respect to the target language, and
3. provide opportunities for practice of the target language.

In such tasks, intelligibility alone is insufficient for success. For example, students may provide utterances such as "I like go shopping" or "I like to shopping" and still be understood. However, such output would demonstrate a deficit in language knowledge relating to the conjugation of English verbs. Accuracy tasks, therefore, aim to reinforce the necessary language knowledge to produce accurate output.

***Fluency-based activities*.**

In real-life situations, of course, language knowledge alone is insufficient if it is not used in a natural manner. Accuracy-based tasks should, therefore, be reinforced by fluency-based tasks, which are more open-ended and encourage free expression among language learners. Tasks that build fluency should be developed around a series of principles. A fluency-based activity should:

1. allow students to experiment with language, whether learned in or outside of class,
2. minimize, if not altogether remove, any potential for learner anxiety, and
3. reward and motivate students for effort and task compliance, instead of final output.

Examples of fluency-based activities include the following:

Open conversation

In this activity, students are paired together and speak only in the target language for a set period of time.

Interview

In groups, students deliver short impromptu speeches based on a question initiated by the class, and then answer questions from their group based on their speeches.

Speed writing

Students write freely in the target language for a set period of time, and assessed for the number of words they write in that time, regardless of content or accuracy.

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Note that fluency-based activities intended to be used in this approach differ slightly from fluency-based activities intended for task-based language teaching (TBLT), which is largely, if not exclusively, transactional and seeks a particular result from learners. Open-ended activities are less guided and provide teachers with a more general scope of the extent of learners' background knowledge.

Educators have long debated the appropriateness of one type of task over the other (Sato, 2010; Shintani, 2011). It is not the aim here to explore the shortcomings of either approach, but rather to suggest that both approaches taken together serve complementary roles in the language classroom. This paper only emphasizes that the aim of fluency tasks in the proposed pedagogy is to also provide teachers with opportunities to learn what students already know and, in turn, create a backdrop that is familiar to students so that the goals set for accuracy-based activities are more easily met.

Development of a scope and sequence

Taken together, the two types of activities defined above are used to (1) provide insight about the interests of students, and (2) allow teachers to present the target language through the topic areas relevant to those interests. Open-ended, fluency-based activities provide students the opportunity to express their own ideas and perspectives without concern for language accuracy. Educators can, in turn, take those ideas into consideration when developing materials, keeping in mind the language goals already determined prior to any language course.

In an oral communication class, a teacher may, for example, monitor her students during an open conversation activity without making corrections for accuracy. Among those open conversations conducted in class, she may learn about what music or movies interest her students. Consequently, the materials for her accuracy-based activities (with the goal of providing students the language necessary to, for instance, make invitations to a concert or movie showing) would then be adjusted to include vocabulary and context relevant to the music or movies in which students express interest. Having facilitated the acquisition of new language knowledge in students, the teacher returns to practice fluency-based activities, providing students opportunities to practice language, newly acquired and otherwise, as well as making other interests known to the teacher so further materials development for other language goals to be realized in later units.

Pedagogical considerations

The time required for materials development may be the greatest consideration for adopting this approach. Language education, if not all of education, is largely dependent on the selection of textbooks appropriate for each course and set of learners. Such textbooks come with a pre-defined array of topic and language knowledge that may be compatible for the classes for which they are chosen, but, given that textbook writers are not familiar with the specific circumstances of each classroom, educators have to question if they are the best fit for their learners. The alternatives are to choose and copy from a variety of textbooks (which raise copyright concerns), and to develop materials independently. The latter alternative, which this paper proposes, is more time-intensive, and requires time over the life of a language course.

In the abstract, the proposed conceptualization described in this paper also affects the decision-making process that educators apply to materials and syllabus development. Educators who adopt the defined approach still make the final decision regarding what language knowledge and topic knowledge is taught, but are limited in the choices of topic knowledge they can use to

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facilitate acquisition of language knowledge, based on what knowledge language learners bring to the classroom.

Educators also need not take a binary approach to the question regarding from where topic knowledge is derived for classroom use. The current state of language education, or at least EFL education, is such that textbooks will continue to be a mainstay in language classrooms for any number of reasons, many of them good. Therefore, the pedagogy proposed in this paper would constitute a major shift away from a status quo that educators find practical. In such situations, this paper encourages that educators consider the possibility that, in general language education, the content that educators want to teach may conflict with the perspectives and preferences of the learners they teach, and consequently interfere with the greater goals concerning language acquisition.

The goal behind the proposed approach is to ensure a classroom environment conducive to building fluency, rather than reinforce or reaffirm any worldview held by the student or the teacher. Brown (1994) asserts that a certain amount of anxiety can facilitate language learning. Because that anxiety can come from interaction with either unfamiliar language knowledge or topic knowledge, educators would do well to, in learning about the interests and preferences of their students, find a balance that allows learners to explore new knowledge without becoming overburdened or uncomfortable to the extent that it would interfere with language learning. It is ultimately the responsibility of language teachers to determine what materials will foster the greatest gains in language proficiency with the least amount of resistance.

Conclusion

This paper argues that the topic knowledge presented through materials be made compatible with the background knowledge of learners to ensure acquisition of the necessary language knowledge with minimal affect and maximum motivation. Rather than "raise awareness" of learners under an assumption that such learners are ignorant of the world around them, the narrative outlined in this paper recommends that teachers take what learners know and use it for their benefit.

In taking the position that language education should take into greater account the knowledge that language learners bring to the classroom, this paper proposes major changes in the way language educators foster language acquisition. Rather than rely heavily on top-down approaches to how content is chosen, educators should instead take advantage of what learners know in order to present new language knowledge and foster language acquisition in a manner that suits the preferences of their learners. Further discussion of the divide between the cultural and social perspectives of teacher and student is welcome; this paper invites and challenges educators to explore this tension in greater detail and research.

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Effectiveness of Debate in ESL/EFL-Context Courses in the Arabian Gulf: A Comparison of Two Recent Student-Centered Studies in Oman and in Dubai, U.A.E.

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Abstract

Using debate as a tool for non-native English speakers' language acquisition and fluency is not a new practice, but it has been little studied in the Arabian Gulf region. In our admittedly limited study of the efficacy of formal "in-class" debates with first- and second-year students in an advanced, skills-integrated "Effective Reading" course in Oman's Sultan Qaboos University (SQU) and a comparable reading/writing course in "Advanced Composition and Research" at American University in Dubai (AUD), the researchers found positive student responses for "in-class" debates despite the stress of time-constraints and quick reassessment responses in rebuttals. Indeed, students reported a high-level of agreement to Likert-scale statements such as "debate encourages students to be critical and evaluate what they hear or read" and "debates encourage polite and appropriate cross-gender interaction." Overall, more than two-thirds of both student samples felt debates improved their English in academic and real-life situations, helping them to "practice what [they] have learnt." Altogether, this relatively small (62 respondent) comparative study suggests that more research should be conducted about "in-class" debates for effective English-language processing, critical thinking, speaking confidence, peer interaction and fluency.

Key Words: ESL/EFL, debates, Oman, Dubai

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Introduction

The term "debate" has a general meaning as argument or discussion about specific issues that evoke differences of opinion, calling to mind intense verbal exchanges in political contests. In the ESL/EFL classroom, teachers have found ways to formulate and structure differing opinions in a parliamentary type of "in-class" debate which can improve many aspects of students' English-language proficiency and create more confidence in public speaking skills. Recent studies suggest that these skills can add strength to language components that students have already mastered, leading to better in-depth understanding of content, analytical writing, and critical thinking in argumentation.

The basic aspects of "formal" debate include the division of students into two teams—one affirmative and one negative—that will debate a resolution/proposition of the three basic types of fact, value, and policy by giving speeches that have time-limits, including limits for intervals between speeches. Other participants include a debate chairperson, a time-keeper, several judges, and an audience. After the debate is concluded, the judges discuss the major relevant points and designate a winner. The process models an orderly way to present evidence about a specific issue in a competitive format and to select a winning argument.

However, in many cultures where consensus is valued, students might feel discomfort with oppositional positive and negative stances that seem to eliminate any possibility for compromise. Recently, some researchers have suggested that confrontational "either-or" discussions are somewhat culturally specific and not always appropriate for all ESL/EFL learners in all countries. Despite this reservation, educators worldwide in ESL/EFL contexts have found skills honed in debate can greatly assist students' progress in reading, writing, listening, and, most particularly, speaking in English. Additionally, several observers caution that students with under-developed skills in argumentation might be at a disadvantage in the globalized marketplace thus making debate training even more necessary and desirable.

Possibly because of this concern and acceptance of the communicative language approach, use of debate seems to have grown more popular in recent years. Notably, debate is a well-explained category in many textbooks and "how to" articles, that are often linked with modified debate structures, topical dialogues, and "Socratic" questioning. Initially, to deal with some educators' reservations about debate in the past, teachers and researchers created adaptations. In their popular student-centered book, Lubetsky, Lebeau and Harrington (2007) tackled the issue of the suitability of debates for many types of basic-level learners, including ESL/EFL students, with incremental and effective "step-by-step techniques" in their teaching and research (p. ii). This approach showed that, although teachers are challenged to engage their students at all levels within large class debates, they can divide responsibilities within each in-class debate team and adapt material when needed so all students can benefit. As Lustigova (2011) points out, topics can be "consistently targeted to the language level and background interests of the class" (p. 22), yet she has found students usually accept responsibility for both individual and group work as part of a team.

In addition, in modified debate formats at a slightly higher level, some educators require students to switch sides and argue for an opposing view which exposes them to other aspects of a contentious issue. Overall, these strategies enable the development of better evaluation skills by students that can be employed to separate biased opinion from fact and logical sequences from flawed reasoning. With more practice and modifications, many ESL/EFL teachers feel strongly

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that debate improves all English language skills along with critical thinking and enables students to better assess the strengths/weaknesses in their own and others' use of evidence in propositions, rebuttals, speeches, and other forms of persuasive speaking and writing. Unfortunately, "in-class" debate in Middle Eastern university courses has been largely both under-utilized and under-researched. This could be due to the differences between Anglophone and Arab cultures, as well as cultural sensitivity that could cause discomfort when discussing controversial debate topics within Arabian contexts. The perceived reluctance to introduce a debate component in courses by teachers could be due to the prevalence of teacher-centered methodologies in the region that give authority to teachers as the main imparters of knowledge. Hence, this study explores the use of debates from the point of view of students in the region to discover their actual experiences and feelings about them, along with specific benefits they can identify after participation in debates.

Background of Student Participant Populations at SQU and AUD

Qaboos University (SQU), the national university of the Sultanate of Oman, was founded in 1986 as part of education reforms first begun in 1970. The university draws a student body of young Omani men and women from all regions of the country. Most of them are graduates of Omani public schools. Within that population, there is ethnic and language diversity due to the historical/geographical position of the country and its 2,092 kilometer coastline. Though Arabic is the sultanate's official language, many Omanis might speak one of ten other languages as a first language. However, English has long been "regarded as essential for the country's modernization, its acquisition of knowledge of science and technology, and its communication with the rest of the world" (Al-Mahrooqi & Tabakow, 2013:1). In fact, teaching of most specializations in Omani higher education, public or private, is conducted in English, and students strive to develop proficiency to meet their own and the national goals. As an additional factor, almost all Omani students at SQU have a government scholarship that is dependent on making good progress in their studies and maintaining a satisfactory GPA, thereby giving added incentive to continually improve their English proficiency. Broadly characteristic of SQU students, also, is their cultural propensity to be polite and emphasize cooperation in team projects. Therefore, it has been claimed that Omani students tend to look for elements in group projects that all members of a team would agree upon, consent to, and support.

The American University in Dubai (AUD) in the United Arab Emirates is a modest-size private university which has a multi-ethnic, multi-cultural student body that has been a characteristic since its founding in 1995. As noted in the university's *2012-2013 Undergraduate Catalog*, there were more than eighty nationalities represented in 2002 alone, which represents a microcosm of the diversity of Dubai's general population, and around one hundred different nationalities by 2012. Because of this diversity in an English-language based institution with US standard course offerings, students recognize the need to develop their speaking, listening, reading, writing, and research skills to succeed academically and find suitable employment after graduation. Some students have academic scholarships, such as those scholarships available in design, engineering, or architecture, but most paying students attend AUD because they recognize English as a *lingua franca* and feel it is necessary to their future advancement in their chosen profession, regardless of their nationality, first-language status, and previous education. In relation to the current study, there are, according to self-report data, many students at AUD

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from "consensus" cultures in which an effort is expected from individuals to find common ground with others in a group, which might affect team dynamics related to debate.

Review of Literature

Debate and Active Learning

When thinking of "debate," one might recall secondary-school or university competitive debate teams. However, keeping in mind Toulmin's (1958, 2003) broadened conception of argumentation, debate has a surprisingly malleable structure and, like writing position papers, has been adapted in teaching many different subjects in the social and biological sciences, in addition to economics, marketing, nursing, and dentistry (Kennedy, 2007). This is not surprising because, as Kearney (2014) states, "contemporary debate's emphasis on the real world" and relevant topics (p. 4). "In-class" debate has been the subject of much additional research along with increased usage in a number of disciplines, and Louden (2010) suggests that "in-class debate provides a competitive incentive for finding as many innovative and unique approaches to a problem as possible" (p. 305) and conceives of it as "an integrative experience that helps students to do the work of weaving together…seemingly] fragmented components" (p. 292) when doing their own research on topics. As a classroom model, it offers "hands on" learning that uses a variety of skills to engage all students, and studies suggest that the student centeredness of "in-class" debate creates a more effective learning environment.

Gravitt (2008) reports that a "test case" of applying a debate format among "construction law" students improved their understanding of "real industry applications beyond the example cases in the text" (pp. 1-2). This might be because a majority of students prefer active, participatory learning situations, such as Gravitt's "alternative dispute resolution" methods provided by her debate format, as opposed to passive ones. Zare and Othman (2013) say "flourishing classrooms involve interactive learning" (p. 1507). In fact, Rao (2010) found "positive correlations between debates and short and long-term learning outcomes" among business students taking human resource management classes in the United States (pp. 234-235). The versatility of debates allows a student who is actively listening and participating to find many routes to understand a topic. Aclan and Abdul Aziz (2015) emphasize that "debate's interactive nature requiring contextualized and meaningful language use from preparation to actual debate" is critical to students' futures in the global workplace (p. 102).

Debate and Critical Thinking

Critical thinking (CT) has been defined as a "general term given to a wide range of cognitive skills and intellectual dispositions needed to effectively identify, analyze, and evaluate arguments and truth claims" and is characterized by "disciplined thinking governed by clear intellectual standards" (Bassham, Irwin, Nardone, & Wallace, 2005:28). Most educators see CT as a necessary attribute in order to successfully engage in debate, and many classify it as a vital objective, particularly in technological fields (Bissell & Lemons, 2006; Scott, 2008;). Indeed, researchers have suggested that debate structure actually forces students to consider and weigh alternative views and information by employing critical thinking (Freeley & Steinberg, 2012). Other research suggests that the process of debate causes students to look carefully at "multiple viewpoints" before making a judgment, whether for individual understanding or to influence others. In fact, Vo and Morris (2006) reiterate educators' awareness that, even though some

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emphasis might be on "short term" interest in accessing information, particular emphasis "should be tempered with the long-term goal of training the mind to think analytically and critically" (p. 16). Furthermore, Hall (2011) acknowledges that "structured classroom debates" promote more analytical thinking in the "development of problem-solving skills" beyond an immediate problem or situation among healthcare professionals as well (p. 2). She emphasizes that such "debates move students beyond the memorization and superficial application of theories, techniques, and evidence to actively integrating and applying… materials under an array of situations" (p. 3). Indeed, the acceleration of changes in a variety of fields worldwide is "likely to continue", and educators need "to focus less on teaching facts and more on teaching students how to use information" that they can access (Kennedy, 2009, p. 2). As Rear (2010) observed, debates are also "centered on… functions that the students would find pertinent once they entered the world of work" (p. 2).

Some Pedagogical/Cultural Objections to Debate

Tumposky (2004) highlights cultural issues in raising objections to the confrontational nature of debate with its "yes or no" final outcome or judgment and suggests that debate's structure, such as in-class debate, might encourage students to "oversimplify and misrepresent" information to reinforce an assigned argumentative position (p. 54). In addition, she cites previous studies indicating that adversarial argumentation is unfamiliar and uncomfortable for some student populations, as witnessed in Clinchy's (2002) research regarding female students. Aspects of many female students' behavior included a tendency "to silence" when faced with discussion/dialogue and ready acceptance of "received knowledge" from external authorities. For these reasons, Clinchy emphasizes the importance of college teachers' messages to students to "move beyond received knowing and on to more active, reflective…thinking" (p. 69).

Nisbett (2003) calls attention to societal and cultural learning styles, particularly between categories of "Western" and "Asian" students, and showed that "very different systems of perception and thought exist - and have existed for thousands of years" (p. xxi). These differences, the author claims, cause some Asians, such as Chinese and Japanese students, to focus on "harmonious relations with the group" which creates a tendency to judge behavior and speech contextually and avoid differences of opinion. He maintains that Westerners, in contrast, generally "value individual distinction" with their personal initiatives encouraged (p. 63). Therefore, Nisbett argues that Westerners feel more comfortable giving opinions and supporting them than Asian students; furthermore, he claims "Debate is almost as uncommon in modern Asia as in ancient China. In fact, the whole rhetoric of argumentation that is second nature to Westerners is largely absent" (p. 73). Supporting this stance, Murray (2003) characterized this alternate view as "differing profoundly from the West's" (p. 397).

However, many Asian educators and researchers have a contrasting evaluation of this perception. Kubota (2004) observes that this culturally specific model in regard to Asian thinking emphasizes a "fixed" view of Far-Eastern, specifically Japanese, culture and is often "produced in discourses that embody politics and struggles for power" that border on stereotyping (p. 1). Alluding to this controversy, McKinley (2013) emphasizes the fact that "Western interpretations, maintaining the negative stereotypes of 'passive' or 'silent' or 'uncritical' East Asian students, are no longer appropriate" (p. 97) and pointedly suggests that greater observation and real understanding is necessary. In addition, Lu (2013) states that, in Taiwan, much emphasis is placed "on English-proficiency levels among Taiwanese college students" and competition about

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scores/levels with other Asian countries, such as Korea, therefore overshadow the need for developing critical thinking skills even though Taiwan recognizes "the key role of English in the processes of globalization and… internationalization of higher education" (p. 9). Issues related to Lu's (2013) contention were raised by McLaughlin and Moore (2013) in their evaluation of critical thinking in essays. The authors claim that it is easier to mark essays on grammatical "correctness" than on "logical development" or consideration of "alternative views" (p 145-146). However, these are some typical college-level academic/critical-thinking expectations in first-year writing courses. Amid this ongoing debate, Song and Cadman (2012) have recently stressed that "human beings have the capacity to learn" so there is a need to "grow in understanding each other's ways of knowing about the world" (p. 11) and "bridge the cultural divides that come into focus as these… intersect" (p. 7). In fact, the authors point out that the goal is "to come to terms with the conceptual frames that we ourselves are operating within" (p. 12). Many other researchers state that, even though some aspects of debate emphasize opposition and confrontational stances, it is necessary in a rapidly changing world for students to have an adequate understanding of assessment, critiques, and persuasive strategies to become economically competitive. This is further emphasized in the recent Council on Aid to Education report by Benjamin et al. (2013) which states that higher education is meeting the demands of the marketplace with "less emphasis… on content-specific knowledge and more… on critical thinking skills, such as analytic and quantitative reasoning, problem-solving, and written communication" (p. 3). Of course, these are all promoted and enhanced in the process of using "in-class" debates.

Teaching Academic Expectations and Critical Thinking (CT)

Much discussion in the literature is about how to recognize and focus on key elements of critical thinking, as well as the question of whether or not critical thinking can be taught. A recent study on critical thinking instruction by Tiruneh, Verburgh, and Elen (2014) suggests that, overall, there is little agreement about specific modes of instruction or "the conditions under which instruction could result in greater CT outcomes" (p. 1). Nevertheless, Lu (2013) reported improved CT scores with intercultural "theme-based content" requiring students "to link their learning to…personal experiences through writing assignments" among 50 first-year medical students (p. 20). However, while acknowledging an inconclusive trend in some published studies about teaching CT, Mehta and Al-Mahrooqi (2014) support the idea that "continuous practice, both oral and written, provide opportunities for ESL/EFL students to develop their critical thinking abilities" (p. 1) while noting students' own products need to be examined, along with contextualizing students' struggles with "confidence…reflected in the choice of words and tone adopted for argumentative essays" (p. 12).

Methodology

Research Goals and Sample Populations

The primary research goals for this small comparison study was to examine debate's effectiveness from the perspective of students in an Arabian Gulf context. When reviewing other student-centered studies of "in-class" debate, the authors found few that focused on two separate student populations in Near Eastern/Middle Eastern countries. The current research sample was drawn from two student populations. These were first- and second-year students at Sultan Qaboos University (SQU) and at the American University in Dubai (AUD) who were taking

basic courses in an English-language sequence that had recently introduced "in-class" debate. In total, the study recruited 62 students who completed the above-mentioned "required" courses: skills-integrated "Effective Reading" at SQU and "Advanced Composition and Research" at AUD. Though there was a gender imbalance in the two student samples (31 females and 14 males from SQU and 5 females and 12 males from AUD), it should be noted that the SQU sample, at least, reflects the fact that more female students are actually enrolled in that university's English Education Department. On the other hand, the fact that more males than females were involved in the AUD sample appears somewhat of an anomaly because both the course and university in which these students are studying generally has a balanced male to female ratio.

Research Instruments and Objectives

A questionnaire consisting of 40 items was distributed to both student samples (see Addenda for the complete questionnaire). In addition, a number of students from the questionnaire phase of the research volunteered to be interviewed. Interviews featured four pre-determined, open-ended questions, and 11 SQU students and 17 AUD students volunteered to take part in the interview phase of the research.

As researchers, we were interested in learning if students would respond positively to this new tool, the "in-class" debate, which they were not likely to have encountered in their secondary-school experience. In particular, we hoped to learn how pedagogically effective debate was in terms of the 10 learning categories offered below. Furthermore, an important part of this research was exploring if there might be some cultural sensitivity to, or reservations about, the confrontational aspects of debate and if the group bond of debate "teams," even within the classroom, would contribute to a cohesiveness of purpose and social rewards for most students and positive effects on students' language confidence.

Question Groupings for Research Areas

The 40 statements featured in the questionnaire were combined into 10 categories to reflect a range of pedagogical objectives in the overall research design. Those categories were (1) debate and interpersonal skills, (2) debate and communicative skills, (3) debate, argumentation, and logical thinking, (4) debate and vocabulary learning, (5) debate and leadership, (6) debate and critical thinking, (7) debate and language practice (output), (8) debate and active participation in the classroom, (9) debate and classroom learning, and (10) attitude toward debate.

Results/Findings in Question Groupings

Overall, the results were positive, with some unlooked-for higher means in question areas anticipated to elicit only modestly positive responses along with others that might appear more problematic. For example, Group 1 had a mean of 4.31 for SQU participants and 4.18 for AUD participants for Debate and Interpersonal Skills with the interesting note that Item 4—"Debates train students to control their emotions—had a means of 3.94 for both samples. This may correlate with interview responses that focus on fear of speaking in public or shyness as the main emotion expressed by both SQU and AUD students. Responding Interview Question 4—"How does it [debate] help you personally?"—both samples listed overcoming "shyness" or "fear of presenting to an audience" as a potential benefit. One SQU student even wrote, "I got over shyness because of debates".

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Group 2 exhibits many of the highest means regarding Interpersonal and Communication Skills. For example, Item 12—"Debates improve students' speaking skills"—produced a mean from SQU students of 4.82 and 4.47 from AUD respondents, while Item 23—"Debates give students a chance to engage in real communication"—recorded means of 4.65 (SQU) and a 4.35 (AUD). This response points to the importance of speaking in English for both student populations as a recognized communication goal and tends to support responses to Interview Question 2—"What skills does it help you develop?"—which elicited 12 responses of "improves language and communication skills" from SQU and AUD students alike.

Group 3 is an illustration of the strong tendency towards high levels of agreement from both samples. For example, means for Item 3, "Debates train students to speak logically" (*M = 4.53* for SQU students and *M = 4.47* for AUD students), Item 25, "Debates teach students how to counter an argument" (*M = 4.47* and *M = 4.35*, respectively), and Item 24, "Debates teach students argumentation skills" (*M = 4.65* and *M = 4.41*, respectively) were among the highest recorded on the questionnaire. This strength of agreement is reflected in SQU's and AUD's final overall means of 4.49 and 4.25, respectively.

Group 4 focuses on Debate and Vocabulary Learning with an overall mean of 4.24 (SQU) and 3.97 (AUD) which indicates a more muted response level than reported in Group 3. Item 77—"Debates improve students' vocabulary acquisition"—recorded means of 4.24 (SQU) and 4.00 (AUD) and generally support responses to Interview Question 1—"What do you think about debate? In reply to this question, participants offered responses including "gives practice and improves language" and "improves learning and understanding abilities."

Group 5 concentrates on Debate and Leadership and has an overall mean of 4.37 (SQU) and 4.16 (AUD). Here, Item 38—"Debates give students a chance to prove themselves"—recorded a mean of 4.59 for SQU and 4.29 for AUD respondents. This result again supports responses to Interview Question 4—"How does it [debate] help you personally?"—with responses of "raises confidence." This response was recorded five times from the SQU sample and 2 times for AUD.

Group 6 deals with Debate and Critical Thinking and has an overall mean of 4.47 (SQU) and 4.09 (AUD). This result is generally supported by responses to Interview Question 2—"What skills does it help you develop?" Responses here included "promotes critical thinking," which was recorded four times from both SQU's and AUD's student sample. Other responses included "challenges and criticizes different viewpoints" from AUD students and "creates awareness of thoughts and ideas" offered by SQU participants.

Group 7 focuses on Debate and Language Practice (Output) and produced an overall mean of 4.30 for SQU and 4.12 from AUD respondents. Examples of items include Item 11—"Debates put into practice what students have learnt"—which received one of the lower means for both SQU and AUD students of 3.94. This group also contains Item 13—"Debates give students the opportunity to discuss important topics in English"—that received a mean of 4.47 from SQU students and 4.18 from AUD students. These means again receive support from participant responses to Interview Question 4—"How does it help you personally?" Responses here included "aids in expressing my opinion," "teaches me different styles of communication," and "helped me speak in front of a large audience."

Group 8 treats Debate and Active Participation in the Classroom with overall means of 4.20 for SQU students and 4.03 for AUD students and features Item 20 –"Debates make students more active in the classroom"—which received means of 4.29 (SQU) and 4.12 (AUD). Responses to Interview Question 3—"What are its advantages in general?"—again supported

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these findings and included "gives more chances for students to participate," "use of teamwork and cooperation," and "share thoughts and opinions." These were recorded between 1 and 3 times each.

Group 9 is concerned with Debate and Classroom Learning and has an overall mean of 4.26 for SQU and 4.30 for AUD samples respectively. This group features Item 21 –"Debates enrich the language classroom"—which received means of 4.47 (SQU) and 4.12 (AUD). This may find support in responses to Interview Question 4 –"How does it help you personally?" Responses here included "benefits me from other's thoughts and ways of thinking" and "aids expressing my opinion"—both of which were recorded 2 times each by SQU and AUD participants. For AUD students, other responses that add support to this mean include "helps me understand the topics and how [they] affect my opinion" and "develops mental flexibility."

Group 10 regards Attitude toward Debate and produced overall means of 4.53 for SQU and 4.35 for AUD students, featuring only Item 34—"I enjoy taking part in debates." The positive interpretation of this result relates to a number of interview comments, including responses to Interview Question 1—"What do you think about debate?" These include, "It is more useful than tests and exams, especially in the reading class" (SQU), and "It benefits the audience and debates themselves more than it would if they [students] were simply reading an article" (AUD). Possibly feeding into the positive means also was regional concerns about "open discussion" as 7 AUD students mentioned: "The debates were very helpful because they allowed the classmates to share their knowledge and opinion about political topics." This is an issue that is particularly sensitive in a number of Arab nations.

Conclusion

In drawing conclusions from our comparative study, we were surprised by the students' positive responses that were higher than expected to the use of debate in courses in this part of the Arabian Gulf. Interestingly, both student population samples showed a very strong level of agreement to a number of items, such as Question 1—"Debates improve students' social skills." This might be interpreted as agreement that they felt social interaction within their debate teams, or even within their classrooms, was satisfying and stimulating. Other items that elicited high levels of agreement were "Debates train students to speak logically" and "Debates improve students' speaking skills." The latter is likely related to a frequently expressed and noted issue pointed out by Arslan (2013) that students seek to "facilitate interaction with each other and with authentic materials in real life situations" because of "a shortage of opportunities for extended spoken communication both within and outside" the classroom (p. 28). It may also be related to a relatively high means (*M = 4.35 and M = 4.29* for SQU and AUD, respectively) for the item—"Debates encourage polite and appropriate cross-gender interaction"—as this can be somewhat sensitive in this part of the world. As a note on reservations about this, three students in one SQU emphasized agreement to the statement—"Debate face-to-face with the other gender is against our culture and even religion"—thereby signaling that some individual students are troubled by this aspect of debate in mixed-gender classes.

Some items that recorded lower response means by both student samples included Question 11—"Debates help students put into practice what they have learnt"—which might indicate that these learners in the first two years of their university studies may feel they have not learned or mastered as much as they had anticipated when taking these first/second-year courses. Indeed, both samples mentioned challenges and suggested improvements associated with their reading and research skills. In addition, lower-mean responses to the item—"Debates make students feel

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more responsible for their learning and participation"—may reflect a certain level of perceived challenge and, even, anxiety about that very learning and responsibility. Clearly, some of the results suggest the need to elicit more specific responses to separate factors that may be at work among these student populations and to study larger samples from this region. There are implications for future research in the fact that, though there were few apparent differences in data from both genders in each sample, more female students than males were enrolled in SQU's English Education Program from which the sample was drawn and which offered some of the highest means in the study. This might signal changing views among educated Omani women as prospective teachers with an important job to do or among modern Omani women as a whole. This is an area that could benefit from future exploration.

Because we did not find a great deal of correspondence between our student samples' results and projections of "consensus culture" discomfort with the confrontational aspects of debate that has been reported elsewhere, we have concluded that many of these students believe debate contributes to the improvement of their English-language proficiency and individual language-confidence and this has helped them overcome any form of cultural sensitivity related to the practice. Among SQU students, this finding might be related to students' perceptions that, while on government scholarships, they are not only advancing their own personal goals by improving their English but also promoting Omani national goals. For the AUD students, we surmise that they, too, are directing their energies toward English-language proficiency and the ultimate goal of graduation; thus, it might be that their responses to the questionnaires and comments in the interviews reflect the great mix of nationalities and first-language groups that are "goal-driven" and so do not all share discomfort/reluctance in being critical of another debate team's arguments and evidence or in being overly anxious about their own performance.

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Trade Openness and Spatial Inequality: Evidence from ASEAN9

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Abstract

Income inequality has been extensively studied by economists for several decades. However, there are considerably few studies on spatial inequality, which refers to the inequality in the economic and social indicators of well-being across geographical units within countries, have been conducted because of the limited within-country income data; as a result, the relationship between income and spatial inequality remains poorly understood. This study uses the satellite night images of light density as a proxy of spatial inequality and determined whether changes in trade openness were essential for the evolution of spatial disparities in ASEAN countries from 1992 to 2010. Two different measures of inequality are employed: Gini and Theil indices. Using static and dynamic panel data analyses to separate short- and long-term results, we find that an increase in international trade can lead to a high short-term spatial inequality; nevertheless, trade openness exhibits a long-term association with spatial inequality to a less extent. Therefore, short-term spatial inequalities resulting from changes in trade openness are persistent when these inequalities occur for a long time. This conclusion may reinforce pre-existing inequality in each ASEAN country.

Keywords: Trade Openness, Spatial Inequality, Theil, Gini

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Introduction

Over the past three decades, international trade has been considered as one of the key features of globalization. World trade increased from 38.8% of GDP in 1990 to 55.6% in 2010 (World Bank, 2009). In ASEAN countries, trade openness evolution has shown an increasing trend since the last decade.

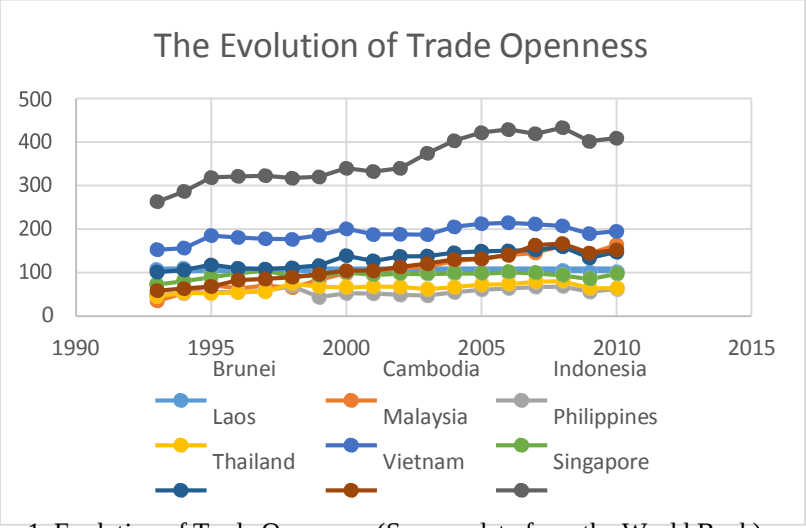

Figure 1: Evolution of Trade Openness. (Source: data from the World Bank)

International trade can lead to considerable spatial inequality, which is defined as the inequality in the economic and social indicators of well-being across geographical units within countries. International trade particularly causes economic agglomeration in geographic areas benefitting from trade; these areas include those located near seaports, airports, and industrial estates. Figure 2 illustrates the GDP densities of Thailand, Myanmar, and Vietnam. The dark colors represent high values, which are concentrated in the economic center of each country. Thailand's GDP is significantly concentrated in Bangkok and Rayong, where numerous international airports, seaports, and industrial estates are located.

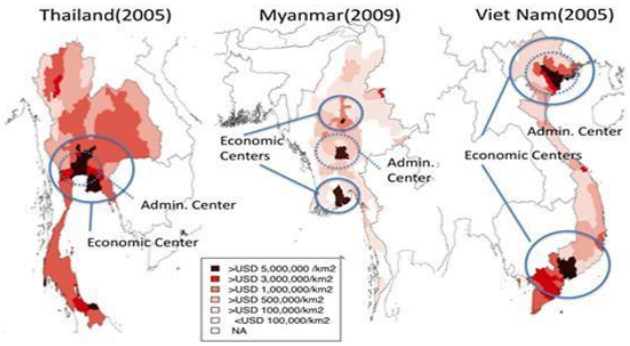

Figure 2 Geographical concentration of economic activities in several countries Source: Institute of Developing Economies (IDE-JETRO)

Spatial inequality is an urgent economic issue that should be raised because this issue leads to migration from suburban areas to cities. As a consequence, immigrants become second-class citizens in cities while they work in an assembly line and live in congested or poor-quality residence instead of first-class citizens working in familiar areas in their hometown. Several immigrants also cannot find jobs in cities because of limited competence in certain skills. A few of these immigrants later become homeless, several immigrants resort to prostitution, a few immigrants commit suicide, and other immigrants become involved in activities promoting social unrest. Therefore, economic agglomeration encourages people in suburban areas to leave the agriculture sector in favor of the industrial sector. As a result, these individuals are at a risk of becoming permanent second-class citizens.

The evolution of spatial disparities can result in permanent inequality; however, lagging regions unlikely keep pace with leading regions particularly when disparities occur in countries with high levels of spatial inequality. Therefore, trade openness may strengthen pre-existing social, political, cultural, and ethnic divides; as a consequence, national unity and social stability are threatened.

Several economists concurred that spatial inequality may be essential for a short time but not for a long time. On the basis of theoretical principles, Kuznets (1955) and Lucas (2000) suggested that the nature of growth unlikely appears simultaneously everywhere, and income inequality is related to spatial inequality; thus, spatial inequality should occur when a country facilitates development but then experiences downfall when a certain development stage is reached. However, this condition remains true when spillovers are sufficiently strong to transmit growth and technological progress across regions. This idea is reinforced by empirical studies from developed countries where a considerably small gap exists between urban and rural inequalities caused by development; in this case, international trade is at the center. Nevertheless, evidence from developing countries remains insufficient; as such, studies have yet to determine whether the conclusion from studies in developed countries is similar to that in developing countries. Therefore, the perspective of eliminating spatial disparities should be considered.

Studies related to the relationship between international trade and spatial disparity likely focus on developed countries because within-country level data are accessible, particularly in the case of the European Union (EU) (Barrios and Strobl, 2009). Limited evidence has also been obtained from developing countries because of the insufficient within-country income data and the disturbance of economic activities in the informal sector. Hence, the relationship between international trade and spatial inequality is inconclusive.

This study uses the satellite night images of light density to provide spatially within-country differences defined as "nightlight spatial inequality." In ASEAN countries, nightlights can efficiently proxy the diffusion of economic activities (Chaiwat, 2013). The areas with a high degree of economic activity likely exhibit a high light intensity.

Nightlight data (NL) are collected in a raster image form by using Defense Meteorological Satellite Program (DMSP) and Department of Defense program, and NL data are provided by NOAA's Earth Observation Group, a sub-organization of NASA. Figure 3 illustrates the image of light at night in 2010. Light is dense in the eastern US and

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Asia, western Europe, southern Africa, and northern and southwestern India. This analysis has clipped an image in the ASEAN region. The image is at the global level of lights generated mostly by human activities; thus, light from the sun, moon, aurorae, forest fires, and clouds has been removed algorithmically. Luminosity or light intensity is a digital number between 0 and 63, where zero represents no light and 63 refers to maximum light. This study uses nightlights to proxy spatial inequality.

This study presents and evaluates an alternative conjecture that focuses on the relationship between international trade and spatial inequality by using a sample set of nine ASEAN countries, particularly Brunei, Cambodia, the Philippines, Indonesia, Malaysia, Laos, Thailand, Singapore, and Vietnam. Myanmar is excluded from the analysis because of inadequate data in this country. This thesis focuses on whether changes in trade openness should be considered essential for the evolution of spatial disparities and whether this association changes over time. Two different measures of inequality are employed: (1) Theil, which allows the parsing of inequality in a group and between group components; and (2) Gini, which allows direct comparison between the units with different population sizes. The analyses are estimated by running balanced static and dynamic panel data covering the period between 1992 and 2010 when data availability is the same in all countries.

Data are analyzed by running balanced static panels with country and time fixed effects to address whether the evolution of trade openness is related to the evolution of spatial inequality in a short term. The other part of the analysis is devoted to assess whether this relationship changes over time. Dynamic panel estimation is employed to differentiate the short- and long-term effects. The findings indicate that an increase in international trade can lead to high spatial inequality in a short term; however, trade openness is less associated for a long time. Therefore, short-term spatial inequality as a result of the changes in trade openness is persistent for a long time. This conclusion may reinforce pre-existing inequality in each ASEAN country.

This paper is organized as follows. Section 2 presents the literature review. Section 3 provides the methodology, including detailed data and spatial inequality measures, and presents basic correlations. Section 4 reports the results of the static and dynamic analyses associating trade openness with spatial inequality across the nine ASEAN countries. The last section summarizes the findings and policy implications and discusses topics for future studies.

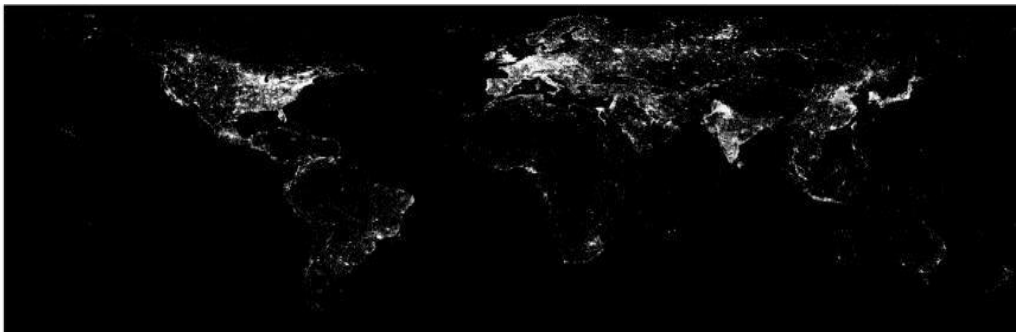

Figure 3 Satellite image of the Earth at night from NOAA Earth Observation Group, 2010. Source: NOAA Earth Observation Group, 2010

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Literature Review

Trade and Inequality

Globalization may either encourage or discourage spatial inequality. The fact that several regions may gain more than other regions allows external trade to increase spatial inequality. In neoclassic economics, spatial inequality determined by international trade is likely to increase if regions exhibit different comparative advantages. Regions with natural resources for exports, such as coasts, transportation networks, and proximity to rivers, likely benefit more from international trade than those that lack these resources. In terms of increasing returns, spatial inequality increases possibly because a few regions remain more dependent on domestic trade; by contrast, other regions benefit from the increasing returns as a result of international trade.

Puga and Venables (1999) suggested that trade liberalization may reduce spatial inequality over time. Once industries concentrate in one region, the wage in this region is higher than that in underdeveloped regions; thus, a wage gap is generated. Industries will then migrate to one of the lagging regions. Over time, economic agglomeration will be distributed to the lagging regions. In the aforementioned researchers' model, both trade liberalization, which discourages tariff; and import substitution policy, which encourages tariff, are mechanisms that facilitate the migration of industries to lagging regions. However, the welfare levels are higher under the trade liberalization scenario than those of import substitution.

Krugman and Livas (1996) demonstrated that foreign trade may also reduce urban inequality. In particular, urban inequality factors (forward and backward linkages) are counterbalanced by transportation costs and land rental. An equilibrium is the concentration of industries in one primate area when tariff rates for international trade are prohibitively high. Given this assumption, firms and workers concentrated in one primate city produce significant forward and backward linkages to offset the urban congestion costs.

Spatial Inequality

Both theoretical and empirical studies on the factors determining spatial agglomeration have emerged in recent years (Henderson and Thisse, 2004). Although theoretical studies tend to highlight the micro-foundations of spatial agglomerations, empirical studies take advantage of the advances in empirical methods that have considerably expanded the quality of empirical evidence on agglomeration economies.

Spatial inequality is fundamentally determined by the location decisions of firms and households. Although firms select locations to maximize profits, households do so to maximize job market outcomes and utility. Both firms and households care about the quality of their respective regional and urban environments. However, a unified theory of spatial location decision has yet to be developed (Fujita et al., 1999; Fujita and Thisse, 2002; Berliant, 2007).

Economic geography is divided into two fields, namely, regional and urban economics (Kim and Margo, 2004). The regional models that possess a regional–urban perspective have been discredited because of inadequate theoretical foundation. Regional models are also fundamentally based on international trade models. By contrast, urban models lack a useful dimension for regional location decisions. According to Handerson's (1974) model, cities are

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defined as islands with different scales. The distribution sizes of cities are being discussed among urban economists.

In the revision of economic geography theories, Kim (2008) demonstrated that theoretical advancements in increasing return models in recent years reflect a plethora of traditional concepts. For example, Marshallian externalities (emphasizing technological spillovers, labor market pooling, and access to non-traded intermediate inputs) and non-pecuniary externalities (focusing on forward and backward linkages and market size) have clarified the forces of spatial agglomeration and dispersion. Therefore, spatial inequality is the net result of the balance of forces of concentration and dispersion. The regional perspective has suggested that the centripetal forces of geographic concentration are naturally advantageous. The centrifugal forces of dispersion are the immobility of factors and goods caused by high transportation and communications costs. The urban perspective has suggested that the most important difference is the addition of new costs of concentration in the form of congestion costs caused by the fixed land supply. Concentration leads to increased housing and commuting costs, as well as costs caused by numerous crime, pollution, and exposure to disease.

Only a few methods are used to measure regional inequality. The simplest and most extensively used measure is the location Gini coefficient (Krugman, 1991). Its application is similar to the Gini coefficient used to measure household income inequality but in the geographic activity concentration dimension. Moreover, Ellison and Glaeser (1997) proposed an alternative measure that corrects an industry's scale economy. Brülhart and Traeger (2005) suggested that entropy indices are decomposable into within-region and between-regions components. To measure urban inequality, urban productivity and the size distribution of cities are placed at the center. Differences in wages and productivity measure urban inequality because both wages and productivity are generally positively correlated with city sizes. Urban inequality is also often measured using the rank–size distribution of cities. In particular, urban primacy or the urban population concentration in the largest cities is often used as a measure of urban inequality. However, a measure that relates urban inequality with regional inequality is still lacking.

Based on the nature of geography, the development of spatial inequalities is related to both neoclassical and increasing returns models. The neoclassical model focuses on the role of resources endowments and geographic proximity to rivers and ports. By contrast, the increasing returns model focuses on the density of human interactions. Economic development allows regions to benefit from the nature of geography; thus, spatial inequality may be beneficial because productivity increases. Nevertheless, spatial inequality in the form of excessive urban concentration or urban primacy may be detrimental because congestion costs are not internalized by individuals. Therefore, the theory suggests that an optimal level of spatial inequality is present (Kim, 2008)

Evidence of Spatial Inequality in Developing Countries

The concept of regional inequality is quite challenging because studies vary in terms of indices of geographic concentration, geographic units of observation, as well as theoretical motivation and empirical specifications. Moreover, international cross-sectional, or panel analysis, either in the urban inequality literature, or the household income literature are considerably rare; thus, constructing inequality measures to compare across countries is difficult. Consequently, the literature on regional inequality is dominated by country-specific

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studies. Nevertheless, the review of various developed and developing countries may facilitate comparisons. However, evidence for developing countries is often based on survey data because of the scarcity of reliable data in these countries. Evidence on spatial inequality is also highly varied probably because of poor data quality or significant variance in the economic circumstances of developing countries. The industrial patterns of spatial localization are fairly similar across many developed countries even though significant variations in the spatial inequality levels are present. In developing countries, country-specific geographic and political factors may play an out-of-balance significant role in shaping the patterns of spatial inequality in development compared to developed countries. These variations in the inequality patterns of developing countries represent significant challenges in identifying the causes of spatial inequality.

Urban/Rural Development in Developing Countries

Tacoli (1998) reported that selecting the correct combination of investments between agriculture and industry is still debatable. One party may support the agriculture sector because it can provide the surplus for industrial and urban development. The other may argue that industrial and urban growth is required for a modern and productive agricultural sector.

Modernization through Industrialization and Urbanization

The concept of development in the early 1950s focused on increasing the domestic market and investment inducement sizes. Moreover, the important components of the modernization process at that time were industrialization and urbanization. Lewis (1954) assumed that minimally marginal productivity would occur in densely populated rural settlements in developing countries; hence, agricultural productivity will not decline when labor from rural agriculture migrate to the urban industry. In the mid-1960s, the settlement of migrant workers and their families in urban areas became permanent. However, the job supply level in the manufacturing sector was clearly significantly low to absorb the increasing urban population. Therefore, initial studies on the urban informal sector were conducted because of the emergence of concerns with over-urbanization.

Structural Adjustment, Globalization, and Decentralization

An export-oriented economy, underpinned by neoclassical economics that encourages competitive free markets rolled-back governments, is a strategy for development of many developing countries. The primary commodities of export is food; "...local agricultural production will blossom and expand" (Corbridge, 1989). For a few small-scale individual farmers, agricultural inputs cost and consumer goods increase at a more rapid rate than the price of agricultural products. With the reduction of government subsidies, farmers cannot buy inputs and sell agricultural products in volume immediately after harvesting because of high transportation costs. At best, they can wait and then sell their products. Therefore, reducing both the rural–urban income gap and the rates of rural to urban migrants seems challenging because access to international markets is unequal among producers. This situation deepens inequality in cities and the countryside. Administrative decentralization also plays an important role in rural–urban associations in the 1990s to deal with international financial institutions and democratic support. In terms of policy, decentralization has continued the interest for regional development planning.

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Data and Variables

Inequality Indices

To generate the spatial inequality indices, I exploit the luminosity variations at the pixel level, which is the lowest geographical unit affordable.

Theil index

Under the context of information theory proposed by Theil (1967), the indices are calculated as follows:

$$T(1)ct = \sum_{i=1}^{n} (pit \frac{yit}{\mu ct}) \log(\frac{yit}{\mu ct})$$

where *pit* represents the grid share of level *i* in country *c* during year *t*;

yit denotes the average light intensity of level *I* during year *t*;

$\mu ct = \Sigma\, pit\, yit$; and
T(1)ct denotes the Theil's index of inequality.

Ezcurra and Rodriguez-Pose (2014) concurred that this measure offers a plethora of advantages. First, this measure is independent of scale and population size, as well as satisfies the Pigou–Dalton transfer principle (Cowell, 1995). Second, *T(1)* is additively decomposable by population subgroups (Bourguignon (1979) and Shorrocks (1980)); thus, this variable is well-recognized by the literature on territorial inequalities (Ezcurra & Rodriguez-Pose, 2009). Finally, omitting population size may immensely distort the perceptions of spatial inequality (Petrakos et al., 2005); thus, *T(1)* considers the differences in population sizes across a spatial unit. This consideration is constantly left unnoticed by studies on economic connection that have prospered since the contributions of Barro and Sala-i-Martin (1992).

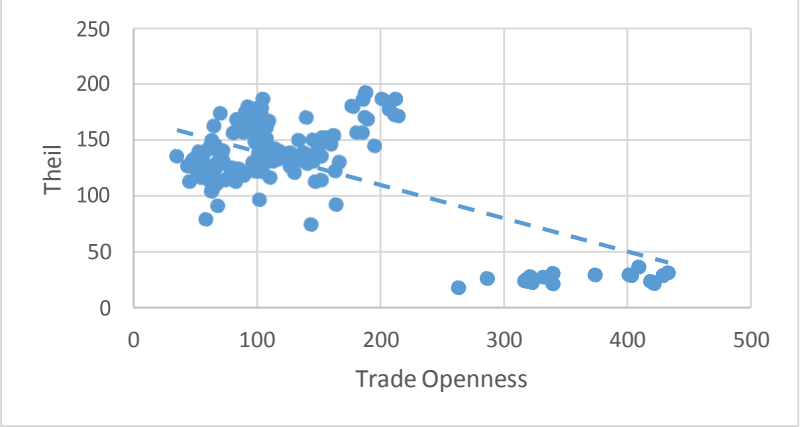

Figure 4 Preliminary relationship between trade openness and spatial inequality (Theil, 1967). Notes: Spatial inequality is measured using the Theil index and represents in (*1000 units). Trade openness is the ratio between exports plus imports and GDP

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Gini index

The Gini coefficient is the simplest and most extensively used measure to quantify spatial inequality (Krugman, 1991). This ratio's locational counterpart measures the extent to which geographic activity is concentrated because it is used to measure household income inequality (Kim, 2008).

The Gini index is defined as follows:

$$Gini = \frac{\sum_{i=1}^{n}\sum_{j=1}^{n} pipj\,|xi - xj|}{2\mu}$$

where pi and pj represent grid population share of level i and j, respectively, in country c during year t; yit and yjt denote average light intensity of level I and j, respectively, during year t; μct = Σ pit yit; and Gini denotes the Gini's index of inequality.

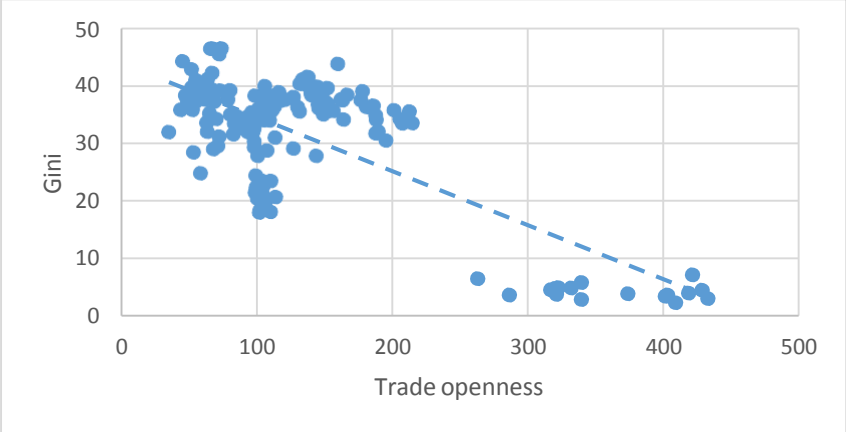

Figure 5 Preliminary relationship between trade openness and spatial inequality (GINI). Notes: Spatial inequality is measured using the Gini's index and represents in (*1000 units). Trade openness is the ratio between exports plus imports and GDP.

Figures 4 and 5 display the bivariate relationship between trade openness and spatial inequality in ASEAN countries using Theil and Gini's index of inequality, respectively. These preliminary results suggest that the openness of national economies to international trade may have spatial implications and affect the level and evolution of regional disparities within the ASEAN countries. Moreover, these results may be the result of neoclassical economics, suggesting the presence of different comparative advantages among regions. Therefore, regions that have natural resources critical for exports, such as coasts, transportation networks, and proximity to rivers, are more likely to benefit from external trade than lagging regions do. An increasing return perspective also suggests that this phenomenon is caused by several regions remaining more reliant on autarkic trade, while others gain increasing returns from trade openness. However, certain country-specific characteristics have also been identified in the literature as factors enhancing or diminishing the influence of trade openness on regional

inequality (as presented in Table 1, Appendix). A considerably extensive detail will be examined in the next section.

Control variables

In the literature, country-specific characteristics have been identified as factors enhancing/diminishing the influence of trade openness on spatial inequality.

Urban Population (+) A shift from rural locations to cities, which is associated with a shift from agricultural to manufacturing and service sectors, will impinge upon the costs of trade, provided that the infrastructure concentration is essential for international trade activities. This case implies that trade is a primary factor of spatial inequality. Urban population is expressed as the percentage of the total population living in urban areas. The higher the urban population percentage, the less spatial distribution of international trade benefits. Therefore, urban population encourages spatial inequality (Source: World Development Indicators).

Polity2 (−) Inefficient institutions caused by rampant corruption and pervasive rent seeking by durable local elites are barriers to wealth diffusion from international trade. Polity2 is expressed as the revised combined Polity score of Polity IV databases (Marshall and Jaggers, 2005). This process combines the scores for constraints on the chief executive, competitiveness of political participation, and openness and competitiveness of executive recruitment. The scores range from −10 to +10, where the +10 spectrum indicates more democratic institutions. The more democratic the institutions, the less influence trade openness exerts in spatial dimension. Therefore, polity2 decreases spatial inequality (Source: Polity Project).

Government Size (−) A government with a considerable social and territorial redistributive capacity through public policies will have a sturdy position to transfer the benefits of international trade from prosperous regions to lagging ones, thereby leading to low influence on spatial inequality. Government size is defined as the total government consumption as a percentage of the national GDP. The variable is expressed at 2005 constant prices. The higher the government expenditure percentage, the more considerable the spatial redistributive capacity; thus, spatial disparities decrease (Source: Penn World Tables 7.1).

Life Expectancy (+) Life expectancy at birth indicates the number of years a newborn infant would live if the prevailing mortality patterns at the time of birth were to remain constant throughout his/her life. The differences in the distribution of human capital can be envisaged that the greater the spatial differences, the greater the influence of trade openness in spatial dimension (Source: CEIC database).

GDP in Purchasing Power Parity (+) GDP per capita based on purchasing power parity (PPP). PPP GDP is GDP converted to international dollars using PPP rates. An international dollar has the same purchasing power over GDP as the US dollar has in the US. Hence, GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the products' value. GDP is calculated without making deductions for depreciation of

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fabricated assets or for depletion and degradation of natural resources**.** The ASEAN countries' respective GDPs have been mainly driven by industrialization in urban areas.

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Consequently, migration occurred from rural to urban areas, and urban population increased at a higher rate than the rural population, thereby resulting in rapid urbanization with widening rural–urban income disparities and worsening intra-urban income disparity. In theory, both results cause nationwide inequality. Therefore, the higher the GDP in PPP, the greater is the effect on spatial disparity (Source: Penn World Tables 7.1).

Population (+) Population is included to control country size because the latter can cause hidden spatial heterogeneity. Population is measured as a natural log of the total population. The larger the population, the more influence international trade exerts on spatial inequality (Source: Penn World Tables 7.1).

Agglomeration (+) Inter-regional labor mobility can be bound to influence the effect of trade openness on the distribution of wealth. The reason is that workers tend to concentrate in prime areas expecting more job opportunities, as well as higher salaries, thereby leading to considerable agglomeration that promotes spatial inequality. Agglomeration is defined as the percentage of urban population living in the largest city of a country. The higher the urban population percentage living in the largest city of the country, the less spatial distribution of wealth results from trade. Hence, agglomeration promotes spatial inequality (Source: World Development Indicators).

Paved Road and Railway Density (−) Based on a new economic geography (NEG) framework, accessibility to markets affects spatial performance. Locations with high relative access to foreign markets will attract the winners of integration, resulting in higher medium- to long-term spatial growth rates than in locations with constrained access to foreign markets. In the current study, accessibility to foreign markets are determined as two factors, namely, paved-road density, which is calculated by the fraction of the total length of paved road over the total area of a specific country; and railway density, which is approximated by the fraction of the total length of railway over the total area of the country considered. The higher the density of paved road and railway, the lower the spatial inequality (Source: National Statistic Offices).

After we identified an appropriate set of conditioning variables capturing the relationship between international trade and internal spatial inequality, the next task is to set the model.

Methodology

Model

The overall trade openness in ASEAN countries is considered as our dependent variable in the econometric model, which is formulated as follows:

$$INQ^*ct = \alpha + \beta TRADEct + \varphi Xct + \varepsilon ct \quad (1)$$

where X is a set of control variables (Table 1) and INQ*ct is the level of inequality in country c at time t.

Rodriguez-Pose (2012) discussed that spatial inequality is bound to be a time-persistent phenomenon with a high degree of inertia. To address this potential inertia, a dynamic model with past levels of spatial inequality on the dependent variables side is formulated. The effect of both short- and long-term can be observed by using dynamic panels.

Adapting Brown's (1952) classical habit persistence model and adding inertia into the model yields

$$INQct - INQct - 1 = \lambda(INQ^*ct - INQct - 1), \quad 0 < \lambda < 1 \qquad (2)$$

where the $INQct - INQct - 1$ ratio is the actual observed change of the spatial configuration and

λ is the speed of adjustment ranging between 0 and 1. If λ is close to 1, then the adjustment is almost instantaneous and the relationship between the theoretical determinants Xct and the actual observed spatial consequences INQct is static. If λ is less than 1, then the difference between the observed spatial outcome and their inertia-free theoretical counterpart INQ*ct becomes significant, resulting in the need to control for partial adjustment in a dynamic model. Rearranging and substituting for INQ*ct yields

$$INQct = \lambda (\alpha + \beta TRADEct + \Sigma\varphi Xct + \varepsilon ct) + (1 - \lambda)INQct - 1 \qquad 0 < \lambda < 1 \qquad (3)$$

Equation (3) shows the basic specification followed in the dynamic panel regressions. The dependent variable that represents the observed inequality is on the left side of the equation, while the theoretical determinants of the inertia-free spatial configuration plus the previous value of the inequality variable are on the right. The latter effectively controls for potential inertia and partial adjustment. By fixing the previous spatial outcome $INQct - 1$, the short-term effect of any independent variable Xct is given by its revealed regression coefficient when running this equation. Conceptually, this coefficient represents the product $\lambda\beta$. The assumption for the long term is that a country's spatial configuration reaches a stable equilibrium, thereby making the current and previous year's inequality levels close to identical. Setting $INQct - 1$ equal to INQct in this equation, the long-term effect of any independent variable on the spatial configuration can be obtained by dividing the observed regression coefficient $\lambda\beta$ by the speed of the adjustment parameter λ.

The foregoing consideration leads to the transformation of equation (1) into the following empirical specification:

$$INQ^*_{ct} = \alpha + \beta TRADE_{ct} + \varphi_1 UrPop_{ct} + \varphi_2 Polity2_{ct} + \varphi_3 Govt_{ct} + \varphi_4 LifEx_{ct} + \varphi_5 GDP_{ct} + \varphi_6 \ln(Pop_{ct}) + \varphi_7 Agglomeration_{ct} + \varphi_8 Road_{ct}\&Railway_{ct} + \varepsilon_{ct} \qquad (4)$$

In the static analysis, I estimate equation (4) by running static ordinary least squares with country- and time-fixed effects. The standard errors are clustered by country. Given that all unobserved invariant country and time heterogeneity was eliminated from the model, the coefficients can be interpreted as partial effects that annual variations of independent variables around the country mean have had on annual variations of spatial inequality around the country mean.

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Findings

Static Analysis

This section attempts to assess whether trade openness has an effect on spatial inequality. The static analysis presents the results of estimating equation (4) by using both the Theil and Gini indices.

The impact of trade openness on spatial inequality: static analysis		
Dependent variable	Theil	Gini
tradeopenness	0.209***	0.0684
urbanpopulation	1.8398**	-0.0515
polity2	-0.976*	-0.673
governmentsize	-1.1624	-0.401
life_expectancy	-0.9128	0.0175
gdp_in_ppp_log	-14.697	1.9467
population_log	-6.0099***	-0.0714
agglomeration	-0.1568	0.1079
road density	-0.2972	-0.0249
Constant	318.2951***	11.6677
R-sq: within	0.2044	0.1499
Observations	162	162

Table 1: Results from the Static Analysis Note: All the regressions include a constant and the full set of control variables of the baseline model. *Significant at 10% level, **Significant at 5%, *** Significant at 1%

The result shows that trade openness is positively associated with spatial disparities at the 1 percent significance level when using the Theil index. However, no significant association exists between trade openness and the evolution of spatial inequality by using the Gini index. The reason is that the Theil index can calculate inequality both within a group and among groups, whereas Gini cannot. Therefore, Theil can calculate inequality more precisely than Gini. The implication of this result is that a 1 percent increase in trade openness may result in a 0.21 percent increase in spatial inequality. Regions or areas that have comparative advantage in infrastructure, such as areas located near seaports and industrial estates, are more likely to benefit from openness to international trade than the lagging areas that have limitation in assessment. Although several regions gain from the increasing returns that foreign trade offers, the others remain more reliant on domestic trade. Hence, the result that international trade can lead to higher spatial inequality in the short term satisfies both neoclassical economics and increasing returns theories.

Dynamic Analysis

This analysis is devoted to assess whether the relationship between trade openness and spatial inequality changes with time. The short- and long-term results can be differentiated by using the "xtabond" command in STATA to correspond to the first difference Arellano–Bond GMM estimation (Arellano & Bond, 1991); the long-term results are emphasized in this section.

The impact of trade openness on spatial inequality: dynamic analysis		
Dependent variable:Theil	Theil	Gini
Lagged Theil	293.1244***	378.517***
tradeopenness	0.1797*	0.0118
urbanpopulation	1.4775	-0.109
polity2	-0.68	-0.0931
governmentsize	-1.1952	-0.3027**
life_expectancy	-0.7709	-0.4034
gdp_in_ppp_log	-21.7877	2.5105
population_log	-2.1926	0.5282
agglomeration	-0.8468	-0.0375
road_dense	-0.2526	0.0024
railway_dense		
Observations	144	144

Table 2: Results from the Dynamic Analysis Note: All the regressions include a constant and the full set of control variables of the baseline model. *Significant at 10% level, **Significant at 5%, *** Significant at 1%

With the inclusion of lagged level on the right-hand side of equation (4), I determined that all the differences in the current levels of within-country spatial inequality are explained by previous levels of within-country inequality. The high degree of inertia inferred from the coefficient of the lagged level of spatial inequality causes the influence of international trade to be irrelevant or less relevant than in the static analysis in either using the Theil or Gini index as a dependent variable. Kuznets (1955) and Lucas (2000) suggested that spatial inequality should increase when a country started to develop and then fall when a certain level of development is reached, as long as spillovers are strong enough to transmit growth and technological progress across regions. This situation means that a decline in spatial inequality comes with the condition of spillover effect to transfer benefits from trade and technological advancement to the poor areas. Although empirical studies from developed countries reveal that external trade-led development causes a small gap between urban and rural inequalities, this finding confirms that such condition may be inapplicable for the case of developing countries. Poor countries do not possess an effective process to transfer trade benefits from primate city to the lagging ones as that in developed countries.

Conclusion and Policy Implications

This study aims to present and evaluate an alternative conjecture that focuses on the relationship between international trade and spatial inequality by using a sample set of nine ASEAN countries. To overcome the shortage of within-country income data and informal sector information, this study provides spatially within-country differences in terms of "nightlight spatial inequality" from satellite night images of light density. Two different measures of inequality are employed, namely, Theil and Gini indices.

Using static and dynamic panel data analyses to separate short- and long-term results, the findings indicate that an increase in international trade can lead to a higher spatial inequality in a short period; however, trade openness is associated with spatial inequality to a less extent as time passes. This result shows that the short-term spatial inequalities resulting from the changes in trade openness are persistent for a long time. This conclusion may reinforce pre-existing inequality in each ASEAN country.

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The result may be specific to ASEAN countries because of the types of exports and imports. Consider the case of Thailand. Table 3 presents Thailand's main exports and imports in 2013. Vehicles, computers and electronic equipment, and oil are among the top either in imports or exports. Therefore, these products are concentrated in a few specific areas and not distributed to other areas. People in suburban areas migrate to cities to find numerous jobs. This economic activity is not distributed to other areas, and the agriculture sector remains underdeveloped as a result of the economy's export-oriented structure; thus, growth diffusion has become poor. Therefore, trade openness leads to spatial inequalities because of (1) international trade in industrial commodities and (2) inefficient income distribution mechanism to lagging regions.

Exports	Imports
1. Vehicles	1. Crude oil
2. Computers and electronic equipment	7. Vehicle components
3. Oil	9. Computers and electronic equipment

Table 3 Thailand's main exports and imports in 2013

Knowledge and technology spillovers will drive economy forward; as such, the government is encouraged to support the export-oriented economy but to leave the agriculture sector behind. However, only a few production processes, such as car assembly requiring a low skill set, are transferred. This condition is attributed to cheap labor resulting from low grain prices and cheap food; thus, a relatively low cost of living is observed.

Therefore, the Thai government should pay more attention to the lagging regions, particularly in agriculture, because this institution plays a major role in providing welfare to the country; in this manner, developments in international trade will not lead to further territorial disparities. This objective can be achieved by implementing policies, such as grain price insurance, universal health coverage service, unemployment insurance, education and skill development, and risk insurance.

Instead of focusing on urban development, policymakers should also pay significant attention to rural development; thus, the government should put the agriculture sector at the center of development. Thailand's agricultural employment is from 35 percent to 50 percent; hence, a majority of workers are in this sector. In the context of international trade in the globalized era, agriculture also plays a role in global food stability. The agriculture sector will survive when farmers survive; therefore, grain prices insurance should be implemented. This case is unlike that of developed countries, such as the US, where farmers are capitalist. Farmers in developing countries need government intervention to aid in setting grain prices so that farmers will be able to thrive in the agriculture sector. Enhancing grain quality should also be supported. Furthermore, once a number of workers are concentrated in a few agricultural areas, wages in those particular areas will decrease. Thus, the government should encourage a variety of jobs in agriculture. The ageing society also necessitates that the government provide universal health coverage service to ensure that farmers obtain the health services they need without suffering financial hardship when paying for them and make the system convenient and efficient. Finally, low-skilled industry workers should have more opportunities in

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education and skills development to enable them to contribute significantly to the industry sector instead of merely engaging in assembly in factories.

This analysis provides a more complete understanding of the relationship between international trade and within-country spatial inequality in ASEAN countries where income data is inadequate and uncompleted. Further studies should focus on the different samples using nightlight spatial inequality as a proxy for inequality and other potential control variables. Pursuing this analysis provides a comprehensive view of the association between trade and spatial inequality.

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Appendix

Control Variables	Definitions	Expected Signs	Sources
Urban population	Percentage of the total population living in urban areas	+	World Development Indicators
Polity2	Combined scores for constraints on the chief executive, competitiveness of political participation, and the openness and competitiveness of executive recruitment ranging from - 10 to +10 in which +10 spectrum indicates more democratic institutions	-	Polity IV databases, Polity Project
Government size	Total government consumption as a percentage of national GDP	-	Penn World Tables 7.1
Life expectancy	Reflects the health dimension of the Human Development Index (HDI)	+	CEIC database
GDP in Purchasing Power Parity	Gross domestic product converted to international dollars using purchasing power parity rates	+	Penn World Tables 7.1
Population	Natural log of total population	+	Penn World Tables 7.1
Agglomeration	Percentage of urban population living in the largest city of the country.	+	World Development Indicators
Paved road and Railway density	The fraction of total length of paved road and railway over total areas of the specific country	-	National Statistic Office

Table 1 Set of Controlled Variables Derived from the Literature

Variable	Obs	Mean	Std. Dev.	Min	Max
Urban population	162	47.26056	25.57036	16.6016	100
Polity2	162	0.685185	5.726122	-7	9
Government size	162	9.980247	5.474901	3.12	26.5
Life expectancy	162	70.41849	5.769323	56.4541	82
GDP in purchasing power parity	162	293772.8	377578.5	5627.46	1,900,000
Population log	162	9658.924	26029.4	0.27133	97,976.6
Agglomeration	162	34.74657	27.26842	7.31846	100
Road density	162	79.86069	135.4578	9.170608	473.6

Table 2 Descriptive Statistical Table

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The Academic Profession in Europe: Changes and Challenges

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Abstract

In the past two decades, discussion about higher education issues, triggered by the changes in the higher education systems, have intensified in the wider public, as well as in scientific, professional and political circles. Issues of special focus are the increase of the number of students, strong internationalisation, examination of social and economic roles, strong pressure from the sector of industry, increased competition, changes in leadership and the influence of new technologies (Altbach, 2000, Kelly and Murphy, 2007). Mentioned changes have a strong influence on the transformation of members of the academic profession, their everyday tasks and activities. Boyer, Altbach and Whitelaw (1994) stress that academic profession is developing into a "profession under pressure". Henkel (2007, 196) warns that the age we live in is "...the age of high insecurity of the academic profession".

This paper will illustrate the results of qualitative research that aimed to establish how academics in Europe perceive changes in their work environment and analyse their connection with the redistribution of existing and the emergence of new tasks. The research was conducted in 8 European countries – Austria, Finland, Croatia, Ireland, Germany, Poland, Romania and Switzerland. The study included 497 participants.

Research results point to changes in the tasks of academics, as well as to the emergence of new tasks in the context of their everyday professional duties. This work will analyse the challenges of these new tasks that members of the academic community in Europe are facing.

Key Words: academic profession, changes in academic profession, challenges of academic profession

Introduction

In the past two decades, discussion about higher education issues, triggered by the changes in the higher education systems, have intensified in the wider public, as well as in scientific, professional and political circles. Issues of special focus are the increase of the number of students, strong internationalisation, examination of social and economic roles, strong pressure from the sector of industry, increased competition, changes in leadership and the influence of new technologies (Altbach, 2000, Kelly and Murphy, 2007). Mentioned changes have a strong influence on the transformation of members of the academic profession, their everyday tasks and activities. Boyer, Altbach and Whitelaw (1994) stress the idea that the academic profession is developing into a "profession under pressure". Henkel (2007, 196) warns that the age we live in is "...the age of high insecurity of the academic profession".

The effect of internationalisation and globalisation on universities and academic profession, as well as changes occurring in the area of higher education, have resulted in an initiative for conducting international (comparative) research of the academic profession. One of the most renowned researches on the academic profession that was conducted on an international level was carried out in the period between 1991 and 1993 with the support of *Carnegie Foundation for the Advancement of Teaching*, and it included fifteen countries (more precisely, fourteen countries and one "territory").[i] As main results of this research, Boyer, Altbach and Whitelaw (1994) point out the fact that members of the academic profession feel the closest connection to their own scientific discipline, while the feeling of belonging to the university and the evaluation of their research work role in the entire scope of their activities significantly varies from one country to another. Low satisfaction level with the models of academic work evaluation and conditions of academic institutions management was also notable, while stronger differences in attitudes were expressed in the context of work conditions evaluation. Most examinees believe international cooperation and mobility are extremely important for the development of the academic profession, however, results demonstrate that mentioned activities significantly vary in different countries. Conclusion of the analysis is that "...there are three key questions/problems that will effect (in the future) the development and vitality of higher education in the world: opportunity to access higher education and the relationship between accession opportunities and excellence criteria, managing in higher education and the relationship between teaching work, research and working in the community" (Boyer, Altbach and Whitelaw, 1994, 21).

In the major publication of Carnagie study, Altbach and Lewis (1996) presented results of national reports stressing out that: "One cannot but be struck by the many similarities among the scholars and scientists in the diverse countries. It is with regard to those working conditions most affected by local political and cultural customs and policies that international differences are most apparent. Academics worldwide are committed to teaching and research, and in varying degree to service in the community... Academics are not especially supportive of senior administrators, yet they express remarkable loyalty to the profession and to other academics. They seem prepared to respond to the call that higher education contribute more tangibly to economic development and social well-being. They believe that they have an obligation to apply their knowledge to society's problems." (Altbach and Lewis,1996, 47-48). Authors also point put that resiliency, determination, and a focus on the core functions of higher education characterise the academic profession in all fifteen countries. Given these and similar research results, authors conclude that the intellectual atmosphere is good, faculty do not regret their career choices and

are generally happy with their relationships with colleagues. They also point out that this depicts a strong, but somewhat unsettled profession. Nevertheless, they conclude "...Academics around the world are inspired by the intellectual ferment of the times. The intrinsic pleasures of academic life obviously endure. Academia is facing the future with concern but with "surprising optimism" (Altbach and Lewis, 1996, 48).

Apart from examining new movements and changes in the academic profession, Carnagie study also focused and identified some new research questions, such as - growth and importance of academic profession, internationalisation of the academic profession and changes in governance styles (Rončević and Rafajac, 2010); the relationship between teaching and research roles of academics; differences between junior and senior academics; increase of administrative responsibilities in the academic profession and the needs to connect research and wider social environment (Teichler, 1996).

Based on the perceived and defined research challenges, Carnagie study was continued in the project *The Changing Academic Profession (CAP)* that was conducted between 2005 and 2007.[ii] Bennion and Locke (2010) point out that CAP research results demonstrate that early academic career and employment conditions in seventeen countries are primarily under the influence of tradition, resources and specific governance systems, that preparation and education for higher education teachers is determined by the system, just as recruitment, rules and regulations for employment, work relations, forms and patterns of rewarding and the status and security of different aspects of the profession. Höhle and Teichler (2013) find surprising that CAP results show that examinees do not perceive the crisis of the academic profession and evaluate the availability of resources for academic work significantly higher in comparison to the results of the Carnagie study. Authors point to results that indicate an increase in the activities of academics' work evaluation and to those that indicate an increase in requests for undertaking administrative and managerial roles. They also draw attention to an increase in the scope of teaching workload and to imbalance between teaching and research work, as well as to a finding that demonstrates stronger insistence on conducting socially relevant studies and on connecting academic community and wider social environment (industry, economy, civil society etc.). However, common forces in all countries are "... expansion, massification, internationalisation, globalisation and marketisation." (Bennion and Locke, 2010). All this points to the appearance of new and wider scope of tasks, in addition to traditional work obligations of academic employees that members of the academic profession were not faced with until recently.

As a result of many changes, it is not surprising that some researchers anticipate uncertain future of the academic profession, which is "...more strongly than in the past exposed to substantial expectations and pressures..." (Höhle and Teichler, 2013, 35) that are placed before it and its' employees by various subjects from within and outside of academic community; hence it is essential to particularly review attitudes of academic employees on changes in the academic profession.

Methodology and Research Results

Apart from the mentioned CAP research, significant contribution to researching the academic profession was made by an international collaborative project *Academic Profession in Europe: Responses to Societal Challenges* (EUROAC). Qualitative research that was conducted as part of the EUROAC project, the results of which shall be presented in this work, was focused on examining what academics think about changes in the academic profession in Europe.

Empirical data were collected through interviews and the application of the interview protocol in the interviews with 497 research participants from eight countries - Austria, Finland, Croatia, Ireland, Germany, Poland, Romania and Switzerland. Research instrument of international comparative research consisted of three sets of thematically grouped questions – governance; management and evaluation; development and structure of academic careers; and professional differentiation in higher education, that were developed based on previously conducted studies, Carnagie study and CAP.

Gathered data were analysed using the method of constant comparison, which includes searching through data with an aim to define categories and themes related to raise research questions (Merriam, 1998). Research first examines and analyses and then, during interpretation, points to recognized challenges in the perception of changes as part of development of the academic profession in the contemporary context. For the purpose of this research, in the context of this work we shall analyse answers to the question: *Do you notice changes in the reassignment of tasks in the academic work in the past several years? Identify changes, give an example.*

The analysis of research results points to changes in the description of tasks performed by the academic employees, as well as to the appearance of new tasks in the context of their everyday professional duties. Answers of the research participants were grouped into 9 thematic categories of identified changed displayed in the table 1.

Change	Country							
	Croatia	Austria	Finland	Ireland	Germany	Poland	Romania	Switzerland
Academic administration increase	•	•	•	•	•	•	•	•
(International) project development/ project cooperation	•	•	•	•	•	•		
Competitiveness among (young) scientists		•	•		•	•		•
Increase in the number of students and their demands			•	•	•			
Harmonisation and the increase of teachers' workload	•		•					
Decrease in investments in science and research				•				
Implementation of quality assurance system							•	
Emphasis on the research orientation of academic profession/university								•
Constant control of work			•					

Table 1 - Changes which academics perceive in their work

Based on the illustrated results, it can be seen that, apart from the category pertaining to the increase of academic administration that was mentioned by research participants from all eight countries, it is possible to extract several other common categories of changes, which, although they do not appear in all countries, can be collectively classified as (European) changes in higher education. Thus, as the most frequent changes perceived by most research participants the following are listed: increase in the number of students and teachers' workload; need to intensify project cooperation which is perceived in the context of international recognition and cooperation and in the context of acquiring additional financial resources; increased competitiveness among scientists with a special emphasis on younger scientists.

Academic administration: fundamental change and challenge in the (European) academic community?

Answers of research participants that point to an increase in academic administration can be grouped in three thematic units:

1) Research participants basically notice increase in academic administration, but such occurrences do not regard as problematic and don't consider them aggravating factors in their work – "We have an abundance of new administrative tasks in the field of teaching and research." (CH_12-AC, Switzerland),[iii] "Demands are increasing in relation to the process of teaching and there's an increase in administrative obligations." (IE_15-ACA, Ireland), "We are constantly receiving new forms that we are required to fill in." (IE_53-ACA, Ireland), "I notice an increase in work duties through new administrative and bureaucratic tasks." (RO_5_AC, Romania), "Administrative tasks have increased. There used to be more administrative employees, but now their duties were reassigned to scientific and teaching staff." (FI_LP_13, Finland).

2) Research participants who see the increase in the academic administration as a problem and point to the consequence of moving away from the fundamental academic activities – "The biggest change is that apart from their teaching and research duties, teachers are now required to perform a large body of administrative tasks. Administration is a big problem for the profession." (PL_8, Poland), "Significant changes have occurred in the past several years. We are constantly required to respond to new requests – be responsible for managing various programs, managing courses on all levels, and in addition to all that, deal with a large quantity of administration that is literally suffocating me and its becoming a problem." (RO_3_AC, Romania), "Significant, but problematic changes are occurring, and the result is that I do my administrative duties during working hours, and teaching related tasks and research I perform at home." (FI_LP_4, Finland), „Administration is increasing, support is decreasing and there are more and more administrative duties which is bad, very bad." (AT09_AC, Austria).

3) Research participants who consider perceived changes dangerous and in that context discuss the development of academic profession in future – "There are significant changes in job descriptions, administrative demands are ever more increasing due to various changes in the economy, there are no new job opening, etc. and that could be extremely dangerous for the development of the academic profession in the future." (0118CC, Germany), "I'm afraid there's a tendency towards the increase of administration. A dangerous tendency of increase, everything is formalized, hundreds of decisions, nothing can be done without a decision and that slows down the work process and that is something that is becoming dominant." (HR_8, Croatia).

Findings such as these confirm the results of previous studies that point to constant expansion of administrative duties expected from university teachers (Teichler, 1996), just as those results that indicate that university teacher are increasingly expected to undertake administrative roles (Höhle and Teichler, 2013). Drennan *et al*., (2013) link the process of increase in the quantity of administrative duties with the influence of so called managerial approach to higher education, which is something that was also pointed out by some of the research participants, for example – "In the past several years managerial approach to university governance was adopted at a large number of renown universities." (IE_32-HEP, Ireland). I can be noticed that research participants view the question of academic administration increase as one of the major changes in the higher education on the European level. In that context it would be wise to consider possible administrative challenges that the (European) academic community is facing, but also various types of administrative demands that are placed before it.

Apart from already mentioned perception of academic administration increase, answers collected from the participants also point to three different aspects of the academic administration: teaching administration, project administration and general (academic administration).

Teaching administration is perceived by the majority of participants as a dominant change and they connect it with a greater number of students, constant evaluations of their work and various types of (statistical) data required by the college/university management, that were not required before – "... I must add that I mostly feel like an administrator, and not as an administrator in the professional sense of the word, and I spend most of my time on teaching and other administration." (HR_11, Croatia), "We are constantly receiving new forms that we are required to fill in." (IE_53-ACA, Ireland).

It is followed by project administration, which is most often connected with the scientific research work dominantly through project planning, project implementation and financial management – "...projects, programs, evaluations, plan this, plan that... those are the key words." (HR_4, Croatia). In relation to this segment of administrative duties, academics most frequently emphasise that they are not educated enough or lack adequate support by their parent institutions – "all those requests are all right and are keeping up with the modern Europe, but we must be educated about it. W may be professors, but we don't know everything. How am I supposed to write a good project or manage finances; I need the support form the university, college to do that..." (RO_16_AC, Romania).

Third one is the general (academic) administration, which is, as they point out, "...certain amount of general administration always existed, but it is now increasing by the day." (PL_23, Poland).

In discussing academic administration as a common change in all analysed systems, we must not ignore the fact that statements by the research participants point to a strong negative attitude about the academic administration increase which they view as an unnecessary burdening with additional tasks and obligations that are distracting research and teaching staff from their primary/fundamental academic roles – teaching and research. That can be indicative if we consider the findings of the research conducted in 2009 on a sample of examinees form Croatia (Rončević, 2009), which reveals that only 16.9% of academics in Croatia are satisfied or extremely satisfied with the administrative or logistic support in their work, and more that half of them (51.3%) claimed to be dissatisfied or extremely dissatisfied with this kind of support. Many

authors point to the fact that requests for an administrative, logistic and professional support are not an isolated case revealed in one national research and that such support in the European systems of higher education is not a novelty (Teichler, 2003; Klumpp and Teichler, 2008; Kehm 2006; Kehm, Merkator and Schneijderberg, 2010). Mentioned authors speak about the (new) group of academics that they call *higher education professionals* (HEPROs).[iv] Schneijderberg and Merkator (2013) define them as a special group of highly educated professionals who are not primarily active in teaching and research, but who cooperate and are a constant administrative and professionals support to governmental bodies of the university, their constituents and to their research and teaching staff. Klumpp and Teichler (2008) say that basic characteristics of HEPROs are: high level of expert knowledge in fundamental academic activities – teaching and research, and well developed communication and presentation skills.

Authors point out (Klumpp and Teichler, 2008; Macfarlen, 2010) that typical positions for HEPROs in Germany, Great Britain, Norway and USA are positions such as: assistant dean or assistant chancellor, coordinator for science and international cooperation, coordinator for human resources development and the manager of department for quality assurance of teaching and student affairs.

In the light of such findings, universities should aspire to educate and form a body of highly educated staff in the field of academic support whose non-research and non-teaching roles will be separated from the research and teaching staff and who will be their constant professionals support.[v] This professional form of academic support can serve as a possible answer to requests from the academics, revealed in their answers of research participants, to decrease the intensity of administrative duties placed before them.

Other changes in the (European) academic community

Since findings demonstrate that academic administration was seen as a change in all countries that participated in the research, discussion was extracted in the previous part, in order to avoid the repetition of the same category. For the remaining eight categories, interpretation was conducted in accordance with the country that participated in the research, that is, in accordance with the changes revealed by the research participants of a given country. Changes mentioned in the context of each country were classified into thematic groups and subgroups.

As dominant changes, academics from Finland point out the following:

1) Intensifying of pressure for the development of project cooperation the reasons for which, as in Germany, can be found in the need to acquire additional financial resources that parent institutions cannot provide and long-term international benefits that such cooperation can bring: „Gathering resources plays the central role today, and pressures to be financially efficient are constantly increasing." (FI_LP_4, Finland), "More and more companies deal with projects and operate based on project financing and because of that universities are becoming more like those companies. Cooperation with industry is also becoming stronger." (FI_LP_5, Finland).

2) Harmonisation and the increase of teacher's workload is the result of an increased number of (foreign) students: "Demands for courses held in English language are

increasing, in addition to the need to adjust those courses because we are having foreign students from various cultural backgrounds." (FI_LP_2, Finland).

3) Increased competitiveness among scientists – "It is necessary to invest more in gathering financial resources and competition is stronger." (FI_LP_16, Finland), "Competition and demands for higher quality research are increasing." (FI_LP_19, Finland).

4) Constant control of work: „Time management is becoming the main characteristic of academic employees. Apart from that, our working hours are becoming controlled, there's no more freedom, and everything is controlled by an electronic system." (FI_LP_2, Finland).

Apart from to the increase of academic administration, academics form Ireland also notice:

1) An increase in the number of students and their demands – "Students today expect all materials to be delivered to them in the form of simplified entries and notes, they no longer read books, textbooks and books for further study. They expect everything to happen by pressing one button" (IE_33-ACA, Ireland), "...students today have greater expectations, you can't refer them to further study material as before and tell them to read and research, today you need to give them detailed instructions for everything and they and their demands, which are sometimes extremely unrealistic, require much more time. (IE_35-ACA, Ireland).

2) Decrease in investments in science and research - „The main problem is the lack of resources. There is a limited amount of resources that we have for attending conferences and publishing works, it all costs money. It is automatically expected of you to make money through your research and projects and to finance yourself." (IE_40-ACA, Ireland), "…in the past you were able to attend a conference without presenting a scientific work, today that is no longer possible, since there's no money for such "scientific excursions." (IE_15-ACA, Ireland).

Academics from Germany noticed similar changes as the research participants from Ireland, and those are the following:

1) Increase in the number of students whose demands are becoming greater and more complex – "Students' expectations have changed the requirements regarding the teaching preparation. However, teachers haven't changed and that is where collision occurs. Pressures to maintain the high quality of teaching as opposed to students' demands are becoming ever stronger." (0113DT_AC, Germany), "A number of students with formal and informal demands is increasing." (0203VS_AC, Germany).

2) Intensive pressure to develop project cooperation which they see as a result of two reasons – due to the need to obtain additional financial resources that institutions cannot provide (*fundraising*) and the development of international cooperation that individuals and institutions can benefit from in the long run.

Apart from these mentioned ones, German academics notice another category of changes and that is:

3) Strongly pronounced competitiveness, especially among younger scientists which is connected to jobs uncertainty and working conditions – "...young scientists are far more globally oriented and are more mobile and less committed to the institution that before. However, that resulted in higher uncertainty and more pronounced competitiveness." (0118BK, Germany).

Answers of academics from Croatia can be grouped into two sets:

1) Harmonisation and the increase of teachers' workload – "I think that the main change is that we have transformed, I would say, from the factory of knowledge into the factory of engineers. I believe that is the biggest change in the last 10 to 15 years. We work with too many students and automatically have double work schedule." (HR_51, Croatia).

2) Project development/ project cooperation - „I think that the main change is that teachers are expected to actively search for sources of financing for their own work through projects (usually international), for example, they are expected to actively reflect on how their work fits into one wider framework, but not only scientific, but also a more general social framework. To some that is more or less a problem. To them change is what they see as purely physical submission of projects, administration." (HR_21, Croatia).

Research participants from Austria and Poland, apart from academic administration, also point to already mentioned – competiveness among scientists - "There is a great competition for permanent positions. The number of such positions is limited and insufficient." (AT27_HE, Austria), "Procedure for acquiring doctoral position is extremely competitive and requires a great mount of effort." (AT30_AC, Austria), "Competition is, especially among young scientists." (PL_21, Poland). They also point to the development of project cooperation – "There's a strong emphasis on big collaborative international projects and insistence upon them." (AT03_AC, Austria), "When I was interviewed for the job, the first thing my mentor asked me was: 'Can you write projects?'" (Pl_25, Poland); need for international recognition – "...there is significant progress towards internationalisation and international recognition of research, but it seems to me that this segments is still overlooked in social sciences." (AT30_AC, Austria), "...an important aspect of academic career is international cooperation with other foreign universities or scientific institutes. That's how academies build their reputation and respect and how social capital and networks are created globally." (PL_25, Poland), "...for example, when being promoted to a higher position, one needs to submit internationally recognizable publications." (AT35_AC, Austria), "New generation of scientists who are internationally oriented to a greater extent, knows that scientific feudalism is the thing of the past." (PL_50, Poland) and to an increased number of administrative employees – "Administrative support at universities is hopeless. How can they be of use to us if they don't notice, for example, that application forms for EU programs have changed six months ago." (PL_3, Poland), "People who work in academic support and administration are exceptionally nice and kind, but their organisation and

management is extremely bad and wrong." (AT43_AC, Austria), "...people from academic administration usually strongly oppose to changes." (AT49_AC, Austria).

Answers of academics from Switzerland point to two thematic categories of answers:

1) Increased competitiveness among younger researchers - "Competition among scientists begins during doctoral studies. Young scientists compete for publication of their work in acclaimed scientific journals, participation in better projects and for work with more respectable scientists." (CH_22-AC, Switzerland), "I am very upset with this strong competition. It seems to me that in the future it will be more important how well you present yourself then how professional you are." (CH_23-AC, Switzerland).

2) Strong emphasis on the research orientation of university. This perceived change relates especially to international research and those being conducted in cooperation with the sector of industry/economy due to acquiring additional financial resources. Research participants from Switzerland thus point out: "What is most important is to acquire or to conduct a research that have a financial contribution to the institution, but also provide acquiring new competences and new knowledge. Research is the most important segment of our work." (CH_2-AC, Switzerland), "Research activities of our university are strongly connected with industry and that is their ultimate purpose." (CH_6-AC, Switzerland), "It's normal that scientists cooperate with industry. Cooperation with industry means that you are capable of doing your job efficiently." (CH_11-AC, Switzerland), "I believe that my primary job is research." (CH_26-MAN, Switzerland).

Apart from increased administration demands, academic employees in Romania point to the implementation of quality assurance system as an additional change in their (working) environment. Implementation of the quality assurance system, according to the research participants' answers, has resulted in the occurrence of new duties, such as various kinds of examinations, checks and evaluations – "University began implementing quality assurance system and quality management is becoming the main condition. Demands of the National Quality Assurance Agency are increasing which, in turn, increases the pressure on the academic employees." (RO_3_AC, Romania), "...for example, there are constant demands for changes of syllabuses and curriculums, accreditations of new study programmes, implementation of quality assurance system... All that can be done only through the contribution of academic employees." (RO_21_AC, Romania).

Discussion

Such findings point to a trend of changes in the academic profession in the recent thirty years. Neave (1983), more than thirty years ago, spoke of significant increase of students in Europe and said that: "...there's a significant interest in higher education and the number of students in the biggest European countries is constantly growing." (Neave, 1983, 223), while Neave and Rhodes (1987) point to a constant expansion of the number of students on the European territory of higher education. Something that especially contributed to the growing number of students was a strong need to internationalise higher education. Kerr (1994) mentions four main aspects of university internationalisation: flow of new information, university teachers,

students and curriculums. In a discussion about the process of higher education internationalisation, Altbach and Teichler (2001, 6) speak of "...growing global academic market of teachers and students whose number is constantly increasing." Apart from the process of internationalisation, Bouillet and Gvozdanović (2008) emphasise that the growing number of students is one of the most perceptible consequences of the Bologna Process that was adopted by all countries that participated in the research. The findings of the CAP study also speak of the expansion of students as one of the most significant new processes that are changing the system of higher education (Bennion and Locke, 2010).

Unlike the growing number of students, which is perceived as a change in the system of higher education for a significantly longer time, the need to intensify project cooperation, especially the one advocated in the documents of national educational policies and strategies of universities and institutions of higher education, and which is promoted and encouraged by university administrations, can be regarded as a new segment of academic activities. Additional argument in favour of this claim is that such cooperation is seen in the context of acquiring additional financial resources for project teams and institutions, as illustrated by the results of this part of the research. The segment of project activities as a means of acquiring additional financial resources, apart from being observed in the context of already mentioned introduction of managerial approach to higher education, can also be observed in the context of adjustments of universities and academic community to the market concept of operation, that is, to the cooperation between universities and the economy.[vi] Although market or, as some authors call it, economic segment of university operation (Kogan and Hanney, 2000) was always an important part of educational policy, today that role is considered primary and is expressed through public policies and strategic documents. For example, the British White Paper from 1987 states: "Higher education should serve economic sector more efficiently... develop close connections with industry, market and promote entrepreneurship." (Kogan i Honney, 2000, 60). Orientation on acquiring additional financial resources can also be perceived in the context of the idea that contemporary universities must become oriented toward entrepreneurship and must be relevant in terms of market (Geiger, 2004; Altbach, 2008). In that context, Altbach (2008) point out that aspiration towards market oriented university of the 21st century and increasingly advocated corporative mission, are the reason for concern over fundamental academic activities and the influence that contemporary changes have on the development of universities in the future. By intending to provide money through (new) project cooperation, academic employees face with new challenges, standards and values of university life. However, Regini (2011) points out that universities and companies n no longer ignore each other, as they did in the past, but are forced to cooperate for the purpose of economic prosperity of national and European society. Regini (2011, 81) also claims: "...universities must not wash their hands of the question of employability of their students... care over students' transfer from the academic world into the world of labour must become one of the fundamental missions of modern universities." Such transfer enables integration of students into developmental and research projects with economy and local community, so in addition to providing them with an opportunity to acquire additional professional competences, that form of indirect learning is seen as an ideal transfer of theoretical knowledge into practice.

One of possible new challenges for the academic employees can be seen in the third group of perceived changes in the academic profession which relates to the increased competitiveness among scientists, especially younger ones. Under the influence of changes that the academic

community is exposed to, young scientists are under a constant pressure of competition, testing and evaluation. In such conditions it can be expected that there will be pronounced (unhealthy) competitiveness, especially if basic existential issues are in question – job, regular income or change of residence – as some of the research participants assert. However, from a futuristic perspective, it seems that this trend will not cease in the future. According to the research results (Kehm and Kreckl, 2008), percentage of PhD degree holders in Europe, many of which will search for work in the academic community, is on the increase. For example, in the period between 1998 and 2006, the number of PhD degree holders in OECD countries increased by 40 % (Auriol, 2010), and in 2004, Europe had two times more PhD degree holders than the United States and six time more than Japan (Meri, 2007). Janson, Schomburg and Teichler (2006) also draw attention to the trend of long waiting and high employment uncertainty from the time of acquiring PhD degree until the moment of obtaining permanent position in the academic community.[vii] Recotillet (2007) says that PhD is financially less lucrative and attractive at universities in comparison to the salary for a PhD degree holder in the private sector. In that context, it is not surprising that indicators revealed by Sursock and Smidt (2010) in the publication *Trends 2010: A decade of change in European higher Education* point to the fact that in 2010 around 50% of PhD degree holders in Europe were employed outside the academic community, in the public or private sector. In accordance with those indicators, it can be expected that dissatisfaction of young scientist at universities will continue. That same trend was pointed out as one for concern in some other earlier research (for example, Enders and Teichler, 1997), which caused by small and uncertain advancement perspective and the lack of employment security (Teichler, 1996). Therefore, a more significant brain drain of (young) PhD degree holders in public or private sector, economy and industry, can be expected, which can be considered a significant challenge for the development of higher education in the future.

Conclusion

Obviously there are many studies that point to changes happening in the academic environment (Boyer, Altbach and Whitelaw, 1994; Altbach, 1996; Altbach and Lewis, 1996; Bennion and Locke, 2010; Rončević and Rafajac, 2010; Höhle and Teichler, 2013), which can be recognized and analysed in more detail on international and individual national levels. Studies reveal that in most countries academic career is under a strong influence of tradition, resources and specific governance systems which determine the way higher education teachers are prepared and educated, the rules of their employment and promotions, work relations and forms and patterns of rewards. Also, as a common element of changes, mentioned studies point to a low degree of satisfaction with the models for academic work evaluation, conditions for academic institutions governance, dissatisfaction with working conditions, greater number of students and resulting greater teacher's workload, as well as with the imbalance between teaching and research work. The conclusion is that all that strongly effects the development and positioning of the academic profession, primarily in the academic, but also in the wider social context.

Detailed analysis of research results presented in this work, points to nine thematic categories of determined changes in the European academic environment. The first and primary one is an increase in the amount of academic administration which is followed by the need to develop (international) projects and project cooperation, extreme competitiveness among (young) scientists, increase in the number of students and their demands, harmonisation and the

increase of teachers' workload, constant control of work, decrease in investments in science and research, implementation of quality assurance system and the stronger emphasis on the research orientation of the academic profession. At the same time, we mustn't ignore data that point to strong negative attitudes about the academic administration increase which they view as an unnecessary burdening with additional tasks and obligations that are distracting research and teaching staff from their primary/fundamental academic roles – teaching and research.

Apart from academic administration being a common category in all countries that participated in the research, other revealed changes can be grouped based on the country participants come from. Thus, the development of (international) projects/project cooperation was perceived as a change by participants from Croatia, Austria, Finland, Ireland, Germany and Poland. Strong competitiveness, especially among young scientists, was noticed by academics in Austria, Germany, Finland and Switzerland. As a perceived change, academics from Finland, Ireland, and Germany also mentioned increase in the number of students and their demands, while academic from Finland and Croatia pointed to the increase of teachers' workload. Academics from Finland also mentioned constant control of work, academics from Ireland were concerned about the decrease in investments in science and research and those from Romania mentioned implementation of quality assurance system on a national level. Academics from Switzerland also mentioned to stronger emphasis on the research orientation of the academic profession.

Presented research results have confirmed the findings of some earlier studies and revealed several current challenges in higher education. Those primarily relate to strongly emphasised administrative dimension of the new roles required of academics, that research participants justly question or even strongly reject believing it to be a role imposed to academics that prevents them in doing their teaching and research work adequately. Furthermore, research results also reveal the focus on the development of (international) project cooperation in the framework of which research participants perceive a personal or institutional recognition within the European territory of higher education, as well as the possibility of obtaining additional funds. It is also important to mention the existence of strong competitiveness, especially among young scientists, which, as a perceived change, supports the findings of those who speak about future expectations and pressures on the academic community (Höhle and Teichler, 2013).

These research results point to numerous challenges to the development and transformation of academic profession in the future, both on European and wider international territories. Apart from that, this research revealed many new research questions that remain to be raised, studied and analysed. In that context, especially challenging in terms of research are current themes, such as competitiveness of (young) scientists, questions of academic liberties or stronger emphasis on the research roles of universities.

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[i] Research included the following countries – Australia, Brazil, Chile, Egypt, Hong Kong, Israel, Japan, Mexico, Netherlands, Republic of Korea, Russia, United States of America, Sweden and United Kingdom.

[ii] Project tried to gather as many countries and possible that participated in the Carnagie study in order to research and examine the objective of the study – *changes* in the academic profession. Of the countries that participated in the Carnagie study, CAP was conducted in Australia, Brazil, Hong Kong, Japan, Mexico, Netherlands (research conducted in 2010), Germany, Republic of Korea, United States of America and United Kingdom, a nine new countries joined: Argentina, Finland, Italy, South African Republic, Canada, China, Malaysia, Norway and Portugal.

[iii] In the part of the qualitative research, after the quotes from the gathered empirical material, interview code from EUROAC research data base shall be displayed in the brackets, as well as the country of the participant. All data bases of partners in the research, with codes and participants data are available to all national research teams. Due to ethical reasons, it was agreed upon that works and publications shall use exclusively originally defined codes of participants and when necessary defined independent variables of the country, scientific field, scientific, teaching and/or associate position and/or gender of participants.

[iv] HEPROs represent a special group of highly educated professionals who are not primarily active in teaching and research, but who cooperate and are a constant administrative and professionals support to governmental bodies of

the university, their constituents and to their research and teaching staff (Teichler, 2003; 2008; Klumpp and Teichler, 2008; Khem 2006; Kehm, Merkator and Schneijderberg, 2010; Schneijderberg and Merkator, 2013).

[v] Conducted research also reveals examples of good practice that point to positive developments in that direction in countries where such systems didn't exist before. Based on the answer of one participant from Finland, it is possible to determine a trend towards the development of educated academic support professionals – "In the past, we used to have administrative duties too, but we had no adequate professional support. Professors performed all their administrative duties on their own. Today, however, there's more administrative support performed by employees who are professionals at what they do." (FI_LP_3, Finland).

[vi] Kogan and Hanney (2000) believe that adjustment of universities to the market concept of operation began during the oil crises in the early 1970s of the 20th century. That was the first time that the oil crisis had a significant impact on the financing principle of higher education. Although the decrease of state investments can be explained by the real economic crisis that dominated at that time, withdrawal of financial resources were also occurring later in the periods of economic development and growth. When governments understood the values that education and applied research can have on economic development and growth, they clearly promoted the view in accordance with which they expected the market to finance what it will benefit from tomorrow.

[vii] Same authors point out that in Germany that period can last up to six years.

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Teacher/Learner Training for Autonomy

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Abstract

There is a mismatch between the learner's and the teacher's agendas and as a result: while the teacher is busily teaching something, the learner is very often focusing on something else. (Nunan, 1999) This is just because the knowledge is transferred unidirectionally.Teachers have dual duty; transfering the knowledge and training the learners on how to access and make use of that knowledge. Teacher training on how to encourage their learners to take control of their own learning, in other words how to make them autonomous learners is highly essential. Autonomy refers to the learner's broad approach to the learning process, rather than a particular mode of teaching. How can English teachers train their learners to learn English then? Feurstein's (1980) Mediation Theory tells us that it is the role of the teacher to help learners to find ways of moving into their next level of understanding. Teachers need to take on the roles as; advısors, facilitators, consultants, partners and joint problem-solvers. They need to raise awareness on different approaches to learning and help learners to acquire the knowledge, skills and strategies they will need in order to progress. However, teachers are in need to be trained to take on such roles. This paper will give the theoretical background of teacher/ learner training for autonomy in English Language classes. Then the teacher training activities for the roles of a foreign language teacher will be given with examples and finally, learner training for autonomous learning activities will be displayed.

Key Words: English Language Teaching**,** Autonomous Learning, First Language**,** Zone of Proximal Development

Introduction

Learners have a broad approach to learning and this depends on a process rather than a particular mode of teaching. Foreign language teachers usually believe that foreign languge learning is a painful process and they need to teach most of the time to help the learner grasp the basic structure of the language. Students, on the other hand, wish to learn the language in a relaxed atmosphere where they can interact. Learners come to class with different expectations. Nunan (1999) believes that there is a mismatch between the learners' and the teachers' agendas. Teachers need to change their beliefs and attitudes towards teaching. They need to train their learners on learning while teaching a foreign language. This brings in the question whether instruction can assist language acquisition or not. The non-cognitive approach sees language as 'picked up' or acquired by natural processes in which the teacher should not interfere (Krashen 1981,1982). Ellis (1984) takes the midway and believes that instruction helps only when the learner is ready to acquire the form being taught, when the form is in the ZPD (Zone of Proximal Development) of the learner.

Reuven Feurstein's (1979) Mediation Theory tells us that it is the role of the teacher to help learners to find ways of moving into their next level of understanding the language. Teachers are mediators like parents who help children to promote learning.

Thus it is important to see the learner as an active participant in the learning process that is interactive and not unidirectional. Teachers need to take different roles according to the teaching/learning taking place in class. They might become coordinators, coaches, learner trainers, diagnosticians and a language learners.

How do we train foreign language teachers to become mediators?

English Language Teachers are educated at the universities where they are introduced to both the theory and practice of the profession. The methods and methodology given as pre-service knowledge are expected to be transferred to their in-service teaching practice. However, there is no single method that works best just because every class, every teacher and every learner is not the same. There are individual differences. Therefore trainers need to raise awareness on individual differences and do explicit training on autonomous learning.

Awareness on individual differences has an utmost importance in foreign language teaching since it brings a difference to the methods they choose. Each learner adopts a different attitude towards foreign language learning. Recent studies claim that aptitude is a trainable concept (Robinson, 2007).

How do we train our students for better learning then?

Training can be done in two ways; implicitly or explicitly. In imlicit training students are instructed to do the activities which make use of their strategies but they are not told why they do such activities. With explicit training on the other hand, students are told why they do that activity to raise awareness on how to deal with such situations outside the class.

The table below displays different models of training to hep students become autonomous learners.

SSBI* Model (Cohen, 1998)	CALLA** Model (Chamot, 2005; Chamot et al., 1999)	Grenfell & Harris (1999)
Teacher as diagnostician: Helps students identify current strategies and learning styles.	Preparation: Teacher identifies students' current learning strategies for familiar tasks.	Awareness raising: Students complete a task, and then identify the strategies they used.
Teacher as language learner: Shares own learning experiences and thinking processes.	Presentation: Teacher models, names, explains new strategy; asks students if and how they have used it.	Modeling: Teacher models, discusses value of new strategy, makes checklist of strategies for later use.
Teacher as learner trainer: Trains students how to use learning strategies.	Practice: Students practice new strategy; in subsequent strategy practice, teacher fades reminders to encourage independent strategy use.	General practice: Students practice new strategies with different tasks.
Teacher as coordinator: Supervises students' study plans and monitors difficulties.	Self-evaluation: Students evaluate their own strategy use immediately after practice.	Action planning: Students set goals and choose strategies to attain those goals.
Teacher as coach: Provides ongoing guidance on students' progress.	Expansion: Students transfer strategies to new tasks, combine strategies into clusters, develop repertoire of preferred strategies.	Focused practice: Students carry out action plan using selected strategies; teacher fades prompts so that students use strategies automatically.
	Assessment: Teacher assesses students' use of strategies and impact on performance.	Evaluation: Teacher and students evaluate success of action plan; set new goals; cycle begins again.

Students can become active participants if we raise awareness on learnıng strategies.

Here is an example for reading:

Please read this text and try to understand it.

Daily Routine

Ben her sabah saat 06.00 da kalkarım. Saat 07.00 de kahvaltıederim. Saat 07.30 da otobüse binerim. Saat 08.30 da Üniversiteye gelirim. Saat 09.00 da ders başlar. Saat 12.30 da öğlen yemeği yerim. Saat 15.30 da eve gelirim. Saat 17.00 de akşam yemeği yerim ve saat 21.00 de yatarım[i]

Did you guess?
Did the title help you to guess?
Did you associate the words with the words you know?
Did you try to understand the word order -subject verb object?
This is what we do in our real life when we read the prospectus of the medicine prescribed for us.

In class, if students work on the text in pairs or in groups and share their ideas,

then they learn from one another. The teacher teaching such a text can raise awareness if he/she plans the stages before the lesson. Planning the stages of the reading lesson (guessing, previewing, skimming and scanning and getting the gist) and writing how this plan makes students use their reading strategies would require the knowledge given in the table above. A well trained teacher would plan carefully for all skills and would ask the students to reflect upon what they have learnt by giving them a checlist:
My reflection:
What I found easy:
What I found difficult:
What I will do the next time:

When do learners learn?

- Learners learn what is MEANINGFUL to them.
- Learners learn if the tasks are PERSONAL and UNIQUE to them.
- Learners learn better if they feel IN CONTROL of what they are learning.
- Learners learn in a SOCIAL CONTEXT through INTERACTION with other people.
- Learners learn better if they are encouraged to THINK.

If learners learn better with the techniques stated above, what could teaching strategies for a better learning environment be?

The mismatch between the learner and teacher agendas as stated above (Nunan, 1999) can be sorted out by discussing the syllabus with the students. In practice, teachers usually prepare the syllabus before the classes start and they do not consult their students. If the topics and books chosen by the teacher do not attract students' interests, then the classes are run with low motivation. Language teachers could start their classes by learning about their students' learning styles and strategies. Another useful teaching strategy could be talking about foreign language learning strategies. Teachers could do a simple vocabulary retention game to show them how different people remember/ memorize words by using different styles and strategies. For example, they can write or project ten words on board with their synonyms in L1 and give them on or two minutes to memorize them without writing. Then, the teacher can clear the words and ask them to tell either the word or the synonym when asked. It is a good idea to ask the students how they remembered the word. The teacher then can talk about several ways of memorizing/ remembering the new words.

Training learners to take control of their own learning is not easy especially in Turkey where students expect teachers to transfer knowledge and be more active in class. However, students like to be involved and be active if the topics are interesting and appealing. They like working on projects and preparing power point presentations. They like being creative and performing the stories they have written. They like puzzles and try hard to solve them. They like debating in the foreign language. We need to train our learners to take the responsibility of their learning not only in foreign language (English) but also in other subjects. Foreign language (English) learners in Turkey consider this course similar to other subject courses and expect the teacher, like other subject teachers, to transfer knowledge and they do not bother to access to more information on their own, despite the technology available to them. This attitude can be changed if teachers' beliefs and attitudes towards

autonomous learning change.

How can we measure autonomy? How do we know if our learners have become more autonomous and taken control of their learning?

Autonomous learning is not just learning on your own, it is also being efficient in making learning plans and setting goals. Therefore, teachers need to encourage students to make plans for further learning and guide them on how to do this. They also need a checking list to check upon autonomous learning:

1- Do learners make and use learning plans?
2- Do they participate in classroom decisions?
3- Do they reflect upon their learning?
4- Do they initiate exchanges in the target language?

In conclusion, second language learners progress at different levels due to cognitive social and affective differences (Chamot,1999).That's why the foreign language (English) teachers need to be trained on how to train their learners to learn in the best way that suits their learning styles and strategies.Learners also need to change their attitudes towards foreign language learning and be ready to become autonomous learners.

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[i] I get up at 06.00 every morning. At 07.00 I have breakfast. I get on the bus at 07.30. I come to the university at 08.30. The courses start at 09.00. I have lunch at 12.30. I come home at 15.30. I have dinner at 17.00. I go to bed at 21.00.

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Training Migrant Teachers along Thailand-Myanmar Border: A Public-Private Partnership between World Education at Mae Sot and the Faculty of Education of Naresuan University

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Abstract

Migrants from Myanmar are in Thailand in large numbers and most without legal status. Therefore, their children are not admitted to Thai schools however they are allowed to study in migrant learning centers (MLCs). The MLCs are run by volunteers and community based organizations. They are not accredited, and receive almost no supports from the Thai government. Most migrant teachers at these MLCs received minimal formal education before they fled from their native country. Since 2012, World Education at Mae Sot (WE-MS), as a branch of an international NGO in Boston, has started to work with a Thai higher institution named Naresuan University (NU) to train migrant teachers. This study aimed to identify the model of private-public partnership (P3) for the training, and to show the results of two training courses which took place in June 2012 and January 2015. The collection of data was based on qualitative methods including observation, personal interviews, and test results analysis. The data revealed that the P3 model was initially started by WE-MS. The initiation was led by a local staff of WE-MS who had been involved in a participative action research conducted by a research team from the Faculty of Education (FE) of Naresuan University. The contract brought about the first training in June 2012, followed by the second group in January 2015. Both training courses were highly satisfied by the migrant teachers. The P3 model created by the WE-MS in collaboration with FE-NU is similar to the model of DBFM (Design-Build-Finance-Maintain) of the Canadian Council of Public Private Partnership.

Key Words: Public-private partnership, Migrant teachers, Thailand-Myanmar border

Background

In 1984, after Karen civilians fled armed conflicts and human rights abuses in Myanmar, the government of Thailand allowed the first refugee settlements in Tak Province on the western border. Most refugees assumed that they could soon go home. However, throughout the 1980s and 1990s a growing number continued to pour across the border to Thailand. Reports by Burma Link show that about 120,000 refugees still remain in ten camps along the Thailand-Myanmar border and educational opportunities vary greatly from one camp to the next. (See http://www.burmalink.org/background/thailand-burma-border/displaced-in-thailand/refu...)

During 2005 to 2010, SHIELD (the Support to Health, Institution Building, Education, and Leadership in Policy Dialogue) Project was funded by the United States Agency for International Development (USAID) to be jointly implemented by the International Rescue Committee (IRC), World Education, and Program for Appropriate Technology in Health (PATH) and to collaborate with the Thai government, community groups, international and community-based organizations to find local solutions to migrant and refugee concerns and priorities. World Education Thailand has been in existence since 1999 in Chiang Mai, Chiang Rai, Kanchanaburi, Mae Hong Son, Ratchaburi, Samut Prakan, Samut Sakorn, and Tak provinces. (SHIELD Thai-Burma Booklet, 2010: pp.1-2)

The government of Thailand has attempted to regularize unauthorized migration. Migrants are categorized into 3 groups: displaced persons, migrant workers, and long-term migrants. And, those refugees who fled the fighting in Myanmar in 1984 and still living in the temporary shelter areas along the Thailand-Myanmar border belong the category of "displaced persons." In 2005, the Ministry of Education of Thailand announced the Regulation on Proof of Admission of Students into Educational Institutes in 2005. The Cabinet Resolution on July 5, 2005, set up the operational guidelines related to the management of education so that educational institutions are duty bound to admit children of school age to study, including children of the migrants of all categories. Consequently, a number of NGOs and religious organizations set up migrant learning centers (MLCs) in areas with high concentrations of migrant workers. The data show that over 100,000 children of migrants attended classes at 130 MLCs across the country. (Ministry of Foreign Affairs. 2011)

According to Dowding (2014: p.12), Mae Sot is a district in Tak Province on a border with Myanmar to the west, a notable hub and for migrants from Myanmar, the majority of which come for economic reasons and predominantly work in agriculture, construction and the service industries. According to Dowding's research, the majority of migrant children (72%) reported having migrated to Thailand with their families, and migrant parents in Mae Sot originate from both rural and urban areas in Myanmar in equal proportions (Dowding, 2014: p.13). The research found that there were 66 migrant learning centers (MLCs or LCs) in Mae Sot Area in order to meet the educational needs of the migrant children, and the number of LCs were not stable. She also mentioned that LCs operated independently and relied on funding from private foundations, some through intermediary or umbrella organizations, or from small public donations from the community of parents of students (Dowding, 2014: p.32).

World Education at Mae Sot (WE-MS, in short) has worked with refugees and migrants from Myanmar to empower individuals by providing educational opportunities and support to local community-based organizations. Since 1999, World Education Thailand has worked in five Burmese refugee camps through the Education Assistance to Burmese Refugees project. World Education achievements under SHIELD (2005-2010) included the training of 9,000

teachers, 400 school directors, and 8,000 parents from Myanmar who were currently living in Thailand; establishing child protection systems in nine refugee camps, developing the first standards-based curricula for migrant schools, in Thai, English, math, and science; training of Thai public school teachers who worked with migrant children, and so on (SHIELD Thai-Burma Booklet, 2010: pp.5-6).

Naresuan University is a government university, established in 1990 to serve the development of the lower-northern region of Thailand which covers 8 provinces including Tak (see http:// www.nu.ac.th). Previously, the university used to be called Phitsanulok Campus of the College of Education. Its headquarters were in Bangkok, and the College of Education was upgraded to Srinakarinwirot University in 1974. The Faculty of Education of Naresuan University was the first faculty under the Phitsanulok Campus of the College of Education, since 1967 (see http://www.edu.nu.ac.th).

From July 2010 to March 2011, a researcher team of the Faculty of Education of Naresuan University conducted a pilot project to develop a model of non-formal education for stateless children in farming areas along the border near Mae Sot District. The research incidentally engaged a few local staff of World Education at Mae Sot (WE-MS, in short) in the participatory action research process. Consequently, a model of On-Farm Night Class for Stateless Children along the border was created, and the model was submitted to the Office of National Education Council of Thailand for its application (Chanbanchong, 2012).

The incident has become the starting point of the public-private partnership between World Education at Mae Sot and the Faculty of Education of Naresuan University. The term "public-private partnership" carries a specific meaning. The Canadian Council for Public-Private Partnership gives the definition that it is "a cooperative venture between the public and private sectors, built on the expertise of each partner that best meets clearly defined public needs through the appropriate allocation of resources, risks and rewards." In the Canadian context, it relates to the provision of public services or public infrastructure, and necessitates the transfer of risk between partners. (http://www.pppcouncil.ca/resources/about-ppp/definitions.html

The National Council for Public-Private Partnership defines that a public-private partnership (P3) is a contractual arrangement between a public agency and a private sector entity. Through the agreement, the skills and assets of each sector are shared in delivering a service or facility for the use of the general public. In addition to the sharing of resources, each party shares in risks and rewards potential in the delivery of the service or facility. The Council suggests 7 key point to success in public-private partnership: public sector champion; statutory environment; public sector's organization structure; detailed contract; clearly defined revenue stream; stakeholder support; and, pick your partner carefully (http://www.http://www.ncppp.org/ppp-basics/7-keys/).

The Canadian Council for Public-Private Partnership classifies seven models of P3: Finance Only; Operation and Maintenance Contract (O&M); Build-Finance; Design-Build-Finance-Maintain (DBFM); Design-Build-Finance-Maintain-Operate (DBFMO); Build-Own-Operate (BOO); and Concession. The Council suggests that the options are available for delivery of public infrastructure where the government transfers all responsibilities, risks and rewards for service delivery to private sector. Within this spectrum, P3 can be categorized based on the extent of public and private sector involvement and the degree of risk allocation. (http://www.pppcouncil.ca/resources/about-ppp/models.html)

The P3 between World Education at Mae Sot and the Faculty of Education of Naresuan University does not occur between the public and private sectors within the same country. It

started with an informal approach between key local staff of World Education at Mae Sot to the researcher team of the Faculty of Education of Naresuan University with whom she had been acquainted. Although Naresuan University is a public university, its administrative system is flexible enough to allow for academic service to be given to stateless people.

The first training course for migrant teachers in Mae Sot Area took place in June 2012. Again, around the end of 2014, World Education at Mae Sot and the Faculty of Education of Naresuan University signed another agreement to train another group of migrant teachers. The second training course took place in January 2015, expanded to two refugee camps at Mae La and Nu Poe. Both camps were outside of Mae Sot District. Mae La is in Tha Songyang District of Tak Province. Nu Poe is in Umphang District of Mae Hongson Province.

As a member of the training team from the Faculty of Education of Naresuan University who has been engaged in the training courses, together with Chanbanchong who had lit up the relationship between World Education at Mae Sot and the Faculty of Education of Naresuan University, the researcher became interested to learn how P3 between the two organizations has been working. Also, the results of the training should be evaluated, about the learning outcomes and the satisfaction of trainees whom previously trained by World Education at Mae Sot and volunteer experts from abroad.

Both sectors have the common mission of providing education service to people without any discrimination. Successful P3 between World Education at Mae Sot and the Faculty of Education of Naresuan University should be an applicable model to other government universities in Thailand which are in search for successful collaboration with international non-profit organizations.

The specific objectives of this research were: (1) to identify the public-private partnership model implemented by World Education at Mae Sot in collaboration with the Faculty of Education of Naresuan University; (2) To evaluate the effectiveness of the two training courses; and (3) to clarify trainee attitudes towards the program.

Methods of Research

This research was descriptive, based on qualitative data collection. Firstly, the identification of the P3 model was conducted through interviews of stakeholders and the analysis of related documents. The target group included the key local staff of World Education at Mae Sot: two researchers of the Faculty of Education of Naresuan University who started the participatory action research that involved the staff of World Education at Mae Sot in the process; two deputy deans of the Faculty of Education of Naresuan University who have been engaged in the P3 system; and two professors of the Faculty of Education of Naresuan University who have been involved in the training. The documentary analysis was based on the final agreement paper signed by both parties.

Secondly, training effectiveness was measured by means of interviewing, observation, and analysis of workshop outputs in response to the objectives of the training. The interview and observation of trainees' reactions took place in the reflection sessions of the training courses. The i-phone video taking was employed to help supplementing the researchers' note taking. In the first training course, there were 24 trainees, and there were 30 in the second course.

Thirdly, the trainees' satisfaction of training program was based on observation and the After Action Review that the trainees were allowed to freely expressed their opinions. The researchers analyzed their opinions to see both positive and negative sides, and then put them in orders by means of the frequency.

Findings

The Model of Public Private Partnership

The P3 model is similar to "Design-Build-Finance-Maintain" (DBFM) of the Canadian Council of Public Private Partnership, and involved the Deming's quality cycle (P-D-C-A) along the partnership process. When considered about the key success factors in accordance with the framework of the Canadian Council of Public Private Partnership, the findings were as follows:

Public Sector Champion was recognized by World Education at Mae Sot. The informal interviews with the key local staff of World Education at Mae Sot revealed that the organization had seen the strengths and possibility to work with the Faculty of Education of Naresuan University since her involvement in the participatory action research in 2011. Again, she found the first training course highly successful and cost-effective. In the meeting to sign the agreement for the second time, she mentioned that, "the Burmese trainees could understand the lectures very well, and they highly enjoyed the learning activities because they could apply quite easily to the real situations."

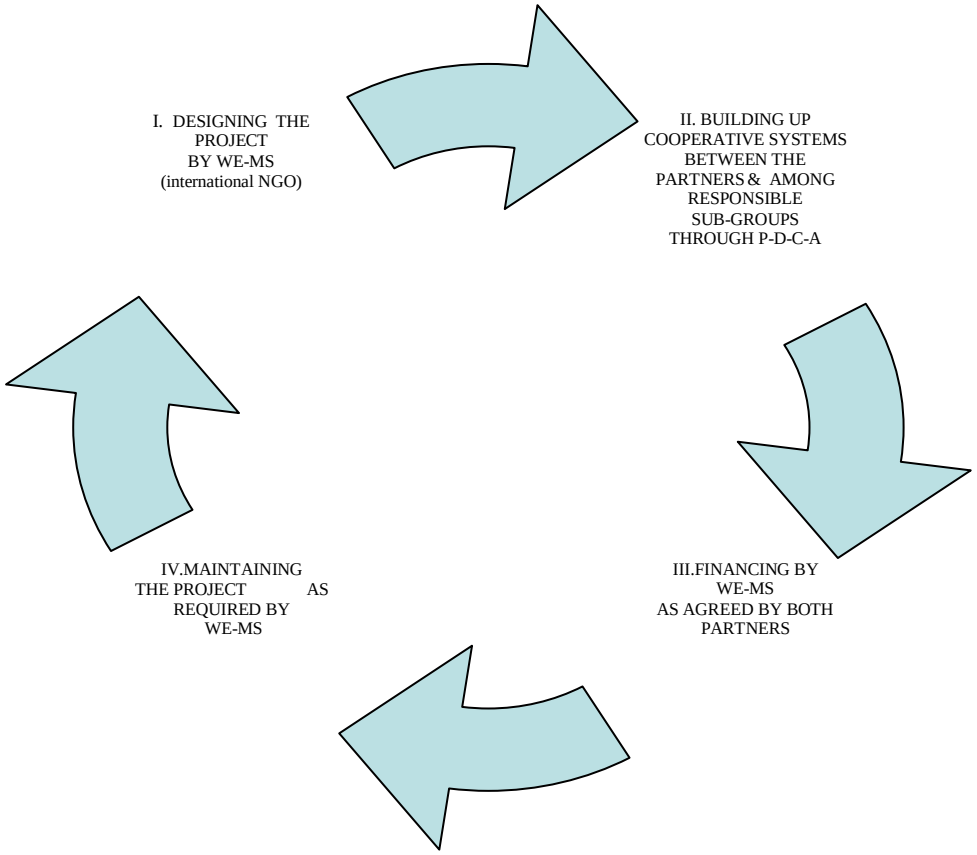
Detailed Contract in Statutory Environment was agreed by both sectors. Both World Education at Mae Sot and the Faculty of Education of Naresuan University have their own regulations, with a common mission related to providing educational service to the less-advantaged. They worked up the first contract in 2012 after a series of informal negotiation.

According to the vice dean in administrative affairs of FE-NU, Dr.Chalong Chatrupracheewin, Naresuan University was established by the government to serve the lower northern region of Thailand in the development of all educational disciplines. After signing the contract with World Education at Mae Sot in 2012, both parties worked together to design the course, the budget, and the training venue. The Faculty of Education of Naresuan University set up a working committee and sub-committees to work up the project through careful selection of teaching staff. Such criteria as doctoral degrees in education, competency in English language communication, and volunteerism were set up by the committee. The trainers were involved in course designing, cost material preparing, and the training in remote places at Mae Sot and the refugee camps nearby.

The Quality Management has been employed by the Faculty of Education of Naresuan University throughout the training courses. According to Dr.Panuwat Pakdeesong, a professor who has been involved with this partnership project since 2012, and Dr.Varinthorn Boonying who was actively involved in the first training course on "Education and Community Development," the P-D.C-A Cycle has been followed at all time by the project managerial committee and the working groups for training. Boonying mentioned that, "…I have trained the first group to use the AIC Technique and the P-D-C-A Cycle, too."

The financial agreement was based on the negotiation and the regulations of Naresuan University. According to the interview with the Deputy Dean of Administrative Affairs of the Faculty of Education of Naresuan University, the trainers were paid by the Faculty of Education as being regulated by Naresuan University, while the Faculty of Education was paid by World Education at Mae Sot as said in the agreement signed by the two partners.

In conclusion, the P3 Model of WE-MS and FE-NU may be put into a conceptual map as shown
below.



The working process of the P3 of World Education at Mae Sot and the Faculty of Education of Naresuan University can be explained in the scope of the above model as follows :
Step I: Designing the partnership project by World Education at Mae Sot, an international NGO. This happened after the realization of the ability of the Faculty of Education of Naresuan University and the decision of World Education at Mae Sot to take risks.
Step II: Building up cooperative systems. This action took place after negotiation and the formal agreement, with the Terms of Reference designed by World Education at Mae Sot. The internal cooperative system using P-D-C-A Cycle among sub-committees of the Faculty of Education of Naresuan University was not interfered by World Education at Mae Sot.
Step III: Financing by World Education at Mae Sot was based on the formal agreement between the two partners.
Step IV: Maintaining the project as required by World Education at Mae Sot. This means that the project would not be able to continue if World Education at Mae Sot, the international NGO, decided not to. After the first training course finished, it took more than one year to start the second training.

Training Effectiveness

Effectiveness of the Training Materials and Methods: For the first group, an unpublished Text titled "Education and Community Development" was approved as relevant and then put into practice. Dr.Chantana Chanbanchong, a senior professor in Comparative Education Systems, and in Educational Administration, employed variety of sources, including Google as

she drafted the text. Afterward, the drafted text was reviewed by three other professors in the training team before submitting via e-mailing to WE-MS for its consideration.

The text has the content which is divided into 5 modules. Module I is entitled "Education: Definition, History and Trends, comprising such themes as Definition and Function of Education, Education in the Past; Education System of Thailand - Early Childhood Education, Basic Education, Vocational and Technical Education, Higher Education, Non-formal Education and Lifelong Learning; Education in the Industrial Era; Educational Revolution in Post-Industrial Era; Education for the Development of an International Mind; and Education for Sustainable Development. (Chanbanchong. 2012: pp. 1-8)

The theme of Module 2 is "Community and Its Role in Education," with sub-themes that include "Community as Social Unit That Shares Common Values – Senses of Community," and "Role of Community in Education, the case of Uttar Pradesh" (Ibid, pp. 10-14). In Module 3, the text is about education and sustainable development in details, defining the term community development, explaining how people participate in community development and how teachers build up a community of sustainable development, i.e. through a participatory action research (Ibid, pp. 17-31). In Module 4, the content is about ASEAN Community by 2015 and the study tour that should bring the trainees to an ASEAN learning center in Mae Sot area, and a suggested activity called "Language-Link Activity" (Ibid, pp. 34-37). Finally, in Module 5, the text is about "Sustainable ASEAN" that includes environmental issues in Thailand, Vietnam, Indonesia, and Myanmar; regional cooperation; education for sustainable development; and sufficiency economy and the case study of Muang Nan Community (Ibid, pp. 38-41 and 43-48).

The text requires that a variety of methods are employed. Module 1 is designed for lecturing and cooperative learning. In Module 2, the lecture is followed by Jigsaw reading and a workshop. In Module 3, the lecture is supplemented by the examples, VDO viewing, group discussion, and a workshop. In Module 4, the lecture is followed by VDO viewing, study tour planning, the actual field survey, and a language-link activity. In Module 5, the lecture is followed by VDO viewing, group discussion, concept mapping, and a workshop.

Three trainers, who were involved in the second training course, mentioned that the text "Education and Community Development" was used by the team, with a supplementary on knowledge and skills for ICT using and child-centered instruction methods. They agreed that the methods used in the first training course were applicable, but not enough to fill up the gap for the migrant teachers who had little access and approach to ICT and child-centered instruction.

Qualification of the Trainers

To reflect the effectiveness of the P3, the qualification of the Trainers in both courses was assessed, by means of educational background, English language communicative skills, and cross-cultural understanding. The following evidences show that the trainers have high qualification.

In both of the training courses, one hundred per cent (100%) of trainers were doctors in Education. For the first course, a trainer received a doctoral degree in comparative education from Japan, another one got his doctoral degree in development education from Chulalongkorn University, then another who got her doctoral degree in human resource development from The University of Victoria in Australia, and the other one who got his doctoral degree in HRD from Naresuan University.

For the second course, the two female professors who had studied in Japan and Australia were substituted by two male philosophical doctors, one in Educational Technology and the other one in Curriculum and Instruction. The reason was related to the change of training venues to work inside of 2 refugee camps where over-night stay would be too difficult for the female professors.To replace them, five volunteer graduate students were allowed to serve as assistant trainers.

Communicative skills in English was necessary because the migrant teachers were all from Myanmar, mostly the Burmese and the Karen. Most could not understand Thai language, but had mainly been educated in schools where English language was regularly used. According to informal interviews and daily acquaintance with other trainers, the researcher can say that none of them has difficulty in basic English communication and academic English reading.

Among the trainers, four of them had studied or trained in English-speaking countries for over a year. Furthermore, the Faculty of Education of Naresuan University had provided opportunities for its teaching staff to go abroad to attend intermediate or advanced English language training, and to join international seminars. All of the trainers could fluently use the internet to search and deliver the messages in English. Four of these trainers had experienced working in several research projects led by Dr.Chantana Chanbanchong, who required them to explore the comparative data through Google and other data bases. All of them, including the other trainers and the graduate students were able to create their own powerpoint presentation in English.

Cross-cultural understanding of the trainers was very important, especially the understanding about the situations of the migrants from Myanmar. Among the trainers in the first course, three out of four had already been acquainted with Mae Sot since their previous research project. Another had experienced working in research projects related to health problems of the migrants in Rayong Province. The two male trainers who came in for the second training course was highly interested in learning about the migrants's situations. Both have got very good international understandings, judged from their informal conversations with the researcher. The one who majors Educational Technology mentioned that he had changed his attitudes towards Myanmar and her people, after he joined the study tour led by the Faculty of Education of Naresuan University to visit Rangoon a few years ago. The other, with educational background in Science Education (Curriculum and Instruction) from the United States, was very anxious to see the actual states of the refugees - with strong desire to help and bring about the sustainable development of the ASEAN Community and the world.

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Positive Outcomes of the First Training Program

According to an interview with the deputy dean for administrative affairs of the Faculty of Education of Naresuan University, the first training course was highly effective and led to the success of the second course. In the first training program, the trainers were divided into two sub-teams, each went to work at the training venue for three days. It was located in Mae Sot District, about 300 km. from Naresuan University.

The professors, though very busy with their regular work, communicated among each other through internets and mobile phones. The intensive contents and practical learning methods, together with other factors described in this section brought about the outstanding outcomes as explained below.

Test Results:

The result of testing on the last day of the first course revealed that 80% of the trainees passed with a high level, while the rest 20% of passed at a moderate level.

Observable Learning Behaviors:

Through unstructured interviews of five trainees and the classroom observation on 15 June 2015, it is found that over a half of the trainees had previously been active leaders in their migrant communities. A woman aged about 60 years had been in Thailand for over 45 years. A man, with about the same age as the woman, used to teach at a Burmese university. However, not only these two persons, but also most of the other trainees, were confident to express their thoughts upon exchanging ideas with the trainers. Most of them spoke English quite well, though a few had some difficulty with the language, as it was not their first language. They all agreed that the oral explanations of all trainers were understood well enough, and the cooperative learning activities and the textbook were very useful.

Applicability of Knowledge and Skills Learned from the First Training Course:

Through an unstructured interview with Dr.Panuwat Pakdeewong, a trainer of the first course, it is found that the decision to carry on the partnership and to expand to the other target groups was related to the success of the first course. According to this resource person, he got the information directly from the project manager of World Education at Mae Sot that the trained migrants were able to successfully apply the techniques such as cooperative learning, case study, brain storming, and mind mapping to their own teaching and working.

Cost-effectiveness of the P3:

The measurement of the cost-effectiveness could be qualitatively made by means of an interview with the deputy dean for administrative affairs of the Faculty of Education of Naresuan University. The financial support from World Education at Mae Sot was not very high, but enough for the stipends paid to the trainers and their travel costs. For example, the budget for the management of the first training course was about 3,000 US dollars on the part of the Faculty of Education of Naresuan University that had to give 10% to the university for its permission of personnel to work outside. World Education at Mae Sot managed the other necessary costs such as trainees' transportation from the refugee camps to the training venue near World Education at Mae Sot Office, meals during the training, and so on.

Attitudes of the Trainees towards the Program

Towards the Content of the Courses:

From the short answers in the After Action Review (AAR) of each course, it is found that more than 20% in the first group would like to learn more especially about the ICT skills and the child-centered instruction methods. From the second group, over 50% of them mentioned that all of the contents were useful. Approximately 10% of this particular group mentioned that they would like to have more time for the training.

Towards the Training Methods:

Among 24 members of the first group, 20 (83.33%) of them mentioned that they enjoyed the cooperative learning, the field survey, and the case study.These answers were in agreement with the second group that 29 out of 30 (96.67%) who nnswered that they enjoy all of the

learning activities. Only one of the 30 was not satisfied with his seating position in class. He mentioned that he was seated too far away.

Towards the Trainers:

None of the trainees in both courses expressed their dissatisfaction with any of the trainers. To have the graduate students as assistant trainers was considered to be highly satisfactory by more than half of the trainees in the second group. They also mentioned that the graduate students would be very welcome to return again, if World Education at Mae Sot and the Faculty of Education of Naresuan University carried on this type of training for them.

Towards the training management. All the trainees (100%) in the first group expressed their satisfaction with the management which allowed them to receive the knowledge from Thai professors who knew their actual situations. Ten of them (41.67%) mentioned that they would like to be trained at Naresuan University, if possible.

The opinions from the second group reveals that the on-site training at the refugee camps was also highly satisfactory. Out of all, five trainees (16.67%) stated that they would like to be trained outside of the camp so that they could observe the successful cases in Thai communities and see more examples from various other resources.

Discussion

The public-private partnership between World Education at Mae Sot and the Faculty of Education of Naresuan University which initiated the training of migrant teachers along the border of Thailand-Myanmar in June 2012 has proved that an international NGO can successfully work in partnership with a public university in Thailand if the project is well designed and professionally operated. The P3 model created by World Education at Mae Sot and the Faculty of Education of Naresuan University is similar to the model of Design-Build-Finance-Maintain of the Canadian Council of Public Private Partnership, but with the P-D-C-A Cycle employed throughout the management process at the Faculty of Education of Naresuan University.

Chanbanchong, a senior professor who joined this research project, has come up with another interesting assumption that government universities in Thailand, like Naresuan University, should be able to work as successfully in partnership with international NGOs like World Education Thailand, if they possess skilful educational workforce and strong willpower to cooperate for the sake of educational service and knowledge advancement.

Since 2006, the government of Thailand has applied criteria of the Malcolm Baldrige National Quality Award (MBNQA) to create the Public Sector Management Quality Award (PMQA) that all government universities in this country are required to follow. Previously, in 2003, the Good Governance Act was launched. The Act has demanded public management based on the good governance principles: people-orientation, public benefits as the final goals, efficiency and cost-effectiveness, clear work procedures, timeliness, responsiveness to the needs of people, and continuity of performance evaluation (Chanbanchong, 2014: pp.13-14).

The Report on the State of Comptrollership in the Government of Canada (2012) states that in P3 the private sector consortium is responsible for securing a significant portion of the financing. This statement is supported by the fact that the financing of the P3 project of World Education at Mae Sot affected the continuity of the training program. The evidence from an informal interview of the deputy dean of the Faculty of Education of Naresuan University shows

that the first and second training courses were not continued year by year because of the financial reason on the side of World Education at Mae Sot.

The other problems included the migrant teachers' low ability to use ICT for their instruction. During the training, the trainees could only present their learning results by flip charts, oral explanation, and so on.

Conclusion

With the good governance, and the championship of its teaching workforce, the Faculty of Education of Naresuan University has been able to continuously manage its mission in Partnership with the international NGO like World Education at Mae Sot as described in the findings of this research. Both partners have been rewarded. The P3 model created by World Education at Mae Sot to work in collaboration with the Faculty of Education of Naresuan University is similar to the model of Design-Build-Finance-Maintain of the Canadian Council of Public Private Partnership.

To benefit more from this basic research, there should be further studies to answer the following questions: (1) the contract system has been carefully designed to cover the significant elements such as the rationale for partnership, expectation, duration, roles and responsibility of both, or not; (2) what are the success factors underlying the use of the P-D-C-A Cycle among the sub-committees from various departments of the Faculty of Education of Naresuan University though the professors are quite busy and come from various disciplines; (3) how has ICT literacy of the Thai trainers from the Faculty of Education of Naresuan University influenced the learning outcomes of the migrant teachers; and (4) what would happen if the migrant teachers were able to access more freely to ICTs.

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Management Support Practices for Teacher Supervision in Secondary Schools in Anambra State, Nigeria

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Abstract

The purpose of this study is to ascertain the extent of principals' management support practices for teacher supportive supervision in secondary schools in Anambra State, Nigeria. Two research questions guided the study and one hypothesis was tested at 0.05 level of significance. The descriptive survey research design was adopted for the study. The study population comprised all the 252 principals and 5,761 teachers in the 252 state government owned secondary schools in Anambra State. A sample of 1,803 respondents made up of 75 principals and 1,728 teachers comprising 30% of the entire population was studied. The proportionate stratified random sampling technique was used in composing the sample. Two instruments were used for data collection. The instruments were duly validated by experts. The Cronbach Alpha was used for the reliability test, which yielded reliability indices of 0.80 and 0.81 for the instruments respectively. The reliability indices were considered high enough making the instruments adequate for the study. The researcher, together with six trained research assistants, collected data for the study. Mean scores were used to answer the research questions while z-test was used to test the hypotheses at 0.05 level of significance. It was among others found out that the level of principals' support practices for teacher supervision was low in secondary schools in Anambra State; that principals, to a very low extent, organize in-school seminars and workshops for their teachers to help them grow professionally and that they neither organize group supervision, peer supervision nor clinical supervision for their teachers. The recommendations of the study included that principals should use in-school seminars, workshops and adequate supervision to enhance teachers' supportive supervision in schools. Conclusions were made and implications of the findings drawn.

Keywords: Management support; supportive supervision; secondary schools

Introduction

Teachers at all levels of education are the bedrock of the education process. They implement school programmes and educate the students. In the course of educating students, teachers prepare lesson notes, teach, administer tests, monitor students' progress and provide guidance services. All these point to the broad range of duties carried out by teachers in any given school system.

It is a truism that no educational system or programme can rise above the level of its teachers. This is in line with the view of Clark (2006), that teachers are the foundation of quality education. In order to maintain the above position, teachers in most cases, and as posited by Firestone (1993) engage in research activities so as to adequately equip themselves for efficient and effective lesson delivery. However, the teachers' role or task in most cases, seem to depend greatly on the kind of support given to them by their principals (Azih, 2001, Eziuzo, 2014).

Principals occupy a central position in the management of secondary education in Nigeria. According to Green (2009), principals by virtue of their positions are managers and the quality of their managerial functions determines to a large extent their success or failure in schools. This, in part, means that principals are very important for the achievement of educational goals or objectives. Starratt, (2003), similarly observed that principals should provide teachers with needed management support in order to effectively function in their schools. This observation leads to the idea of management support practices as discussed in this work.

Management support practices include the provision of enabling working environment for teachers to effectively render the needed services in schools (Tiedt, 1999). Again, Castller (2010:18), explained principals' management support practices as "the provision of school organizational climate that boosts teachers' morale and enhances their commitment to their jobs as well as guarantees their professional development". This corroborates the view of Campbell (2007) that management support practices in secondary schools include all enabling environments put in place by the principals to foster teachers' morale as well as commitment and professional development Thus, providing management support practices in relation to teachers involves giving them supportive supervision, providing them with rewards, taking care of their welfare, supporting them to take part in in-service training programmes and promoting them as and when due (Jefferson, 2004). One can understand from the above that management support practices can take different forms.

Orikpe (2002), highlighted forms of management support practices to include providing for teachers' welfare, professional growth, supportive supervision and motivation. All these forms of management support practice are crucial to teachers' performance. Thinking along the same line, Azih (2001) and Marriette (2004) stressed that providing these forms of management support practices are crucial in building sufficiently motivated and effective teachers. From the above, one can understand management support practice in the secondary school system to mean the assistance, encouragement or help given to teachers by their principals to enhance their performance.

Although there are many forms of management support practice in literature, this study focused only on supportive supervision of teachers as a factor that affects teachers' performance in secondary schools. Justification for emphasis on this area includes the fact that teachers' need supportive supervision in schools to be able to perform maximally. In supportive supervision, the supervisor leads the supervisee to think about new and improved ways of doing things (Akpa,

1998). The role of the supervisor, according to Oliva and Pawlas (2004.24) is "to effect a democratic environment in which the contributions of each participating member is valued". A school principal who applies supportive supervision is expected to posses a predisposition to change and must constantly promote improvement (Snowden & Gorton 2002). Thus, a supportive supervisor needs to convey the attitude of valuing and seeking the ideas of others while not appearing to have answers to all the problems that teachers face.

Supportive supervision is a learning situation for both teachers and their supervisors. It often means unlearning old ideas and learning new ways of thinking and doing things (Guskey,2001). Supervisors have to learn to trust the eyes and ears of teachers while teachers have to trust that supervisors will use the information gathered to help teachers help themselves. The results will often be seen in more friendly, collegial relations between supervisors and teachers and a better understanding of classroom behaviour by applying both the systematic and methodical approach to supportive supervision as explained below.

The systematic approach to supportive supervision involves three steps:

1. Information: Supervisors can use individual and group conferences with teachers to learn more about what is happening in their classroom. This must happen in stages. However, as trust and friendship develop, new and deeper problems will be identified and addressed in the supervising conferences.
2. Problem identification and management: Since the aim of supportive supervision is to place teachers at the centre of their own problem identification-resolution cycle, it can be organized around helping methods and Ego psychological research.
3. Ongoing and cumulative feedback. The supportive supervision method enables supervisors to know how they are doing in their efforts to aid and assist teachers. Using periodic feedback sessions, helps supervisors to identify which of their behaviours are helping and which are not.

On the other hand, the methodical approach to supportive supervision involves five steps:

1. Learn about human personality theories, with a special emphasis upon Ego psychology and its use on problem solving efforts and therapy.
2. Gain an understanding of situational analysis and the structural and relational features that develop.
3. Practice and develop initial skills in having seminars with friends at home or in school. Here the learner can realize her mistakes and correct them in a non threatening environment.
4. Use new conferencing and problem solving skills under the supervision of skillful supervisors.
5. Acquire a continual commitment to self development and learning. Those who commit themselves to supportive supervision must constantly upgrade their skills and insights, using their new experiences and those of others who are working in the same field with them.

Through interaction with teachers, good supportive supervisors learn that mistakes are normal and that providing support is a process that constantly introduces new variables into the supervising relationship (Oliva & Pawlas 2004). Common sense suggests that supportive supervision works best when supported by a motivational school organizational climate (Snowden & Gorton, 2002).

According to Azih (2001), the management of secondary schools in Anambra state leaves much to be desired in terms of desirable school organizational climate. Personal observation and interviews with principals and teachers in the state confirm that some principals communicate with their staff as if they are slaves and not colleagues whose efforts are also needed in achieving the schools objectives. In addition, some school principals are known to molest their staff by

shouting at them, criticizing them even in front of students, and some others go to the extent of even abusing them outrightly.

In a similar vein, it is not rare to see teachers using rude words in response to principals' directives and even demanding resources from principals in defiant, rude and abusive language. Given all the aforementioned management challenges observed in some secondary schools in the state, the study therefore seeks to ascertain the extent of principals' management support practices for supportive supervision of teachers' in secondary schools in Anambra State.

Research Questions

Two research questions guided the study, to wit:

1. What are the management support practices necessary for supportive teacher supervision in secondary schools?
2 What is the extent of principals' management support practices for teacher supervision in secondary schools in Anambra State?

Hypotheses

One null hypothesis was tested at 0.05 level of significance. There is no significant difference in the mean rating of principals and teachers on the extent of management support practices for supervision for enhancing teachers performance in secondary schools in Anambra State.

Method

This study utilized the descriptive survey design and was conducted in Anambra State. In a descriptive survey research design, data are collected from a sample of the population in order to find out the relative opinion, belief, attitude and status of that population about a phenomenon Akuezuilo & Agu (2003), Nworgu (2014). This design is therefore appropriate for this study since the researcher collected data from the respondents through a few representatives and analyzed them in order to ascertain the principals management support practices for teachers supportive supervision in public secondary schools in Anambra State.

The state is bounded in the north, south, east and west by Delta, Abia, Enugu and Imo States respectively. The study covered all the public secondary schools in the six education zones in the state. The education zones include; Aguata, Awka, Nnewi, Ogidi, Onitsha and Otuocha.

There are 252 public secondary schools in the six education zones in the state. The board in charge of secondary schools in Anambra State is the State Post Primary School Services Commission, Awka. The inhabitants of the state are mainly civil servants among which are many teachers, traders and a few farmers especially in rural areas. The people of the state are highly committed to education and have many secondary schools. These reasons therefore make the area suitable for this study.

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Fig. 1: Map of Nigeria showing Anambra State

Fig. 2: Map of Anambra State showing the 21 LGAs

The population of the study comprised 6,029 (six thousand and twenty nine) respondents made up of 252 principals and 5,761 secondary school teachers in the six education zones of the state. The sample for this study is 1,803 respondents comprising 75 principals and 1,728 teachers drawn from the population of the study. The sample was composed using proportionate stratified sampling techniques. The stratification was based on education zones.

Two researcher-developed questionnaires were the instrument for data collection. One was for the principals and the other for the teachers. Each of the two instruments is made up of two parts - "A" and "B". Part A is on background information of the respondents while part B contains items on principals' supportive supervision for teachers. Part B of the first instrument contained ten items which are possible management support practices by principals for supportive supervision of teachers in secondary schools. The items had response options of Yes or No. Part B of the second instrument contains ten items on the extent principals utilize the management support practices. It is structured on a 4- point scale of: Very Great Extent (VGE) = 4 point; Great Extent (GE) =3 points; Low Extent (LE) = 2 points and Very Low Extent (VLE) =1 point. The face and content validity of the two instruments were established by two experts: one in Educational Management and Policy and the other in Measurement and Evaluation. All the experts are lecturers in the Faculty of Education, Nnamdi Azikiwe University.

The Cronbach Alpha was used to determine the reliability of the instruments. This was done by administering copies of the instruments to 30 principals and 40 teachers from a secondary school in Enugu State. Enugu State was chosen for the reliability test because both Anambra and Enugu States are in the same South East Zone of Nigeria and also share similar characteristics in terms of school management. The sets of scores obtained from the respondents were collated to determine the reliability co-efficients for the items. This was done using Cronbach Co-efficient Alpha and reliability co-efficients of 0.80 and 0.81 were obtained for the two instruments respectively. These indices are high enough and the instruments were therefore considered adequate for the study.

The researchers collected the data with the help of six research assistants who were instructed on how to distribute and collect back completed copies of the questionnaire. One research assistant was chosen from each of the six education zones in the state. The

administration of the instrument lasted for ten days. All the 1,803 copies of the instrument administered were properly filled, successfully retrieved and were used for data analysis.

The two research questions were answered using frequencies and mean scores respectively. Mean scores that fall between 3.50-4.00, 2.50-3.49, 1.50-2.49 and 1.00-1.49 were taken to indicate VGE; GE; LE and VLE respectively. Again, z-test statistical procedure was used to test the hypothesis at 0.05 level of significance.

Results

Results in Table 1 below indicate that both principals and teachers accepted the ten items listed as necessary support practices for teachers supervision in secondary schools in Anambra State.

S/N	Questionnaire items	Mean Responses			
	Tick Yes or No according to your perception of necessary management support practice for teachers supervision in secondary schools	**No of Principals**		**No of Teachers**	
1	Supervising teachers while teaching in the classroom	252	Nil	1720	8
2	Organizing group supervision for teachers	250	2	1700	28
3	Arranging peer supervision for teachers	251	1	1728	Nil
4	Organizing clinical supervision for teachers				
5	Organizing general supervision for teachers	252	Nil	1728	Nil
6	Supervising teachers' lesson notes	252	Nil	1720	8
7	Supervising teachers' lesson plan	252	Nil	1728	Nil
8	Supervising teachers' marking schemes	252	Nil	1720	8
9	Supervising teachers' grading of students	250	Nil	1728	Nil
10	Supervising teachers use of instructional materials	250	2	1720	8

Table 1: Principals' and Teachers' Responses on Principals' Support Practices of for Teacher Supervision in Secondary Schools

The results in Table 2 below indicate principals' and teachers' mean ratings on support practices of pricipals for teacher supervision

S/N	Questionnaire items	Mean Responses			
	Rate each item based on the extent it is s practiced ii your school:	**Principals** $\bar{X}$	**Dec**	**Teachers** $\bar{X}$	**Dec**
1	Supervising teachers in classroom while teaching.	1.51	LE	1.50	LE
2	Organizing group supervision for teachers.	1.02	VLE	1.00	VLE
3	Arranging peer supervision for teachers.	1.03	VLE	1.08	VLE
4	Organizing clinical supervision for teachers.	1.00	VLE	1.05	VLE
5	Organizing general supervision for teachers.	1.09	VLE	1.02	VLE
6	Supervising teachers' lesson notes.	3.58	VGE	3.52	VGE
7	Supervising teachers' lesson plans.	3.51	VGE	3.84	VGE
8	Supervising teachers' marking schemes.	1.54	LE	2.00	LE
9	Supervising teachers' grading of students.	2.52	GE	2.58	GE
10	Supervising teachers' use of instructional materials.	1.30	VLE	1.32	VLE
	Grand mean	1.81		1.89	

Key: X = Mean; Dec. = Decision

Table 2: Mean Ratings on Support Practices of Principals for Teacher Supervision

The results above show that both principals (X – 1.81) and teachers (X= 1.89) indicate that generally the level of support practices adopted by principals for teacher supervision is low in secondary schools in Anambra State. However, they also indicated that the practice varies from item to item. While it is high in some areas it is low in others. This is shown by the principals' mean ratings of 3.58 and 3.51 for items 6 and 7, and teachers' mean ratings of 3.52 and 3.84 for the same items respectively which indicate that the principals to a very great extent supervise teachers' lesson notes and lesson plans. It was also shown that the principals to a great extent supervise teachers' grading of students, item 9 with mean scores of 2.52 and 2.58 for principals and teachers respectively. Similarly, the principals' mean ratings of 1.51 and 1.54 for items 1 and 8 respectively, as well as the teachers mean ratings of 1.50 and 2.00 respectively for the same items indicate that the principals to a low extent supervise teachers while teaching in classroom and their marking schemes.

Again, the principals' mean ratings of 1.02; 1.03; 1.00; 1.09 and 1.30 for items 2; 3; 4; 5 and 10 respectively as well as the teachers' mean ratings of 1.00; 1.08; 1.05; 1.02 and 1.32 for the same items respectively indicate that the principals to a very low extent organize group supervision; peer supervision; clinical supervision; general supervision nor do they supervise teachers' use of instructional materials in class.

The results in Table 3 below show the summary of data analysis for the hypothesis. The results indicate that the calculated z-value of 2.80 is greater than the critical z-value of 1.960 at 1081 degree of freedom and 0.05 level of significance.

Groups	**Number**	**Mean**	**Sd.**	**Df.**	**Z-cal.**	**Z-crit**	P	Decision
Principals	75	1.81	1.90	1081	2.80	1.960	>.05	Not Accepted
Teachers	1728	1.89	1.52					

Table 3: z-test on Support Practices of Principals for Teacher Supervision

The hypothesis is, therefore, not accepted. Thus, there is significant difference in the mean ratings of principals and teachers on the extent of management support practices for teacher supervision for enhancing teachers' performance in secondary schools in Anambra State.

Summary of Findings

Based on the data analyses for this study, the following findings were made that:

1. The principals' management practices necessary for supportive teacher supervision in secondary schools include supervising teachers while teaching in classrooms, arranging peer and clinical supervision for teachers, supervising teachers' lesson notes, marking schemes and grading of students.
2. The level of management support practices by principals for teachers' supportive supervision is low in secondary schools in Anambra State.
3. Mean ratings of principals and teachers on the extent of management support practices for supportive supervision of teachers in secondary schools in Anambra State differ significantly.

Discussion of Results

The data analysis presented in Tables 1 and 2 indicate that though the level of management support practice is low in secondary schools in Anambra State that the principals to a very great extent supervise teachers' lesson notes and plans. This agrees with the findings of Campbell (2007) that successful principals always monitor and supervise teachers' lesson notes as well as the teachers' plan of what they want to teach the students.

The results also showed that principals to a low extent supervise their teachers in class or their marking schemes. The findings are in agreement with Lin and Gorrell (2003) who found that some school heads are so occupied with office work that they hardly have time to supervise their teachers.

Further findings of the study indicate that principals, to a very low extent, organize group supervision, peer supervision, clinical supervision, general supervision, nor supervise their teachers' use of instructional materials. The above findings are supported by Cakiroglu (2003) who found that most school heads lack supervisory skills and as a result entrust academic supervision into the hands of Board officials. Ezepue (2005) found out that principals do not adequately supervise their teachers' instructional activities. Like the current study, Ezepue also found significance difference in the mean ratings of principals and teachers' on the principals' frequency of instructional supervision. The findings of this study have a number of implications for principals and state government.

The first implication of the study concerns school principals. If principals do not support their teachers in schools, the performance of such teachers may be low. Secondly, if principals do not encourage or recommend their teachers to attend staff development programmes such as seminars and workshops, teachers may not be abreast of new discoveries in teaching and learning processes.

The last implication of the study concerns the state government. Public schools are among government establishments and as such require adequate funding and provision of facilities. If the government fails to take adequate care of principals and teachers, management support practices in schools may fall below expectation. Again, where principals and teachers are not adequately encouraged to attend in-service training programmes, management support practices at the school level may not be effective.

Conclusion

On the basis of the data analyses and the discussion, the researchers made some conclusions, which include that principals management practices necessary for supportive teacher supervision include supervising teacher while teaching and organizing group, peer, clinical and general supervision. It also includes supervising teachers' lesson notes, lesson plans, marking scheme, grading and supervising teachers' use of instructional materials. The principals management practices necessary for supportive teacher supervision in secondary schools in Anambra State however appear to have ignored such areas like group, peer, clinical and general supervision which are greatly needed in schools in order for teachers to be more efficient in their duties.

Recommendations

Based on the findings, the following recommendations are made:

1. Principals should frequently arrange for inter-school visitations for cross-school exchange of knowledge and skills as a way of supporting teachers to grow professionally.

2. Principals should not limit their supervisory roles to teachers' lesson notes and plans but also their marking schemes and classroom instructions. The essence should not be to police instructions but to help the teachers to grow professionally.
3. Principals should apply several supervision techniques, such as peer and clinical supervision where the contributions of each participating teacher is valued to help them do better in the class.
4. Government should ensure that principals of public secondary schools improve on their management support practices, and should frequently organize seminars on effective supportive supervision techniques for effective and efficient running of schools.

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A Performance Evaluation Model for School Teachers: An Indian Perspective

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Abstract

Education is of value in itself (intrinsic value) and is valued for what it can do (instrumental value). 'Value drives customer satisfaction' and the value of educational services is directly proportional to the quality of human resources providing the services, the front line managers, namely the teachers. Teachers are the spine of an education system. Though teaching is a noble profession, teachers are professionals as any other and must be assessed by their performance and utility.

In India as in the other parts of the world, education is a 'high contact service'. Characteristics like 'Intangibility', 'Perish-ability' and the factor of 'Inseparability' - in the sense that it is usually impossible to separate the service from the person or the provider, are associated with 'Education'. These heterogeneous characteristics of educational services necessitate careful personnel selection and planning, constant and careful monitoring of performances and their continuous development to meet the demands of the changing customer (student) needs (Kaushik, 1997). Therefore a need was envisaged to develop a comprehensive Model for Teacher Performance Evaluation with input from teachers and other relevant stakeholders.

This research followed a mixed method; both qualitative and quantitative approaches were adopted. Data collection tools were developed with reference to the Charlotte Danielson Model combined with a study of the role of a teacher from an Indian perspective. They were administered to the various stakeholders who are impacted by teacher performance (students, parents, teachers and principals/supervisors). Stratified random sampling techniques were used. Factor analysis was used as the technique for quantitative data analysis. Quantitative and qualitative data triangulation led to substantial findings which contributed towards model development.

Key Words: Quality, Teacher, Performance Evaluation

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Introduction

Education is derived from the Latin word 'educare', which means 'to bring up' or 'to raise'. Education is of value in itself (intrinsic value) and is valued for what it can do (instrumental value). Intrinsically it promotes a feeling of wisdom and personal well-being. Instrumental benefits would be in terms of degrees and skills one can use to get a good job and a high social position. Education is the fundamental enabler of a knowledge based economy. Schools account for a substantial proportion of public and private expenditure and are universally regarded as vital instruments of social and economic policy aimed at promoting individual fulfillment, social progress and national prosperity.

With India heading towards a super power status it is realized that 'Quality Education' is a decisive driver for growth. A teacher is the 'moral fiber' of an education system. 'Value drives customer satisfaction' and the value of educational services is directly proportional to the quality of human resources providing the services, the front line managers, namely the teachers. The NCF (National Curriculum Framework- 2005) states, 'No system of education can rise above the quality of its 'teachers', and the quality of teachers greatly depends on the means deployed for selection, procedures used for training and the strategies adopted for ensuring accountability'. Teacher quality (i.e. performance competency) enrichment is a function of improvements in instructional practice focusing on enhancing content knowledge and pedagogical skills. This in turn, is a function of the strategic (planned) professional development, which is achieved through systematic in-service training and development programmes for teachers. To attain this objective, the means required are an effective and efficient performance evaluation system. Therefore, the thrust in Indian education should increasingly focus on the quality of processes in education and hence also on accountability and professionalism of its providers – teachers.

Literature Review

Need for Teacher Performance Evaluation in the Indian Context

Education in India is provided by the public sector as well as the private sector, with control and funding coming from three levels: central, state, and local. The central (CBSE, ICSE) and most state boards uniformly follow the "10+2+3" pattern of education. In this pattern, study of 12 years is done in a school and junior college (10+2 yrs.) and the attainment of a Bachelor's degree takes 3 yrs. of studies thereafter. The first 10 years is further subdivided into 5 years of primary education, 3 years of upper primary, followed by 2 years of high school. It is important to clarify that while there are private schools in India, they are highly regulated in terms of what they can teach, in what form they can operate (e.g., only non-profit organizations can run an accredited educational institution) and all other aspects of operation.

According to the PROBE (Public Report on Basic Education) report 1999, 'Generally speaking, teaching activity has been reduced to a minimum in terms of both time and effort. And this pattern is not confined to a minority of irresponsible teachers - it has become a way of life in the profession' (PROBE Team, 1999, p 63). The report goes on to link teacher absenteeism and shirking responsibility to a lack of accountability among teachers. Citing Weiner (1990) ; "some of principals deposing [before the National Commission]

lamented that they had no powers over the teachers and were not in a position to enforce order and discipline. The district inspectors of schools and other officials do not exercise any authority over them as powerful teacher associations often supported the erring teachers. There was no assessment of a teacher's academic and other work and that they were virtually unaccountable to anybody" (National Commission on teachers, 1986, p68).

Different commissions and educational committees have expressed a need for an effective system of teacher appraisal. Government regulation necessitates teacher performance evaluation in schools; however, it has remained a passive exercise, e.g., an annual confidential report in most schools. Very few schools have progressed beyond this reality. In addition, few have a full-fledged performance evaluation system in place. It should be noted that the criteria for these evaluations are not exhaustively identified or clearly defined. Furthermore, the evaluations tend to be done in a subjective manner.

"There is an urgent need to establish effective performance evaluation system. There is no established linkage between the appraisal process and the identification of the professional development needs of teachers. The professional development programmes need to be diversified and linked to the outcome of the evaluation process. Self-appraisal and reflections in which the teacher uses a variety of techniques, such as, diaries, journals and portfolios are not being utilized". These were the sentiments opined by various school stakeholders during informal discussion with the researcher. It is thus evident that, there appears to be a need of a comprehensive performance evaluation system for maintaining and enhancing quality and ensuring accountability amongst teachers.

Purpose of Teacher - Performance Evaluation

In a research study (Anthony Milanowski, 2004) the findings state; " scores from a rigorous teacher evaluation system can be substantially related to student achievement and provide criterion-related validity evidence for the use of the performance evaluation scores, as the basis for a performance-based pay system or other decisions with consequences for teachers. It could be summarized that, although the concept of quality teaching remains elusive, teachers and their behavior in the classroom are at times considered convenient indicators of school quality and very frequently are at the center of attempts at quality improvement"

According to Danielson (1996), the evaluation system requires three critical components, including "a coherent definition of the domain of teaching (the 'What'), including decisions concerning the standard for acceptable performance; techniques and procedures for assessing all aspects of teaching (the 'How'); and trained evaluators who can make consistent judgments about performance, based on evidence of the teaching as manifested in the procedures". Hypothetically, the teacher evaluation process fulfills several criteria. Foremost, teacher evaluation helps quantify, and thus determine, the overall value and worth of any given teacher's instruction. As Peterson (2000) contends, teacher evaluation is especially critical because, for the most part, students are legal minors and 'non- voluntary' (p. 36).

As Rick Sawa (1995) synthesized in his literature review, these emerge as six main purposes of teacher evaluation:

1. The general purpose of teacher evaluation is to safeguard and improve the quality of instruction received by students (Kremer, 1988).
2. It should strive to improve instruction by fostering self- development (Rebore, 1991) and peer assistance.

3. Staff development activities can be rated and identified (Stanley dk Popham, 1988).
4. The selection process can be validated (McGreal, 1983).
5. A well designed, properly functioning teacher evaluation process provides a major communication link between the school system and teachers (Walsh, 1987).
6. Personnel decisions such as retention, transfer, tenure, promotion, demotion, and dismissal can be enhanced through an effective evaluation process (Kremer, 1988).

Around the world, schools work diligently to catch up with new and ever-changing standards, to keep up with constantly shifting expectations from the state - central governments, and to meet student outcomes. To defend the quality of outcomes it is essential to establish quantifiable variables and processes. If enhanced student outcome is the expected end - product, due focus should be placed on important variables like teacher performances, productivity, potential for future improvements, strengths, weaknesses etc.

Different Approaches to Teacher Evaluation

Different methods of evaluation have received much attention in recent literature as the teaching profession considers evaluation an integral part of staff development and the administration looks to evaluation data as evidence in accountability debates. The rationale for teacher evaluations ought to be: clarity of procedures, fair and rigorous process, professional learning, quality assurances and informed tenure decisions.

Weiss, E Mary and Gary (1998) state "…teachers are judged by society today on how well they prepare students to learn how to learn, to perform creatively and to adapt to a variety of situations in a post- industrial economy. Why then should teacher evaluation models continue to evaluate teachers according to a narrow prescriptive set of behaviors that reinforce a formulaic rather than a creative and analytic way of teaching? ". In alignment with these changing performance expectations there is also a need for well-constructed performance assessment tools which provide valuable feedback and communication.

Traditional summative evaluation models are not necessarily structured to support dynamic, regenerative school environments. Consistent with the goals of education for students to become life-long learners and thoughtful decision-makers in our democratic society, "constructivist" perspectives view schools as diverse learning communities where teachers must possess a broad repertoire of skills and knowledge consistent with the holistic needs of students (Dewey, 1900; 1902/1990). Administrators and teachers need access to comprehensive evaluation models that capture the complexities of teaching. Congruent with an expanding knowledge base of teaching and learning, performance standards are being developed that lead to reconfigured assessment designs which require an array of reflective, analytic skills.

The Danielson (1996) Model for Teacher Performance Evaluation includes variables associated with the role of a teacher that has a strong formative purpose. Therefore, this model was identified as a reference for tool development along with the other variables emerging from the discussions held with various stakeholders regarding the role of a teacher. The Danielson Model is presented in Table 1, below.

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Planning and Preparation	Classroom Environment	Instruction	Professional Responsibilities
Demonstrating knowledge of content and pedagogy.	Creating an environment of respect and rapport.	Communicating clearly and accurately	Reflecting on teaching.
Demonstrating knowledge of students.	Establishing a culture of learning.	Using questionnaires, discussions and various techniques.	Maintaining accurate records
Selection of instructional goals.	Managing classroom procedures	Engaging students in learning	Communicating with families
Demonstrating knowledge of resources.	Managing student behavior.	Providing students with a timely feedback	Contribution to the school and community.
Designing coherent instructions.	Organizing physical space	Demonstrating flexibility and responsiveness	Growing professionally.
Assessing student learning.			Showing professionalism

Table 1. Teacher Performance Evaluations – Danielson Model (1996)

Research Objectives

Teacher evaluation issues cannot be studied in isolation. Societal, school system, and school-level factors all influence the design of teacher evaluation policies. A model developed in one country may not necessarily work in another due to the differences in the educational context. This research was therefore undertaken with an objective to develop a comprehensive Performance Evaluation (PE) model for school teachers with an Indian perspective using the Danielson Model as a base.

Research Design and Methodology

The proposed research has followed a mixed method of research. The researcher has followed both a qualitative and quantitative approaches for the development of the Performance Evaluation Model for school teachers. Separate tools were designed, addressed and administered to the various stakeholders who were impacted by teacher performance (students, parents, teachers and principals/supervisors).

The flow chart for the model development can be summarized in the following steps:

Model Analysis / Teacher role in the Indian context

↓

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Tools for various stakeholders based on the model
(establishing validity and reliability)

↓

Insights gathered from all the relevant stakeholders (data from the rating scales and interviews) on the inclusion of various criteria for teacher evaluation

↓

Model development changes to fit the Indian context

Quantitative Method - Tool Development and Data Collection

The tools were developed with reference to the Danielson Model (1996) and studying the role of a teacher from an Indian perspective. The tools were developed on the Likert rating scale which measures the strength of agreement with a clear statement. The items were to be rated on the scale from 1-5 (e.g., 1- least important and 5- the most important response). A factor analysis was used as the technique for quantitative data analysis. Interviews and discussions were conducted. The interview structure was close to the items on the rating scales, for the ease of data triangulation.

The reliability and validity of each tool was ascertained. The table 2 below gives insights to the values of each tool developed.

Validity and Reliability of the PE Tools					
Stakeholders	**Items**	**Validity**	**Reliability**		
			Correlations – r	**Cronbach's Alpha**	**Significance**
Parents	33	Content	Sig value = 0.01 r = 0.443	Alpha = 0.475	significant
Students	30	Content	Sig value = 0.07 r = 0.481	Alpha = 0.593	Highly significant
Principals	49	Content	Sig value = 0.000 r = 0.709	Alpha = 0.828	Highly significant
Teachers	40	Content	Sig value = 0.000 r = 0.876	Alpha = 0.934	Highly significant
(All values are significant at 0.01 levels)					

Table 2. Validity and Reliability of tools deployed

Sampling

The sampling technique used for the proposed research is a stratified random sampling. Fifty schools representing various curricula were selected as samples from the English medium schools in Mumbai suburbs, wherein 1300 stakeholders (students, parents, teachers and principals/supervisors) responded to the tool. Table 3 provides information about the respondents from the stakeholders representing various curricula.

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Curricula	Schools (Mumbai Suburb)		Stakeholders			
	Population	Sample	Teachers	Parents	Students	Principal/ Supervisor
SSC	213	36	103	324	445	36
ICSE	25	10	41	68	140	16
CBSE	23	4	11	56	55	6
			155	448	640	58
TOTAL		50		1301		

Table 3. Sampling

Data Analysis

As explained by Rummel (1970) factor analysis is a means by which the regularity and order in phenomena can be discerned. Factor analysis helps to discern,

- what patterns exist in the data and how they overlap,
- what characteristics are involved in what pattern and to what degree, and
- what characteristics are involved in more than one pattern

The objective of this research was to develop a comprehensive Performance Evaluation (PE) model for teachers; therefore the minor objectives under this major objective are to:

- Identify the representative variables from the larger set of variables (included in the data collection tool) used in Model development. This would give an insight to the significant variables from the perspective of the prevailing respondents.
- To consolidate the responses [with respect to identified factors in (1)] of different stakeholders (principals/ parents/students and teachers) across different curricula.

Qualitative Methods - Interviews and Discussions

The data collected from the interviews and discussions were triangulated with the findings from the rating scale. Data triangulation, which helps strengthen confidence in preliminary findings, refers to the use of various methods, data sources, researchers, or perspectives to explore a single program, problem, or issue (Bryman & Bell, 2008). In other words, triangulation is the application and combination of several research methodologies in the study of the same phenomenon. It can be employed in both quantitative (validation) and qualitative (inquiry) studies. It is a method-appropriate strategy of founding the credibility of

qualitative analyses. It becomes an alternative to "traditional criteria like reliability and validity".

Triangulation

Apart from the qualitative data emerging and supporting these key variables, the formal and informal discussions with the stakeholders also strongly supported the inclusion of these variables in the emerging Model. These variables were;

- Withholding use of corporal punishment
- Inclusive education
- Completing a syllabus
- Role modelling
- Impartiality in classroom procedures

According to the Indian scenario, one - style - fits - all, is assumed for student learning. Therefore, how a teacher uses the knowledge of students and can make a difference to the teaching – learning processes and the achievement of students is not something that is frequently discussed in the classroom. There is no reference or stress on learning styles and its impact on their learning in the schools because the principals and the teachers do not see the scope of implementing any of those concepts due to the lack of time and the huge student – teacher ratios in our classrooms. Perhaps, if parents, students and teachers were to become aware of the differences in how students 'learn' they may be able to help them learn better.

The prime objective of education in the current school system is examination success, wherein high marks in a single annual or biannual examination are equated with good academic performance. Very few schools have an ongoing assessment on various parameters other than written examinations. The parents in this study felt the need to define assessment without the boundaries set only by marks and grades. It was felt that assessments should be able to give indications of the students assimilation of knowledge at all levels, cognitive as well as affective and his/her readiness for higher levels of learning and understanding.

There is significant agreement that the benefits of creating a positive learning environment, a culture of inquiry and thought, and a climate of passion and excitement are beneficial to learning. A school that could achieve such characteristics would be a place where; students would enjoy coming every day and be a source of pride for the parents and community in general. The parents and students demand proficient teachers have a thorough understanding of the subject(s) they teach and disseminate how knowledge in their subject is created, organized, linked to other disciplines, and applied to real-world settings.

Interviews revealed that being impartial and banning corporal punishments in schools should be a norm. This criterion emerged as one of the strongest amongst parents and students and hence was included in the model. The teachers and school leadership had a perception these aspects were meticulously implemented in their schools; however, both the parents and student stakeholder groups felt these essential practices were completely ignored in many schools. A detailed exploration of these perception gaps is necessary. There is a strong demand for detailed guidelines from the schools to help the parents understand what their child might incur if their actions merit discipline. Information in this document could include the type of

punishment allowed, who among the school staff are authorized to deliver the punishment and whether parents must first give their permission before punishment can be delivered to their child. The parents also expressed their uneasiness about the favoritism teachers displayed towards students engaged in private tuitions with them. They strongly recommended school policies, which discourage teachers from accepting any gift or favor that might impair or appear to influence professional decisions or actions.

After the parents, the teacher is typically the adult with the greatest impact on the social world of children. Therefore there is a strong need from the parents to ensure that their children inculcate the habits, values that are conducive to being a good human being and also to 'learn to be lifelong learners' through role modeling from their teachers. The teachers too have to stress on opportunities for continuous professional development to keep themselves abreast of the latest developments in their own subjects. However, there were a few variables from the Danielson Model which did not find a place in the Indian context, there were;

- Knowledge of Resources.
- Clear communication.
- Reflection on teaching

While examining the reasons why these criteria probably would not have emerged in the Indian context some emerging critical thoughts are summarized below:

- The school board members, principals and supervisors concurred, knowledge of resources and clear communication are ascertained through the scores / grades attained during their Bachelor of Education (B.Ed.) and Master in Education (M.Ed.) which is sufficient to indicators to ensure these competencies. The school boards declare, their robust recruitment and selection processes sufficiently confirm their teacher's possess these skills.
- Due to the low teacher student ratios in the class (60-70 students per class with one teacher and no assistance) it gets challenging to refer / use all the resources to make learning more effective while managing time and class room discipline. So even though the teachers have ample knowledge of resources', using them has practical difficulties.
- There was little scope for 'reflection' due to the various co-curricular , extra- curricular activities along with various government duties (e.g.: election duties, survey duties) assigned to the teachers. However they accepted the importance of self-assessment and reflection and were willing to devote time and efforts to learn from their peers.

Summarizing the discussion, if teachers are expected to deliver as professionals, they should be provided with specifics on role clarity, job descriptions and productivity parameters and have no ambiguity about their responsibilities and role before they are evaluated. Teaching as a profession, no longer attracts quality human resources. Poor teacher quality is a catch-22 situation in India - it is not possible to recruit high quality talent without restoring dignity to the profession, and it is not possible to restore this dignity without making teaching a viable career option. Low wages, long working hours, few opportunities for growth, no streamlined system for incentives, recognition and rewards are amongst the many contributing factors to this vicious circle.

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The Emerging Model and Recommendation

The Model emerging from obtained from quantitative data subjected to Factor analysis is depicted in the Table 4

Pre-Evaluation		**Performance Areas**				**Post Evaluation**
Creating a conducive climate for evaluation	**Preparation for the process of evaluation**	**Planning and preparation**	**Classroom Environment**	**Instruction**	**Professional responsibility**	
Constructive climate through communication, collaboration and commitment	Evaluation methodology differentiates positions, experience and tenure	Knowledge of content	Creating an environment of respect and rapport	Use of different technique and aids	Completing syllabus	Helps in formative decisions
Communication of purpose, and process, agreement on set criteria	Using multiple data sources for evaluation.	Knowledge of pedagogy	Establishing a culture of learning	Engaging student in learning.	Maintaining accurate records	Helps in summative decisions
	At least one class observation before evaluation.	Knowledge of students	Classroom management (Impartiality, Corporal Punishment)	Providing timely feedback to Students	Communicating with families about student progress, maintaining confidentiality	Rating supported by data (explanations, examples)
	Train evaluators for evaluations including training for ‘cognitive ‘coaching’ and ‘clinical class room observation’	Selection of instructional goals	Managing physical environment	Inclusive education	Contributing to school and community and own personal & professional development	Confidentiality in storing information (appraisals)

Table 4. The emerging FV- Model for Teacher Performance Evaluation

Recommendations

There was an agreement to by all the stakeholders to the inclusion of almost all important variables from all the domains of Danielson (1996) Model with an exclusion of just a few. Interestingly, there have also been some factors, which have emerged from our school setups (highlighted in yellow), which have been included in the Model. The **pre and the post evaluation** processes are also included as there has emerged a strong need to have a comprehensive process of evaluation.

The recommended FV Model of Performance Evaluation would help determine competence, assess strengths, provide support and mentoring, and assure continued growth through differential experiences. The Performance Evaluation Model if implemented in a planned manner would also help improve delivery of services to the students and would be a part of a continuous, constructive cooperative whole school improvement process. The Model has ample scope to be applied across schools that have embraced technology as a means to achieve educational objectives.

Some other recommendations, which emerge from the study, are:

1. Every student learns differently. The closer the match between students 'learning styles and their Teachers' teaching styles, the higher the student achievement. Teacher should have the knowledge of her students so that she can alter her teaching styles to the needs of the learners. Due to the huge student teacher ratio, if both the students as well as parents share this responsibility it would make good sense. Therefore schools should spend more time developing students' awareness about their learning styles; this would improve their self-esteem and self-efficacy. Schools should also make efforts to educate the parents, to understand how different student learn differently. Parents must understand the distinctiveness of their child to help him/her become a better student.
2. Despite understanding the value of teacher preparation time, it is becoming difficult for teachers to find time during the school hours to prepare lesson plans and perform other duties important to effective teaching Making teacher preparation time a scheduled activity in the teacher time- table, will give them an opportunity to be a part of the decision-making, regarding strategies to boost student achievement and enrich the learning experiences.
3. Student assessment should reflect information from multiple sources in order to provide an enriched view of student learning. Assessment should not be limited to cognitive domains, but also include skills and affective domains.
4. There should be a 'zero tolerance' towards corporal punishments in all the schools.
5. The professional development of all the teachers should have a mandatory component of inclusive education and the teacher education degrees should lay greater emphasis on this area in their curriculum and use of relevant technology.
6. The core competency of a teacher is to 'teach'. He/she is entrusted with the responsibilities of learning outcomes, which in turn shapes the students lifetime perceptions related to education. If the teacher has to enrich student learning experiences then he /she should be allowed to concentrate on this core responsibility. The other peripheral tasks (supervision, class attendance, election duties etc.), which do not require the teachers to actively contribute as a professional, should be outsourced.

7. Provide incentives, structures, and time for teachers to participate in highly effective staff development (such as study groups and action research) to help them integrate technology into their teaching and learning.
8. Expectations are high from teachers to deliver as professionals. To help them deliver effectively, they should also to be provided specifics on their role clarity, job descriptions and specifications that would give them a clear picture of their responsibilities and role before they are being evaluated.

Contribution of Research to the Domain of Education Management

Education as a service is creating tremendous pressure and demanding quality in education. The research has contributed by developing a comprehensive Model of Performance Evaluation for school teachers. The proposed FV Model of Performance Evaluation, if implemented would serve both the Formative as well as Summative purposes of the organizations (schools). The Model could be applied across all curricula, in both urban and rural settings. The metrics and the weightage given to each area suggested in the Model in accordance to the school growth strategies.

Suggestions for Further Research

The proposed FV Model for Teacher Performance Evaluation could serve as fundamental work and some variables from this model could be studied in relation to its impact on Student Achievement. e.g.:

1. To study the impact of Teacher pedagogical content knowledge on the cognitive achievement of students.
2. To study the impact of corporal punishment on the affective domain of school students.
3. The applicability / scalability of the proposed FV Model of Teacher Evaluation to higher education (Academics / Professional courses)
4. Longitudinal studies relating linkages between Teacher Performance Evaluations and Student Achievement in the Indian context.
5. Study the impact of changing technology in performances measurements of school teachers.

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School ethics: Personal Reflections on Moral Philosophy

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Abstract

The focus of this study is to explore school ethics phenomena in Taiwan. The journey begins with personal reflections on moral philosophy, including Idealism, Relativism, Egoism, Altruism, Justicism, Deontology, and Utilitarianism. The process of personal reflections on moral philosophy can arouse ethical beliefs, leading to the fulfillment of moral obligations and the improvement of schools. The issues of school ethics should be emphasized, since they can easily be neglected. The promotion of school ethics could inform school management and revive movements to improve schools. To achieve the goal of this study, a qualitative case study was adopted as the research method, and a private high school in Taipei, Taiwan, was chosen as the study field. Personal interviews were used for data collection. The interviewees (sixteen in total) were school administrators, teachers, and parents. Conclusions and implications are derived from the personal reflections on moral philosophy, the expansion of stakeholders' participation, the accumulation of moral assets, and the effects of ethical beliefs. Principles and modes in the practice of school ethics are brought up to enhance the ethical decision-making abilities of school stakeholders.

Key words: school ethics; personal reflections on moral philosophy; school management

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Introduction

In the past two decades, the field of organizational ethics has generally been valued and advocated (Oosterhout, Wempe, & Willigenburg, 2004). However, the organizational ethics of schools, such as the values of trust, character, and equity, are gradually declining as less importance is placed on them. The ethical value of truths has been eroded by the prevalence of meritocracy in today's society (Ahmed & Machold, 2004), causing the prevalence of unjust social relationships (Baez, 2006). Under pressure from competitive markets, schools are more likely to be influenced by thoughts that are detached from ethics (Apple, 2006), resulting in lessened concerns about morality issues in education (Cameron & Caza, 2002; Sankar, 2003).

As the important educational institutions of nations, schools carry the responsibility for ethical duties in education, especially in the cultivation of student character (Starratt, 2006). Therefore, the intention of this study is to call more attention to issues concerning morality and ethics in school management so as to establish a rigid foundation for the practice of school education.

School ethics refers to school members fulfilling moral obligations more actively in the process of school education, while their ethical beliefs are motivated by personal reflections on issues concerning moral philosophy (Dubinsky, Natraajan, & Huang, 2004; Pojamn, 1995), which are crucial to the practice of school ethics. Also, the practice of school ethics could legitimize power and leadership, resulting in good organization and innovation (Trevino, Weaver, & Brown, 2000; Walker, Haiyan & Shuangye, 2007).

The objective of this study is to understand the phenomena of school ethics with an emphasis on personal reflections on moral philosophy. Discussions focus on moral appeals, ethical beliefs, and the effects and implications of ethical decision-making in school management.

Literature Review

The Meaning of School Ethics

Combining various definitions of schools (Bates, 2003; Blanke, 1992; Daft, 1989; Deing and Quinn, 2001; Sergiovanni, 1992; Trac, 2006) with the meanings of organizational ethics (Badiou, 2001; Christie, 2005; Dubinsky, Natraajan, & Huang, 2004; Freeman, Engels, & Altekruse, 2004; Grove, 1981; Heinze, 2005; Pojamn, 1995; Reed, 1999), school ethics can be defined as follows: In order to achieve the goals of education, the reflections on moral philosophy of school members in terms of organizational function and the market are emphasized to arouse ethical beliefs and values for improving the fulfillment of moral obligations.

School Ethics and Personal Moral Philosophy

Personal reflection on moral philosophy, an important approach to the practice of morality, is a major feature of school ethics (Audi, 1997). The categories of personal moral philosophy involve reflection of Utilitarianism, Deontology, Egoism, Idealism, Relativism, Justicism, and Theories of Moral Cognitive Development (Ahmed and Machold, 2004; Arnett & Hunt, 2002; Bass, Barnett, & Brown, 1998; Long, 2003; Shultz & Brender-IIan, 2004). One's moral philosophy plays a leading role in cultivating one's personal character and habits (Kronman, 1998); furthermore, one's moral philosophy can foster harmonious social relationships, bringing about integration and a sense of morality in a community (Balazs, 2004; Hartman, 2001).

Ethical Beliefs in School Ethics

Ethical beliefs are believed to be motivated by personal reflection of moral philosophy, such as the values of prudence, justice, benevolence, utility, criticism, autonomy, reciprocity,

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equality, truth, deliberation, honesty, respect, responsibility, care, benefit, consideration, democracy, interpretation, equity, efficacy, coordination, courage, and ideals (Bates, 2003; Bottery, 1993; Deing & Quinn, 2001; Fraser, 2000; Greefield, 2004; Hanssen, 2000; Starratt, 2006; Walker, Haiyan, & Shuangye, 2007; Woods, 2006).

Effects of Personal Reflection on Moral Philosophy

Based on the results of related research, Idealism is regarded as a vital factor in ethical decision-making across various cultures; while Relativism works only under specific cultural contexts (Lee & Sirgy, 1999; Singh, Vitell, Al-Khatib & Clark, 2007). This indicates that opposite theories of moral philosophy applied in different cultures could produce similar effects on philosophical reflection on issues of morality and ethics.

Method

In this study, the operational definition of school ethics is as follows: School members, including administrators, teachers, and parents, reflect on personal moral philosophy regarding functional, market-oriented, and competitive aspects of the school, in order to arouse ethical beliefs for prescribing personal behaviors and encourage the individual performance of moral duties.

A qualitative case study method was adopted for a comprehensive understand of ethical phenomena in schools initiated by personal reflection on moral philosophy. A private comprehensive school known for the brilliant performance of its students and teachers was chosen as the research field. Interviews with school members, including administrators (the principal, directors, and section chiefs), teachers, and parents, was the major method of data collection. All interviewees had experience in school management and participated in the development of the school.

In-depth personal interviews were conducted for data collection in such a way as to allow respondents to feel free to fully express their feelings and thoughts. The duration of each interview was about one and a half hour to two hours. There was some spare time for interviewees to rethink and reflect on their experiences and responses to the interview questions. Guiding questions were as follows:

- What values and/or beliefs do you keep when you doing educational activities? Why you think the values/beliefs are important?
- How do you put your values/beliefs into practice? Can you give some examples?
- What influences do the values/beliefs have on your daily practices of education and on the school management?

These questions were adjusted based on interviewee responses during the interview process in order to gather more specific and richer data relating to the phenomena of school ethics.

Interviews were recorded with sound recording devices to ensure completeness of the data, and permission for sound recording was obtained from interviewees in advance. To protect the privacy of the participants, their anonymity was maintained throughout the data analysis and presentation. Audio data from interview recordings were transcribed after each interview, and the transcripts of the interviews were coded for data analysis.

Research Findings

The coding of interview transcripts was based on the categories of personal moral philosophy presented in the literature review. Analyses and discussions were organized according to the different positions of the interviewees. From the data analysis, we found that school members with different roles reflected different aspects of personal moral philosophies in their statements as shown in Table 1.

Table 1 Different aspects of moral philosophy reflected by statements of school members

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Interviewees / Moral Philosophy	School administrators	School teachers	Parents
Idealism	○	○	○
Relativism	○	○	
Egoism		○	
Altruism		○	○
Justicism		○	○
Deontology	○	○	
Utilitarianism	○	○	○
Moral cognitive development			○

The statements of school administrators tended to reflect beliefs from Idealism, Relativism, Deontology, and Utilitarianism. Those of teachers reflected almost all aspects of moral philosophy, including Idealism, Relativism, Egoism, Altruism, Justicism, Deontology, and Utilitarianism. Those of parents reflected Idealism, Altruism, Justicism, Utilitarianism, and the theory of moral cognitive development.

School administrators

The school administrators expressed beliefs tending toward Idealism and Relativism to pursue educational ideals and to improve the achievement of students. This was expressed by one administrator thus: "*The working attitudes, including ideals, ambition, and respect, would drive you to pursue the excellence of the school.*" (A1) Also, school administrators tended to accept the fact of a societal dilemma, as one administrator stated, "*I don't think I'm only a follower in the school organization. Instead, I think I'm a leader, too. Expanding the responsibility range can foresee the hidden problems of specific events in order to adopt essential measures in advance, and make effective judgments. Under this circumstance, the situation would be improved.*" (A3) And thus the ethical beliefs of respect and involvement were aroused to strengthen their motivations for taking responsibility, generating the virtue of wisdom (Rooney & McKenna, 2008), consolidating rational decision-making, maintaining the excellence of the school management, and establishing a pleasant work climate in the school (Shultz & Brender-IIan, 2004). In this way, the achievement of students in the school was promoted.

School administrators also tended to hold beliefs consistent with Deontology and Utilitarianism,, which may explain why they tended to respect professionalism, listening carefully to others, and maintain the rights of students. As several administrators noted:

"*We respect the professional course plan, and this could really serve the needs as well as benefit students' learning.*" (A2)

"*As a leader, the principal needs to be kind, decent, and friendly. These traits of a leader will win the respect of the followers. Also, the principal communicates with teachers very often, and responds to the needs of parents or students in person.*" (A7)

"*I also have to listen attentively to others, and this goes back to magnanimity. When you are listening to others, you have to be tolerant. All in all, you must broaden your perspective to coordinate in harmony.*" (A3)

These actions are favorable for winning respect, developing professions, and pursuing efficiency: "*The school administration should be effective in conducting school activities, and then the communication with teachers will be more effective.*" (A1)

From the above, the ethical beliefs of passion, friendliness, love, and generosity should be motivated; furthermore, the ethical beliefs of support, community, and care should be added to construct an environment of high quality, satisfy the needs of teachers, and increase the

effects on social coordination and problem solving.

School teachers

School teachers valued the accumulation of student experiences and love of education, a value consistent with Idealism. This value in turn aroused ethical beliefs of devotion and commitment to the long-term development of students and the self-actualization of teachers. As two teachers stated, "*Students lack life and living experiences…so I would pay more attention to this part, and I'm very willing to pay attention to students' affairs to benefit the long-term development of students…Instead of profit-making, the starting point of educational ideas held by this school is love…and I will have opportunities for self-actualization.*" (T4 & T6)

In addition, accepting the coordination of contradictions and the advocacy of autonomy tended to reinforce beliefs from Relativism, initiating ethical beliefs of understanding and freedom to promote the coherence of the school communities. As noted by two participants, "*As a senior teacher, I play the role of communication and coordination…I will give them freedom and flexibility to bring their ideas of teaching into full play.*" (T3) "*I like the autonomy given by the school…the teachers in this school have a lot of freedom and flexibility.*" (T5)

The statements of the teachers also strongly reflected Deontology, since teachers emphasize the importance of values such as respecting interests, eliminating deceptive behaviors, encouraging modesty and humility, serving as a role model, and taking care of the needs of teachers. As two participants noted, "*The school members should not be too big for their own boots so that mutual respect among members can be achieved.*" (T4) "*The school marketing must not cheat others, so there's no huge advertisement published by our school, as other schools would do. If we keep managing the school with a down-to-earth attitude, word-of-mouth marketing will spread among the neighborhood communities.*"(T1) The values from Deontology held by teachers could give rise to ethical beliefs of professionalism, practicality, honesty, respect, devotion, and trust, leading to effects on the involvement of in work, benefits of recruitment, the development of students, capacities for problem-solving, and the improvement of teaching.

Also, the statements of teachers tended to reflect Utilitarian beliefs; they paid much attention to taking care of students, goal achievement, the happiness of the parents, competitions of student performance, and the efficacy of time management. As several teachers noted:

> "*Being a teacher, you should take good care of every student to improve the achievement of education missions and to promote the atmosphere of collaboration in the school.*" (T1)
> "*Members of the school need to work together to achieve the goals of the school, so the division of labor among school sections should break departmental boundaries as well as the hierarchy; instead, the work distribution should be task-oriented, and different sections in the school should be organized into a collective team to establish an interrelationship of mutual support. This would consolidate the internal cooperation inside the school, and the competitiveness of students would be improved and the achievements of the school would be promoted.*" (T2)
> "*The staff members in the school need to expend great efforts on school management to satisfy parents' demands. Therefore, I think I should keep on improving my professional skills, and parents are more likely to identify with your teaching as well as the school performance.*" (T3)
> "*Highlighting the rates of students entering excellent universities in our school*

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means that if a school can develop distinguishing features, innovation will be promoted in the process of school management, and we won't face the problem of declining student enrollment." (T6)

Their statements also reflected ethical beliefs of cooperation, ability, innovation, and effectiveness, promoting successful communication, the accountability for the competitive market, professional identification, the advantages of recruitment, and a sense of achievement.

In addition, teachers concerned with taking care of the family, having chances to perform in their professions, and having stable salaries also exhibited some tendencies toward Egoism, initiating ethical beliefs of self-respect, confidence, and self-esteem to encourage teachers' involvement and devotion to teaching: As several teachers noted, "*I cherish this work very much, and I try my best to perform well in teaching…I anticipated that I could have a stage to show my own art to satisfy myself with unique experiences and strengthen my self-confidence…Teachers in this school are free from pressures concerning recruitment and financial problems…and are guaranteed a living.*" (T3, T5, & T6)

An emphasis on serving others reflected the beliefs of Altruism, motivating the ethical belief of responsibility to promote the spirit of collaboration at school. In the interviews, one teacher said that it was important to "*be responsible in team work…show your passion and bring your specialties into full play to serve others…encourage your willingness to communicate and avoid suspicion among colleagues or mistrust between administrators and teachers to enhance the unity of the whole school.*" (T4)

Particularly, fair distribution and consultation on the basis of equality, both valued by teachers, reflected the ideas of Justicism, giving rise to ethical beliefs of attentiveness and reciprocity to facilitate the involvement and innovation of the school administration. As one teacher noted, "*Students in this school can be treated fairly without discrimination against the factors of family or scores…so teachers are attentive to students' affairs…The organizational climate of this school is active and energetic, leading to a willingness to innovate among school members.*" (T1)

Parents

The statements of school parents tended toward Idealism, Altruism, Justicism, Utilitarianism, and the theory of moral cognitive development. Parents generally recognized teachers' hard work, caring about school affairs, fair distribution, the good climate at school, and the spirit of enterprise as important values in the practice of school ethics, initiating ethical beliefs of support, safety, inspiration, assistance, and innovation. As two parents pointed out, "*Though teachers are well-paid, they are under more stress and work harder than teachers in other schools. Teachers' devotion to teaching and class management should be encouraged by the school, and I'm willing to support the resources they need to achieve their educational ideas.*" (P2) "*Everyone needs to participate in and care about school affairs…it's a kind of social service. It's meaningful for responding to the anticipation of the society, so I would take the initiative and cooperate with other parents in the school to expand the school resources.*" (P1)

These ethical values help the school to gain abundant resources and support a happy learning environment, and they reduce the negative emotions of parents, such as anxiety and panic, further arousing positive motivation for transforming the school educational system (Hargreaves, 2001).

The results of the data analysis are summarized in Table 2. That table features various aspects and effects on personal reflections on moral philosophy in the process of practicing school ethics.

Table 2 Ethical beliefs and effects of personal reflections on moral philosophy in the practice of school ethics

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Theories	Reflection points	Ethical beliefs	Practice effects
Idealism	1. administrators: (1) ideals and aspirations, (2) the best service, (3) adaptive development	1. administrators: (1) respect, (2) insistence, (3) involvement	1. administrators: (1) pursuing excellence, (2) working cheerfully, (3) improving students' performance
	2. teachers: (1) being proficient and experienced, (2) love in education	2. teachers: (1) devotion, (2) commitment	2. teachers: (1) long-term development, (2) self-actualization
	3. parents: (1) teachers are hard-working.	3. parents: (1) support	3. parents: (1) providing resources
Relativism	1. administrators: (1) accepting contradictions	1. administrators: (1) undertaking	1. administrators: (1) improving the condition
	2. teachers: (1) coordination of contradictions, (2) autonomy	2. teachers: (1) freedom, (2) understanding	2. teachers: (1) getting along with each other cheerfully, (2) coordination
Egoism	1. teachers: (1) needs for taking care of family, (2) chances for showing professions, (3) insurance of salary	1. teachers: (1) self-respect, (2) confidence, (3) self-esteem	1. teachers: (1) doing well in teaching, (2) displaying specialties, (3) concentrating and devoting in education
Altruism	1. teachers: (1) service	1. teachers: (1) responsibility	1. teachers: (1) unity
	2. parents: (1) caring about the school	2. parents: (1) inspiration	2. parents: (1) resource expansion
Justicism	1. teachers: (1) fairness in distributions , (2) fairness in procedures	1. teachers: (1) attentiveness, (2) reciprocity	1. teachers: (1) willing to innovate, (2) participating in administrative affairs
	2. parents: (1) fairness in distributions	2. parents: (1) safety	2. parents: (1) rights for learning
Deontology	1. administrators: (1) students' rights, (2) being respect, (3) respecting professions, (4) listening to others	1. administrators: (1) passion, (2) friendly, (3) love, (4) magnanimity	1. administrators: (1) environment with high quality, (2) contentment of demands, (3) problem-solving, (4) coordination and integration
	2. teachers: (1) respecting interests, (2) no cheating, (3) modesty and humbleness, (4) role modeling, (5) taking care of teachers	2. teachers: (1) professions, (2) practicality and honesty, (3) respect, (4) devotion, (5) trust	2. teachers: (1) involvement in work, (2) advantages of recruitment, (3) rights of learning, (4) problem-solving, (5) effects of teaching
Utilitarianism	1. administrators: (1) expectation of efficiency, (2) performance of specialty, (3) pursuit of efficiency	1. administrators: Support, community, sincerity	1. administrators: Interpersonal harmony, mutual support, effect of coordination
	2. teachers: (1) taking good care of students, (2) goal achievement, (3) satisfaction of parents, (4) highlight of students' performance,	2. teachers: (1) cooperation, (2) collaboration, (3) ability, (4) innovation, (5) effect	2. teachers: (1) effective communication, (2) power of competitiveness, (3) professional identification,

	(5) efficiency of time management in project promotion		(4) advantageous recruitment, (5) sense of achievement
	3. parents: (1) The school climate is good.	3. parents: (1) assistance	3. parents: (1) gaining resources
Theory of moral cognitive development	1. parents: (1) spirits of enterprises	1. parents: (1) innovation	1. parents: (1) without panic

Analysis and Discussion

There are two ways to analyze the practice of school ethics: One is sequential analysis, and the other is simultaneous accumulation (Firick, Faircloth, & Little, 2012). According to sequential analysis, all the stakeholders in the school, including administrators, teachers, and parents, tended to reflect Idealism and Utilitarianism in their statements. These values in turn aroused ethical beliefs, including respect, insistence, involvement, devotion, commitment, support, community, sincerity, cooperation, ability, innovation, and effectiveness. For schools, there were effects on the pursuit of excellence, efficacy in coordination, competitive advantages, and the expansion of resources; for individuals, there were effects on the promotion of good morale and self-actualization. As a result, personal reflections on personal moral philosophy encouraged the practices of school ethics, which had a positive effect on student performance. Between the two philosophies, Idealism is regarded as the most important one, since it is directly related to student development.

In the analysis of simultaneous accumulation, the focus is on the meta-cognitive process of self-reflections on personal moral philosophy; therefore, reflections on Idealism and Deontology should receive primary emphasis. Personal reflections on Idealism and Deontology tend to result in cheerfulness in the process of working, a demand for satisfaction, involvement in the work, and self-actualization within the individual dimension. For schools, there tend to be effects such as the establishment of an environment of high quality, the promotion of the pursuit of excellence in school management, advancements in social coordination, integration of resources, motivation for innovation, and improvement of teaching. In this way, the rights of students will be preserved to facilitate the development of students as well as gain an advantage in student recruitment, so the ethical standards and codes will be rooted in the foundation of the school. In addition, the emphasis on personal reflections on Utilitarianism will stimulate the sense of achievement for the school members, and the reflections on the theory of moral cognitive development made by parents will increase the confidence of parents, further intensifying the virtual basis of the school. The reinforcement of personal reflections on Relativism, Egoism, Altruism, and Justicism will initiate positive effects on the achievement concerning aspects of individuals, institutions, and tasks, leading to a school culture of accumulated virtue and kind deeds and the improvement of the organizational commitment and self-efficacy of teachers in the school (Cheng, 2012).

No matter what method is applied to the data analysis, it is clear that intensifying personal reflections on moral philosophy is not only the key to the practice of school ethics but also the motivation for extending school improvement. Particularly, personal reflections on Idealism are the core motivator for school improvement, since reflections on Idealism could facilitate reflections on other moral philosophies. On the other hand, in terms of values, Deontology, as reflected by the school administrators, will trigger ethical beliefs of love to resist the temptation and intimidation of the competitive market (Farmer, 2002), to intensify the practice of professionalism (Apple, 2006), and to initiate the value of friendliness for generating inspirational leadership (Trevino, Weaver, & Brown, 2000). In addition, the reflections on Utilitarianism of school administrators will give rise to ethical beliefs in the community, stimulating the recovery of institutional health to encourage organizational

innovation (Koloroutis & Thorsstenson, 1999).

Above all, from the viewpoint of ethical practice effects, if school administrators intensify their reflections on Idealism, the effect will be excellent service. This outcome can be regarded as the product of respect, and it is likely to build connections among the school administrators, teachers, and parents to increase the confidence in education of the whole society (Magill & Prybil, 2004). For the role of school teachers, if their reflections on Idealism can be reinforced, the effect of self-actualization will be promoted to motivate ethical beliefs of commitment and further increase their passion for involvement in their work (Hartman, 1999). Also, if school teachers can enhance their reflections on Deontology, ethical beliefs of trust will be aroused (Dickson, Smith, Grojean, & Ehart, 2001), averting the sense of grievance against the job and improving morale (Apple, 2006).

Conclusions and Implications

From the data analysis above, we found that personal reflection on moral philosophy in the process of practicing school ethics can truly give rise to positive effects on the school (Cameron & Caza, 2002). Several ways of practicing school ethics can be generalized from the study results.

First of all, in the process of school ethics practices, personal reflection on Idealism and Utilitarianism may increase the involvement of school administrators, teachers, and parents, and ethical beliefs may be aroused simultaneously, including values of respect, insistence, involvement, devotion, commitment, support, community, sincerity, cooperation, ability, innovation, benefit, and assistance. These ethical values could be adopted in the context of school management, which would motivate individuals to become involved, improve the school, and achieve education tasks to make schools virtuous organizations. In addition, personal reflection on Deontology, Justicism, Relativism, and Altruism will prompt two kinds of stakeholders to join in the practice of the virtuous organizational management. Lastly, in this study, only teachers and parents tended to pay attention to the reflections on Egoism and the theory of moral cognitive development. Since intensifying the willingness of members to participate in school affairs is the most important issue in school management, the order of priority for various moral philosophies should be based on the amounts of involvement of the stakeholders in the process of school management. Among all the moral philosophies, personal reflections on Idealism and Utilitarianism are the most important, as they increase the participation of different stakeholders and therefore have the strongest power for improving the development of the school. Personal reflections on Deontology, Justicism, Relativism, and Altruism are secondary; the least important are personal reflections on Egoism and the theory of moral cognitive development, which increase only the participation of teachers and parents and have little influence on organizational development.

Next, under the context of school ethics, personal reflections on moral philosophy are highlighted and the accumulation of moral assets is valued. Personal reflections on Idealism and Deontology will motivate ethical beliefs such as respect, insistence, involvement, devotion, commitment, support, passion, friendliness, love, generosity, professionalism, practicality, honesty, and trust. These ethical values, which tend to encourage the individual to become involved and motivated, promote the improvement of schools and the quality of students' learning to set a moral foundation for the establishment of a virtuous organization and the promotion of institutional improvement. With teachers' reflections on Utilitarianism, a sense of achievement will be aroused; with parents' reflections on the theory of moral cognitive development, a sense of relief will be triggered as well. The ethical beliefs held by teachers and parents could provide support for the management of virtuous organizations. Moreover, personal reflections on Relativism, Egoism, Altruism, and Justicism can improve the school management through the accumulation of virtues, expanding the power for organizational development.

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Furthermore, personal reflections on Idealism are emphasized in school ethics to initiate ethical beliefs such as respect, insistence, involvement, devotion, commitment, and support. These ethical values can be regarded as the core motivations for the management of virtuous organizations.

Particularly, the reflections on Deontology of the school administrators will increase the openness of the competitive market and the abilities of professionals, and the aspects of function and market in the school market will be emphasized simultaneously. The prerequisite condition for the effect of excellent service is the ethical value of respect, which the school administrators, teachers and parents can hold together. Also, the ethical value of friendliness can improve the leadership in the school administration. In addition, reflections on Utilitarianism made by school administrators tend to arouse the ethical beliefs of the community to promote the health of the institution.

As for the reflections on Idealism of the teachers, the effect of self-actualization will be initiated because the ethical belief of commitment is aroused and followed. The reflections on Deontology of the teachers will give rise to the ethical belief of trust, leading to humanistic interactions for motivating the morale of teachers. Accordingly, the reflections on ethical deontology and Utilitarianism of school administrators and the reflections on ethical idealism of teachers will establish a virtuous foundation for the practice of school education and promote the improvement of the school. Therefore, school administrators need to apply the ethic of love to improve school management, the ethic of respect to integrate the various opinions of different stakeholders, the ethic of friendliness to intensify the power of school leadership, and the ethic of community to promote school innovation. For school teachers, it is necessary to apply the ethics of trust and commitment to raise morale, which can be regarded as an alternative way to practice school ethics.

To sum up, the achievement of education goals could be motivated by the ethical values of love, respect, friendliness, and community held by school administrators, and by the trust and belief of the teachers in the school. Moreover, these ethical values can reinforce the integration of social relations and initiate innovation to increase the power of making progress for the sustainable development of the school.

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Australian Experiences with Education and Technology

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Abstract

The impact of technological advances over the last twenty years, including our use of Google, not only impinges on our teaching and learning abilities, but also on our individual lives. Have these technological advances been a panacea for our educational systems? The focus for this paper will be on some Australian research with references to four Australian State examples to provide evidence of the successes or difficulties imposed on schools, parents and communities as technology continues to be introduced into the educational systems. The discussion begins with a Western Australian overview and evaluation of twenty years of the use of technology in Australian schools. The paper continues with an analysis of the variations in results for a selected group of Tasmanian participants in an online course when compared to another group of Tasmanian participants in the same face-to-face campus study, the impact of which will impinge on the further use of technology to provide University education. The collaboration of a New South Wales based city Council and the State's Education Department in an educational research study, involving the use of IPads, highlights the need for communities to also engage with technological advances into our society. Finally, the research from Queensland which describes the possible deployment of a wider range of technologies such as blogs, vlogs and podcasts, provides suggestions and methods to invigorate and change specific English curriculum from "shaping" it, by prescribing what it will contain and how it will be assessed, to giving it a more "design" focus where the students will compose their own courses and assessment activities.

Keywords: Technology, Online -Study, IPads, Innovation

Introduction

This paper has the focus of highlighting some interesting research, conducted in four States of Australia, and about the interaction of education with various aspects of the technological advances which have overtaken our lives over the last twenty years. Have these technologies been the panacea we imagined them to be for stimulating our education systems or have they taken on roles of their own and in practice been counter- productive in education or within society itself? The four experiences will begin with a theoretical overview of the introduction of digital devices in Western Australia, and then a comparison between a Tasmanian on-campus study and an online study. Following this will be research on the use of iPads by Primary School children in New South Wales and the use of digital technologies to change the design of English courses in Queensland.

One researcher, (Newhouse 2013), investigated what had happened with computer technology in Western Australia1980 -2012. The Australian government policy of a 1 to 1 computer per student in secondary schools by 2012 became a tipping point for reflection about technology (Greaves and Hayes, 2008). This also became an opportunity to consider what had been learnt about computer access in schools. The conclusion was that the process had been more about implementing the computers into schools and how this would change teaching and learning, than actually about the role of the technology. The arrival of word processors and a computer literacy rational in the 1980s was aided by the increasing affordability of computers. However, this did not translate into better teaching and learning practices in the1990s. The ability to make the computer portable was the first positive sign that computers could take a central role in teaching and learning. The belief then became that the computer would "teach", even act as a "tutorial" device (Cox, 2012). Now that computers are smaller, cheaper and more powerful and have coupled with the technology of the mobile phone, it has also been an aim to have every teacher and student with access to both devices since 2012. The advantage of this mobile learning is that it can occur at any time of the day and in any place (Kearne et al.2012).This portability could be the centre of the rationale for future computer use. A further consideration is that the technology could be developed to address the many problems in education, but will the costs of any new technologies be justified by increased learning outcomes or better use of teacher and student time?

Research at the Launceston campus of the University of Tasmania (Pullen 2014), outlines the increasing use of communication and technology communication, in particular online learning management systems (LMS) to provide the teaching and delivery of course materials and to provide assessment. Distance education is one initiative used by universities to deliver courses to students with more diverse learning needs, including those who are unable to attend University, because of work, family, costs or physical distance. Since 2012, following the Australian Bradley Review Reforms (2008), the Universities can enrol as many students as they wish depending upon their eligibility and the University's ability to teach them. Consequently, the University of Tasmania is able to use the technology Desire2 Learn (D2L) for face-to-face, online or a mixture of both study modes for delivery methods. Previous research had discovered that whilst undergraduates were "digital natives", their use of available technologies was not as consistent as expected and not all these technologies were being used to their full potential (Kennedy, Churchward, Gray & Krause, 2008).There appears to be a great divide in the access to online courses and its related technology and equally the students' abilities to access and use the available technological functions and capabilities. Despite the views that online learning initiates

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many changes in the design of the programs, it is actually the students who will decide *if* and *how* they will use the technologies.

The researcher, (Pullen, 2014), also reported on the Pew Research findings which indicate that learning from online courses is considered to be lower when compared with the on-campus courses (Parker, Lenhart & Moore, 2011). Technology does offer learning without consideration of time or place and fits perfectly with educational institutions encouraging students to place themselves at the centre of the learning process. To meet industry and personal changes then, the higher education sector must realign with academic teaching practices and student approaches to learning, (Biggs 2003, Ramsden 2003). To discover whether there are differences in final results between on-campus and on–line students, the Pullen study (2014) sought to identify the differences in educational attainment between pre-service teachers, studying compulsory undergraduate courses either fully online or on-campus.

The Sydney Region and the New South Wales Curriculum Learning and Innovation Centre formed a partnership to scope an evaluation of the use of iPads in the classroom. This was done to provide information to schools to allow informed purchasing decisions and to identify critical ramifications of tablet technologies on teaching and learning and appropriate opportunities for professional learning for teachers

In Queensland the Australian curriculum's emphasis on the use of technology is filtering through educational programs. Some teachers are wary of this deployment, many being 'digital immigrants' (new to technology) and not 'digital natives" (conversant with technology) as are our students. The author Jetnikoff (2009) suggests that by embracing new media forms such as podasts, blogs, vodcasts and responses, there will be a whole new world of possibilities for literary and creative texts which will have new audiences and publication spaces. The author also argues that teachers can overcome their technophobia and technology resistance in classrooms, opening up potential for "authentic audiences' through their students' publications online and possibilities for composition and responses. In her paper Jetnikoff explores digital storytelling using other digital multimodal texts such as blogs and wikis in the resources for English teaching.

Methods

Newhouse (2013) did not include practical experiences but instead offered some philosophical ideas to guide teacher and students and their experiences with technology. He argued that all technology use should be based on an "understanding of the nature of learning" (Newhouse 2013). He used a two vines metaphor from Pines and West (1986) "with the upward spontaneous growth of knowledge frameworks originating from the learner, entangling with the downward imposition of formal knowledge" from the technological device. Therefore computers can be visualised as providing support for the learner deciphering that entangling stage, noted as the "zone of proximal learning" thus computers should be viewed in terms of the overarching support they can provide. As each new technology emerges, teachers and researchers should investigate them in the classroom.

For this concept of computer support, Newhouse developed a model which starts with the learning environment and extends through the teacher with beliefs, attitudes and perceptions and continues to a response and a level of facilitation and then back via a loop to impact on the environment. The students should contribute as do external factors encouraging and discouraging the use of computer support. Then the balance of all these forces determines the response of the teacher which leads to the amount of use and the meaningfulness of that computer involvement.

Pullen (2014) from the Launceston campus of the University of Tasmania focused his research on the two important aspects of his investigation into on-line and on-campus learning.

RQ1 *Does it matter to student academic achievement (final module grade/award) if attendance is online or on –campus (face-to-face) and*

RQ2 *What are the differences in instruction satisfaction and learning in online and on-campus mediums*?

There were several components of this study with the participants being all the students in their third year of study in a teacher preparation course at the University of Tasmania 2013-(203 in total) The University of Tasmania used the commercial platform *Desire2Learn.*The module occurred in the first term with 39 hours of study. In the total group 86% were female and 14% were males. Those who studied the module online constituted 63% of the total students in the course with 83% being female and 17% male. The age range online was 18-57 with the average age being 29 while the age range on campus was 18-48, the average being 23.Students studied fully online or on-campus.

The compulsory module was about health and well-being of school–aged children and their families. The delivery included a one hour recorded lecture and a two- hour tutorial per week. The researcher had a background in Health Sciences and he was the principal teacher. The content and assessment practices were well developed and the researcher tutored 7out of 8 tutorial groups- 4 online groups and 3 on- campus groups. Reading lists were provided before tutorials and feedback given weekly upon completion of tutorial activities (Charts, Web-Quests, Posters, Lesson Plans and Conversations). A sense of community was fostered and two major assignments were marked by the researcher for consistency and comprehension.

In the Sydney experience (Goodwin 2012), tablet technologies or mobile touch screen technologies were recognised for providing a new generation of technological and educational tools for instant access to a wealth of online resources and the opportunities for creative use. They could enable learning everywhere and the classroom would no longer be the centre and the teacher would no longer be at the centre of all learning, 'as the web democratises the availability of information' (Snyder, 2008).Teachers do have an abundance of learning materials for use on iPads, but limited research has been done on the use of touch screen devices and their support for the learning process. This evaluation seeks to provide evidence-based information about the practical and technical implications of deploying mobile devices and their impact on teaching and learning.

To address this the Sydney Region conducted an iPad trial in 3 Primary Schools in the Sydney area. The trial included approximately 18 weeks' time in the selected schools. There were 3 schools, 5 teachers, over 90 students and 75 iPads used in this multi-setting case study. Multiple data sources were used to provide descriptive information re the technical and logistical us of iPads. A comprehensive data set provided- lesson observations, teacher-student online surveys, principal-parent semi-structured interviews, digital work samples, teacher and student blogs and an 'app matrix'.

Jetnikov (2009) provided no practical experiments, but was conscious of the fact that the students' use of social media in their home lives and with their friendship group should be utilized. Teachers should be using this student engagement to develop critical skills "to sift through the plethora of virtual worlds" (p. 56). Text only presentations (Power Point) are now outmoded and we now must emphasise the use of online technologies for teaching and learning. Students are becoming more socially semiotic (visual), so there are opportunities for creating and

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composing more visual content in digital stories. Students are also using technology on the home front and this "domestication' should be embraced as it is most useful for English teachers who need to work in contexts which are relevant to the ways our student interact with the texts. It is obvious that technology is changing quickly and that this can be alienating to teachers, but they can be assisted through understanding about these new technologies which students are bringing into the classroom. Two theories dominate the perspectives around using technology and literacy. The discussion focuses on Technological Determinism versus Social Determinism. The former argues that technology can be held responsible for social changes whereas the latter states that users do have power and control over computers. In other words 'people, not technology (are) portrayed as responsible for the phenomenon of digital democracy' (Snyder, 2008, p. 162)

Findings

Newhouse (2013) realised that obstacles and barriers will moderate the amount of computer support which is largely dependent on the type of teacher response, including such aspects as toleration or investigation. One advantage has been that the former storage devices needed to be held in hardware or software, but now the strategy is to access data or software through networked servers, eradicating the need to move to computer laboratories, but instead to have flexible access, in the school or any workplace.

In the online versus on-campus study (Pullen, 2014), electronic portfolios from the participants of the course were assessed and the technology they used. The lecturers utilized Analytics' tools to gauge student use of the lectures, readings, tutorials and peer feedback. An eVALUate survey was an additional component which needed completion and the use of Social Media such as YouTube, Wikipedia and other sites were queried. There were no significant difference in the final achievement scores for the on-line students when all the Modules were collated, but there was a significant lower achievement effect shown on the final Health Module result for the online group and this was related to the lack of tutorial involvement on-line and the lack of a second reading of all the notes in the course. There were some complaints about the work load and the fact that board posts were not assessed. The Mean scores - attendance above 80% - were significantly different when compared to attendance below 80%; (M=4.20 versus M=2.60).The type of learning mode affected student's use of additional technologies when studying.

This research highlighted the need for university lecturers to engage with more of the social media technologies to deliver learning. Attendance at tutorials needs to be emphasised, as must real time VOIP with lecturers and peers communicating more with each other by Skype and text chats. The students' use of technology and the educational parameters of these will guide university teaching and learning in the future.

The Sydney trial with iPads (Goodwin, 2012) found two broad areas of teaching and learning implications, including parent concerns about technical and logistical considerations. This type of teaching placed additional demands on teachers' planning and preparation time. Significant time was taken in evaluating the educational apps and evaluating relevance to the NSW curriculum. Time taken to install apps (applications) on individual student services was also a problem. This technological method was used in a myriad of ways across the Key Learning Areas, but teachers tended to map the iPad use to existing curricula and preferred the content –creation 'productivity' apps. The content-creative apps produced higher order thinking and collaboration amongst students, while the games-based apps were suitable for rote

memorisation – spelling and tables. One professional piece of work by a Grade 3 student used the iPad and voice recorder, camera and screen recorder to create a body of work.

Both teachers and students believed that iPads enhanced teaching and learning. The trial was successful because teachers embedded activities in authentic and rich learning experiences and they explored more innovative pedagogy. It was found that iPads enhanced engagement and motivation, improved collaboration and personalised learning. Teachers could differentiate activities according to students' needs and preferences. Predictive text supported spelling as normally iPads are designed for single –consumer use and not for group or paired activities. Technical problems encountered included the availability of internet connectivity, proxy servers, restricted internet use and export of student work.

Schools must make careful decisions about sharing and deploying iPads across classrooms and support models must be considered prior to their implementation. Schools must budget for the additional costs –infrastructure and teacher professional learning and administrators need to also consider the storage and sharing of student content. Teachers need an 'app' selection rubric with explicit criteria to judge the effectiveness of individual apps. Explicit training is also needed for teachers for evaluating apps and copyright regulations. Online app databases are also needed showing information and relevance of apps for learning. Drill –and -practice games should be used sparingly and only to aid students' memorisation as open ended apps encourage higher order thinking. A wider variety of apps should also be considered –not just iTunes. Parents need evidence –based information about the safety and impact of learning with apps.

It appears that further trials need to be undertaken with even younger students and those in secondary schools. There is an underlying message for developers to introduce apps that are vastly different to the design of "skill and drill" which dominates much of the educational market. Touch devices provide unique opportunities to develop students' abstract concepts with dynamic representations and opportunities for embodied learning and interactive elements. Much remains with the applications' developers to match teacher-student and teacher-parent needs and to align with teaching and learning potential in the future.

Queensland's English Curriculum (Jetnikoff, 2009) could adopt the use of ***design*** and not ***shape*** curriculum and facilitate the students' selection of a range of tools and technologies, facilitating autonomous and purposeful use of technology to produce audio stories and podcasts with recorded interviews. There could be the creation of multimodal digital images with still images and narration and mini movies which uses both sides of the brain, cognitive and aesthetic. Time could be given to the crafting and sharing of digital stories, such as autobiographies. Students could be trained in the use of an online "cookbook' (manual) for narrative structure and technical guidance. Semiotic or visual decoding interprets images or symbols and will need to be more a part of student experiences.

Digital stories can be responses to literature rather than written versions and narratives can use images and soundtracks (cf Photo Story 3).You Tube has exemplary performances available about digital opportunities and Poetry writing can transform many students by using Slam Poetry which contains many of the rhythmical qualities of rap (cf Poetry Slams). Blogs can now include not only words, but pictures also and Vlogs which incorporate video and are a form of web broadcasts. Podcasts incorporate many types of media on the web. It appears that the traditional way of teaching English can be transformed with many combinations of the new media forms to create exciting and varied experiences for the students of the 21st century.

Conclusion

The research regarding provision of ubiquitous computing access and the use of portable digital devices over the last 20 years has been successful and gives credence to the widespread implementation of this scheme. Whether these devices are most useful for the empowering of our students using the constructivist (student created) method and a portable device is a question still to be addressed. Perhaps we should ask about how the vision for planning and the uses of the technology for learning are decided? The benefits of the many decades of spending on digital technology will be only be realized with a collective will to evolve the pedagogical understanding amongst all the educators and communities involved.

Over the last ten years Australia has had a realistic aim, encouraging students to have a portable technological device and this is particularly so in secondary schools where Newhouse has indicated much student satisfaction and he comments on the positive impact on learning, higher order thinking, collaboration , active learning , productivity, problem solving and authentic assessment. There has also been a wider range of activities, investigating the world, knowledge building and student independence and collaboration, all associated with a process – orientation, not a content one.

By contrast the effect on teachers has been more negative. The teachers' operational skills have been diminished, more likely because they feel inadequate and deskilled in computer-supported environments. However, teachers must realise that TPACK (Technological, Pedagogical and Content Knowledge) (Mishra & Koehler, 2006) must be addressed. The pedagogical strategies appropriate to transfer the curriculum content now includes the capability to plan and implement the computer support. It is a case of a constructivist-type (student created)) belief versus an instructivist-type (teacher created) belief. Many teachers still need to be given targeted curriculum and technical and professional support. Other barriers to computer use and support include schools where there are no computer policies, isolated teachers and short teaching time. The appointment of Curriculum Directors can alleviate these problems with teacher support and integrated computer support to assist learning.

Tablet technologies or mobile touch screen technologies are providing a new generation of technological and educational tools for instant access to a wealth of online resources and the opportunities for creative use. They enable learning everywhere and the classroom is no longer the centre and the teacher is no longer at the centre of all learning, 'as the web democratises the availability of information' (Snyder, 2008).Teachers do have an abundance of learning materials for use on iPads, but limited research has been done on the use of touch screen devices and their support for the learning process.

This research into a small, but varied set of Australian experiences with education and technology highlights one most important aspect that the power still belongs to the student. Technology provides the support, but it will be the student who decides on its contribution to the educational tasks and outcomes. Newhouse (2013) in Western Australia contended that too much attention had been given to all the technology as it became available, rather than the student use of it and Pullen (2014) in Tasmania discovered that online students must commit to access all the online services provided to gain a more comparative result with on-campus students. Goodwin (2012) in New South Wales highlighted the additional safety and storage facilities needed for younger students to fully utilise the use of iPads whilst the innovative Queensland curriculum changes from Jetnikoff (2009) placed the student in control of the whole learning process.

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An Evaluation of Good Practices in E-Learning in the 21st Century: Student and Lecturer Perspectives of Learning and Teaching in a Blended E-learning Context

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Abstract

Today, information and communications technologies are finding their way to classrooms around the world at an exceedingly rapid pace. In the wake of this influx, what are some of the good practices and issues with using technology with a blended learning context to enhance student learning experience? E-learning with a blended context is usually viewed as a combination of face-to-face and online delivery methods, with the aim of each complementing the other. Such an approach should, therefore, influence educators and higher education student perception of the learning environment and, subsequently, study approach and learning outcomes. The data was collected through semi-structured interviews with lecturers and students from the University of Singapore (UniSIM) where E-learning is widely used as pedagogy. The interview questions were divided into four sections: knowledge and experience, design and use, resources needed and the evaluation of the use of blended E-learning. The interviewed lecturers were also requested to send an online questionnaire to their students to collect views and perceptions of the use of blended E-learning. The benefits of using blended E-learning for enhancing student learning experience, perception and attitudes have also been identified. The similarities and differences between lecturer and student views on E-learning blended context have been discussed. These discussions form the basis of recommendations for the development of learning and teaching practices that should enhance student learning experience in meeting the needs of the 21st century workforce.

Key Words: Online Learning, Blended E-learning and 21st Century Education

Introduction

The methodological approach presented in this paper was based on practices at SIM University (UniSIM) in Singapore. UniSIM started in 2005 as the first and only university in Singapore dedicated to adult learners to gain more skills and knowledge; to earn their degrees for lifelong learning, and for learning at any time and at any place. As Singapore's only privately-funded university dedicated to adult learners, UniSIM plays an important role of supporting Singapore's economic growth by providing skills and knowledge upgrading pathways for working adults to enhance their learning experiences. UniSIM adopts a flexible and practice-focused teaching and learning strategies and offer programmes that are rigorous, multi-mode and relevant – factors that are highly valued by busy executives who demand learning that can be tailored to suit their busy schedules, and knowledge and skills, which are immediately applicable to their jobs.as part of this plan. One of the strategies mentioned in the plan was to include the use of the learning management system (LMS) of blended E-learning as a delivery method. UniSIM's approach to blended learning involves utilizing a combination of traditional face-to-face and online instruction. In blended E-learning courses, the learning materials are delivered through face-to-face interaction, but they are also available via a robust learning management system known as MyUniSIM via Blackboard in order to provide support and enhance after-class, online interactions for instructor–student and student–student communication.

The aim of this paper is to evaluate the practices of using E-learning pedagogies for teaching and learning and to examine the benefits that blended learning provides to student learning experience focusing on the case of a single institution, SIM University (UniSIM) in Singapore. The application of blended learning for undergraduate programs at UniSIM and student experience has been evaluated. The benefits of using blended learning for enhancing student learning experience, student and lecturer perceptions of and experiences with a blended E-learning context are also identified. The lecturers are also interchangeably referred to as educators and teachers in this paper. In addition, the similarities and differences between lecturer and student views on blended learning are discussed. These discussions form the basis of recommendations for the development of learning and teaching practices and approaches that will potentially enhance student learning experience in a blended E-learning context.

Blended E-learning Context

There has been much discussion over the term "blended learning" in recent years, yet there continues to be no agreed-upon single definition (Jonas & Burns, 2010; Sharpe, Benfield, Roberts, & Francis, 2006). There is, however, a common theme presented in the literature – the recognition of some combination of virtual and physical environments. This common theme is evident as Graham (2006) describes blended learning as the convergence of face-to-face settings, characterized by synchronous and human interaction, with Information and Communication Technology (ICT) based settings, which are asynchronous, text based, and involve humans operating independently. Garrison and Vaughan (2008) define blended learning as "the thoughtful

fusion of face-to-face and online learning experiences" (p. 5) and emphasize the need for reflection on traditional approaches and for redesigning learning and teaching in this new terrain. Littlejohn and Pegler (2007) also observe that blended learning is a useful approach because it changes the focus of learning design by shifting the emphasis from face-to-face and online environments to the design of issues, such as considering the process and synergy of blending between online and face-to-face environments.

Driscoll (2002) identifies four different concepts of blended learning, which Oliver and Trigwell (2005) summarize as follows (p. 18):

- combining or mixing web-based technology to accomplish an educational goal;
- combining pedagogical approaches (e.g., constructivism, behaviorism, cognitivism) to produce an optimal learning outcome with or without instructional technology;
- combining any form of instructional technology with face-to-face instructor-led training; and
- combining instructional technology with actual job tasks.

Sloman (2007) argues that blended learning should not simply be considered in terms of delivery and technology. According to Sloman (2007),

> If the term blended learning is to have longevity ... we must extend its use beyond technology. It must be as much about varying learning methodology as it is about training delivery. We must understand more about what motivates learners, what support they need and how these supportive interventions can take place in practice. Only with this understanding we can get the "blend" right. (p. 318)

Thus, blended learning is itself a blend. It is a mix of pedagogical approaches that combines the effectiveness and the socialization opportunities of the classroom with the technological enhancements of online learning (Dziuban, Hartman, Juge, Moskal, & Sorg, 2006). Contained within the mix is a paradigm change in which the emphasis shifts from teaching to learning (Nunan, George, & McCausland, 2000). In order to enhance this shift, a blended learning course should also increase the interaction between the educator and students, and also among students. It should furthermore enhance the mechanism for integrating formative and summative feedback in order to boost students' learning experiences (Yen & Lee, 2011). Therefore, blended learning is a fundamental redesign of the instructional model with a shift from teacher-centred to student-centred instruction where students become active and interactive learners.

Blended learning can also be considered good practice. In other words, the use of blended learning as a delivery method can help the manifestation of two of Chickering and Gamson's (1987) Seven Principles, which are: to encourage students to engage in active learning; and to encourage contact between the students and teachers (lecturers), as discussed, in this paper. The use of blended learning can also potentially elicit another good practice principle, which is to give prompt feedback, as blended learning usually involves online interaction, which can facilitate feedback. However, whether prompt feedback occurs depends on how frequently the lecturers and students use the relevant online platform.

Literature Review

There has been systematic and extensive research into the quality of students' learning in higher education (Biggs & Tang, 2011; Laurillard, 2002). Outcomes from this paper research have helped to identify the key concepts related to quality learning in higher education.

According to Entwistle, McCune, and Hounsell (2002), and as depicted in Figure 1, factors influencing the quality of learning achieved include course material presentation and both the type of teaching–learning environment provided as well as the students' perceptions of this environment.

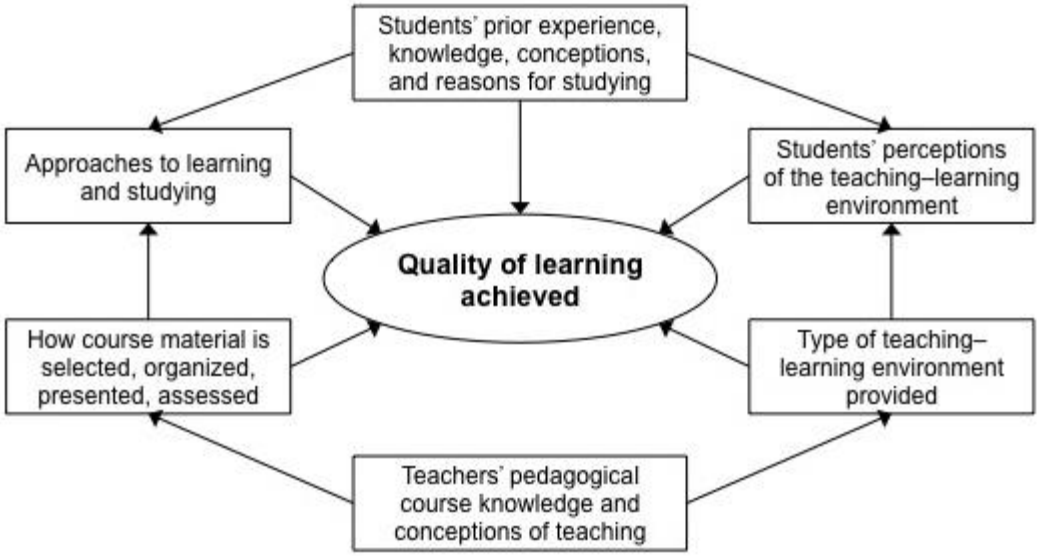

Figure 1. Concepts related to the quality of learning at university (Entwistle, McCune, & Hounsell, 2002)

A common factor in these elements is the degree of pedagogical knowledge of university lecturers, which dictates both the design of the course materials and the learning environment. Lizzio, Wilson, and Simons (2002) share similar findings. They investigated "the relationship between university students' perceptions of their academic environment, their approaches to study, and academic outcomes" (p. 27), and stress the practical significance of these relationships for educators wishing to understand the impact of course design. They conclude that elements of the learning environment, which can be influenced and controlled by lecturers, affect not only how students approach studying, but also the subsequent learning outcomes they attain (Lizzio et al., 2002). This echoes the seminal work of Chickering and Gamson (1987), which are highly relevant to postgraduate courses as well. Chickering and Gamson posit that good practice "encourages contact between students and faculty," "encourages cooperation among students," "encourages active learning," "gives prompt feedback," "emphasizes time on task," "communicates high expectations," and "respects diverse talents and ways of learning." In order to ensure students have successful learning experiences, it is therefore important to consider these principles in conjunction with the elements and design of the learning environment.

Williams, Bland, and Christie (2008) define blended learning as a combination of traditional face-to-face learning and distributed learning, the latter of which "is an

instructional model that allows lecturers, students, and content to be in different locations" (p. 43). A main feature of distributive learning is that the learning environment is designed to accommodate the fact that students have different learning needs and preferences. This pedagogical model encourages students to learn in an interactive and collaborative environment, and at their own pace and in their own time (Graham, 2006). Yen and Lee (2011) assert that "blended learning, thoughtfully combining the best elements of online and face-to-face education, is likely to emerge as the predominant teaching model of the future" (p. 138).

Garrison and Vaughan (2008) describe best practices for blended learning implementation in higher education. They underscore the need for a seamless connection between the face-to-face and online components in order to ensure a truly blended learning environment. Moreover, they advocate the superimposition of various other pedagogies, as appropriate – lecture, problem-based learning, just-in-time teaching, cooperative learning, and others – on the blended framework.

There is considerable evidence attesting to the fact that blended learning can positively impact student achievement. Ginns and Ellis (2007) explored the relationships between students' perceptions of the E-learning environment, their approaches to study, and their academic performance. They found that students differed widely in their perceptions, resulting in variations in study approaches and grades. In other words, students with positive perceptions of the E-learning environment tended to obtain better grades, and vice versa.

Benefits of Blended Learning

Blended learning benefits students and institutions. It facilitates improved learning outcomes, access flexibility, a sense of community, the effective use of resources, and student satisfaction. Several research studies have demonstrated that courses using blended learning as a delivery method contribute to improved learning outcomes for students (Twigg, 2003a). Twenty out of the thirty institutions that participated in research funded by the Pew Foundation in the United States reported having improved learning outcomes (Twigg, 2003a). Twigg (2003a) and also report that course redesign has resulted in students achieving higher grades, greater knowledge, and greater understanding of course concepts.

Another key benefit of blended learning is the increased flexibility of access to learning that reinforces the student's autonomy, reflection, and powers of research (Sharpe et al., 2006; Tam, 2000). Blended learning modules have a combination of face-to-face and online components. This format allows learners who live some distance from a university to enrol in a program. In addition, the online components benefit other learners by allowing them to work whenever and wherever they prefer, as they can access the Internet without making the journey to campus. It also enhances student ability to control their own pace of learning. Via blended learning, students are able to catch up on a course if and when they can (Owston, Wideman, Murphy, & Lupshenyuk, 2008; Smyth, Houghton, Cooney & Casey, 2012).

Garrison and Kanuka (2004) explored some of the benefits of using blended learning in higher education institutions. They describe how blended learning has a transformative potential, offering institutions the opportunity to embrace technology,

encourage a community of inquiry, and support active and meaningful learning. Owston et al. (2008) looked at professional development in schools of education and describes how blended learning has the ability to foster a professional learning community and yet still allow for the development of social cohesion due to the inclusion of a face-to-face component.

Blended learning also promotes student satisfaction. Blended learning enables the students to become more motivated and more involved in the learning process, thereby enhancing their commitment and perseverance (Sharpe et al., 2006). Student satisfaction has also been reported to be higher in blended learning courses compared with purely face-to-face courses (Owston et al., 2008; Twigg, 2003a). Therefore, it can be said that blended learning is beneficial to students.

Challenges of Blended Learning

The use of blended learning can pose challenges for students and educators (lecturers), too. Unrealistic expectations and feelings of isolation are challenges for students, while educators are challenged by time and support issues. Both students and educators encounter challenges presented by technology issues.

Vaughan (2007) cites studies suggesting that students enrolled in blended courses can sometimes have unrealistic expectations. The students in those studies assumed that fewer classes meant less work, had inadequate time management skills, and experienced problems with accepting responsibility for personal learning. Students in such courses have also reported feeling isolated due to the reduced opportunities for social interaction in a face-to-face classroom environment (Smyth et al., 2012).

Having difficulty with more sophisticated technologies is another challenge for implementing blended learning. This was particularly the case where students had to rely on slow Internet connections (Smyth et al., 2012).

Another challenge related to technology is the pervasive access the technology affords. Although the flexibility to learn online and from a distance provided by blended learning is perceived as advantageous, the pervasive access may also be invasive to students' personal lives. For some, the online component results in more time devoted to study and less to personal concerns. This can lead to students feeling overwhelmed and tired (Smyth et al., 2012).

However, just as students must adapt to blended learning technology, educators must be taught to use the technology from the user end in order to effectively facilitate student learning. The attitude, readiness, and technological skills of the educators as course facilitators are equally important, as all of these factors affect how successfully they use, develop, and update the technology-based tools and resources in operation (Harris et al., 2009).

The final challenge of blended learning is the difficulty in acquiring new learning technology skills, such as how to foster online learning communities and how to facilitate online discussion forums among students and between students and course facilitators (Dziuban & Moskal, 2013). Hence, the aim of this paper is to fill those gaps; and to identify and evaluate good practices in blended E-learning. Based on the findings, several recommendations can be made on pedagogy to enhance higher education students' learning experiences in the 21st Century.

Methodology

The data for this research were collected through semi-structured interviews with lecturers teaching in the Faculty of the School of Arts and Social Sciences (SASS), UniSIM Singapore. There was also an online questionnaire survey via Survey Monkey given to students. This survey was used to collect their perceptions and opinions of their blended E-learning experience.

Four lecturers teaching in a blended E-learning environment at UniSIM were interviewed. The lecturers are referred to in this paper as Lecturer A to Lecturer D. The interviewees' years of experience ranged from five to 29, resulting in an average teaching experience of 19 years. Their experience using various forms of blended learning, including online learning, ranged from one year to more than 10 years.

The semi-structured interviews, which took place in the interviewees' offices, lasted between 45 and 90 minutes. Interviews began with the collection of professional background information and proceeded to a series of key questions. Questions were divided into four sections: knowledge and experience of blended learning, design and use of blended learning, resources needed for blended learning, and evaluation of the use of blended learning. Finally, interviewees were given the opportunity to add further comments. The interviews were recorded, transcribed, and coded with similar themes. These were then sent to the lecturers as a reference to read through the transcripts to ensure reliability and validity of the data.

The interviewed lecturers were requested to send an online questionnaire to their students to collect views on blended learning. Eighty questionnaires were returned. The majority of respondents (50%) were first-year undergraduate students. The remaining respondents were second-year undergraduate (19%), third-year undergraduate (10%), fourth-year undergraduate (6%), and postgraduate (15%) students. The predominant age group of the respondents (80%) was 18 to 25 years old; only 15% of students were between 26 and 35 years old, and 5% were over 35 years old.

The student questionnaire was adopted from the student survey questionnaire shown in Appendix of Garrison and Vaughan's (2008) *Blended Learning in Higher Education: Framework, Principles, and Guidelines*. The questionnaire was constructed using Survey Monkey. The survey began with the collection of background information, such as year of study, mode of study, and age. The key questions were divided into four sections: the first section queried students' experiences of blended learning; the second looked at students' overall satisfaction with blended learning; the third asked the students to comment on blended learning; and the last section asked students to compare blended learning with face-to-face learning. Please see the Appendix for a copy of the student questionnaire.

Results

Lecturer Experiences and Perceptions – Benefits of Blended E-learning

Based on the findings from the interviews, the primary benefit of using blended learning is flexibility. This flexibility accommodates students to the varied learning styles, non-traditional course access requirements, and non-traditional course pacing preferences. A high proportion (i.e., more than 50%) of this student population was

composed of mature students, many of whom had just recently returned to study after years of full-time employment. Unavoidably, they have different preferences and attitudes towards learning. Also, most of the mature students were still working either full time or part time; therefore, flexibility is an important consideration. This finding reinforces the pedagogical characteristics of blended learning as mentioned in existing literature, including the work of Graham (2006), and Yen and Lee (2011).

Student Experiences and Perceptions of Blended Learning

Notably, the student participants had had relatively little previous experience with blended learning, with only 17% of the respondents reporting they had had previous blended learning experience.

In terms of support for using blended learning, student respondents expressed the need to receive clearer guidance and a demonstration of how to use the online learning resources. This result is very much in line with what the literature says about the importance of skills training to facilitate the successful use of blended learning (Beadle & Santy, 2008; Harris et al., 2009).

Regarding the comparison of blended learning with face-to-face learning, the majority of student respondents (57%) commented that the quality of feedback from blended learning courses was no different from that for traditional classroom teaching. The only comment made about feedback was that, *"we would prefer face-to-face feedback as it is more effective and more personal,"* which reinforces the necessity for including face-to-face elements in blended learning approaches.

The majority of student respondents (more than 50%) did not see any difference in the amount and quality of interaction between students, or between students and lecturer, when comparing blended learning with face-to-face teaching. On the other hand, the majority of students (68% of respondents) commented that there was a relationship between online and in-class learning, and that these delivery methods enhance and are relevant to each other. Student respondents perceived blended learning as a method that allowed them to study at their own pace and time, and encouraged them to become more independent with regard to their own learning. They identified blended learning as a flexible learning method that gave them the convenience of studying off campus. This was also reflected in their comments on rating the advantages of blended learning in the questionnaire. The top three advantages of blended learning chosen by students pertained to:

- Flexibility of being able to complete assignments in any place/at any time;
- Convenience of not having to come to campus as often;
- Benefits of the online component when job responsibilities and other commitments make it difficult to attend face-to-face classes.

The students' perception of the flexibility of blended learning was further reinforced by their open comments on the most effective aspect of the use of blended learning. One of the student respondents commented that the most effective aspect of blended learning is *"the use of different teaching methods (online and face to face lectures) makes the delivery easier to understand, as a result, we are more engaged with our study,"* which summarizes the overall purpose of using blended learning as a delivery method.

On the other hand, the student respondents also identified one of the least effective aspects of blended learning, *"blended learning is making lectures redundant as all information is online"* and "*there is less interactive/lack of direct communications with lecturers."* One of the major concerns of using blended learning as a delivery method is the potential of reducing interaction between lecturers and students. This can be summarized in one of the students' suggestions for blended learning, which was *"blended learning is beneficial but it should still maintain the interaction and instant contacts with the lecturer."*

The UniSIM students had a different perception of blended learning compared to that in the literature. The UniSIM students perceived blended learning simply as an online learning delivery method. This was possibly because the lecturers did not define and explain "blended learning" to the students. Therefore, they did not necessarily realize they were being taught using a blended learning approach.

Discussion

Similarities and Differences between Students' and Lecturers' Views

The first common view shared by both students and lecturers of the study was that blended learning provides flexibility for students. Both groups found the use of a broad range of teaching methods assisted student learning. Students with different learning paces and styles benefited from using various learning methods in order to maximize their learning ability and potential. The lecturers and students shared the same views as Garrison and Kanuka (2004) and Owston et al. (2008), that is, blended learning encourages flexibility. They also expressed the view that blended learning was a favourable delivery method, particularly for part-time or distance learning courses with students studying off campus.

The major difference in view, between students and lecturers, was related to the placement of teaching materials on the Internet. Lecturers saw posting such materials online prior to lectures as being convenient for student study, but students felt this made lectures and learning redundant since all the information was already available online! Both students and lecturers also expressed that blended learning led to less interaction and there was a lack of direct communication between lecturers and students, as well as among the students themselves. The final concern, which was solely raised by students, had to do with the importance of training, with students commenting that it was important to have enough training in order for them to fully utilize blended E-learning context for learning. Blended learning enhances student learning experience by creating opportunities for them to improve their understanding through their own exploration and research of certain issues and topics (Sharpe et al., 2006). It encourages student-led learning and allows students to learn at their own pace. It gives greater flexibility of learning for students, which in turn, improves student learning experience and achievement. However, blended learning must not be seen purely as an economic measure for teaching. This view is supported by comments from the lecturer interviewees in this paper who emphasized the significance of investment for successful implementation of blended learning and one of the purposes of using ICT for blended learning is to aid student learning, not to use it to replace the valuable interaction between lecturers and students. This echoes O'Toole and Absalom's (2003) findings that

the use of ICT alone does not enhance student learning experience, and that only the appropriate use of ICT and interactive strategy will enhance student learning experience.

Blended learning cannot totally replace face-to-face contact with students, who require reassurance and ongoing support from lecturers. Students who responded to this survey voiced this opinion strongly. It was reflected in their comments that they prefer face-to-face interaction instead of online communications only, as they require the personal interactions with the tutors. The successful examples of blended learning ensure a good mix of delivery methods that are able to suit individual dispositions of the learners, such as part-time or off-campus students.

Although technology is important, the most important element for successful development of blended learning is an understanding of the learner preferred learning methods and the types of support they require, as evidenced in the interviewees' comments in the present study. It is crucial to take steps to respect and recognize students' "diverse talents and ways of learning," as advocated by the seventh of Chickering and Gamson's (1987) Seven Principles. Furthermore, the design of blended learning should demonstrate, via the online materials and activities, that the diverse talents and ways of learning are understood. It is also important to investigate how the delivery of blended learning at the module or unit level can support student learning across an entire program.

Conclusion and Recommendations for Blended E-learning in the 21st Century

This paper has reported on a study investigating the use of blended learning to enhance student learning experience, from an institutional perspective. The application of blended learning at UniSIM, together with success factors and the advantages of the development of blended learning were investigated in the study. Student' experience and perception of blended learning as a delivery method were also examined. Furthermore, the study looked at similarities and differences between the views of educators and students on blended learning.

The key advantage for students of using blended learning as a delivery method is that it provides flexibility of learning for students, which links back to another factor necessary for successful implementation, which is the suitability of the course. Blended learning works particularly well for courses that have a high proportion of part-time students, as flexibility is vital for them. The use of blended learning also addresses several of the educational principles introduced by Chickering and Gamson (1987), such as "encourage active learning," "give prompt feedback," and "respect diverse talents and ways of learning," which further reinforces the view that blended learning can enhance students' learning experiences. UniSIM students had had relatively limited experience of blended learning. However, they have accepted the delivery method well, which supports Sharpe et al.'s (2006) findings. Although UniSIM students do not see much difference between blended learning and face-to-face learning in terms of interaction between students and lecturers or among students, they stated clearly that they still want face-to-face interaction with the lecturers. The lecturers and students shared similar views on blended learning, both finding that its main advantage is flexibility. The main difference between their views centred around the issue of making

lecture materials available on the Internet. While the academics believed this practice provided convenience for their students, students perceived it as making lectures redundant. It is therefore important for lecturers to carefully consider when and how to release their materials online.

Based on the findings of this study, several recommendations can be made on the use of blended learning as a teaching method.

Recommendations

The recommendations are to design courses by focusing on: Interactions and Feedback between students and lecturers and students and students, Resources and the role of educators as a guide and facilitator (Ginns & Ellis (2007). Strategies for effective online learning with:

- Supporting learner interactions
- Sharing and managing of resources
- Role of lecturers as a guide and facilitator

With reference to supporting learner interactions, students can download a course reading from Blackboard and discuss ideas using an online bulletin board to get feedback. Secondly, in sharing and managing of resources, the resources are sourced by students and are uploaded to a shared workspace using wireless technology and resources are shared within and across project teams. These strategies can support interactions and communications between students and lecturers and a better management of learning resources that help students with activities at a convenient time and place of learning online or offline. This is also discussed in the literature review of flexible nature of blended learning that reinforces the student's autonomy, reflection, and powers of research (Sharpe et al., 2006; Tam, 2000). Furthermore, with good management of resources, these can be subsequently revisited for editing and adjustment to suit the learning aims and objectives of the module accordingly.

For educators who intend to use blended learning in the future, it is suggested that the teaching style should be inclined towards student-centred and to play the role of a guide and facilitator but he/she must be prepared to be experimental. Different modules and courses require different forms of blended learning to suit the course, the content, and the students' needs; therefore, having a flexible approach as a facilitator is important. The educator must also attempt to understand how students access and use materials and resources in order to design a blended learning module that matches students' preferences and expectations in guiding and facilitating students' learning in a student-centred learning approach. The findings from Ginns and Ellis (2007) study indicate academics in blended learning contexts need to focus not only on the technical capacities and functions of online materials and activities, but must also seek to understand their students' perceptions of the blended learning environment, and identify how successfully it supports students' learning across the whole course. The other important aspect for developing blended learning that emerged from the present study was the importance of not making assumptions; an approach that works for one module may not work for another. Students in different disciplines may have dissimilar preferred learning styles in different modules, so they may require different teaching

and learning methods. It is also important to provide sufficient training for the students and for educators who are new to blended learning and teaching.

Recommendations for good blended E-learning practices also include:

Based on the findings and the discussion of this paper, the following are some good E-learning practices for a blended learning context.

- **Implementing chat groups at a fixed time –** Allow for **i**nteractivity, sharing and discussing of information and queries, between students and facilitators, synchronously for example via Skype or online audio/visual conference sessions
- **Incorporate the use of social media -** Use of Facebook for short interactions, postings and sharing of topics and model examination topics for discussion and revision purposes and the use of YouTube for aided visual guide and to showcase good videos posted and uploaded by students during their presentations. Blogs for teaching and sharing and for review of students' writings
- **Complementary face-to-face with online learning –** Continuation of both online and in-class discussion with links, podcasts and video recordings as well as an online discussion forum
- **Team play** Have activities that are team-based in the form of contest for teachers and their students; teams use assessments and exams to earn points, competing for prizes and worldwide recognition

Based on the findings of this paper, the following are some recommendations for the University that intends to implement blended learning context. The first suggestion is that the institution must be realistic about the investment of time, effort, and resources that are required for development and implementation. Institutions must create the necessary policy, planning, resources, scheduling, and support systems to ensure that blended learning initiatives are successful. The resources required are not restricted solely to the acquisition of equipment and technology, but also refer to the human resources used in developing and managing the implementation of blended learning. It is also important to provide technology training and support for the students as well as professional development for the academics who will be using blended learning. The development program should teach educators how to redesign their courses, the most effective way to deliver their courses online, and also the effective use of technology.

The major limitation of this study is that the research findings are based on the practice in a single institution, although they do cover a range of disciplines. A suggested future research area is to adopt the research methodology developed in this project to conduct research in several universities to obtain a broader picture of the use of blended learning in the sector. Another proposed research area is to conduct an extensive study on the use of blended learning in particular subject disciplines.

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Appendix: Student Questionnaire

Background Information

1. Year of study
    - First year
    - Second year
    - Third year
    - Fourth year
    - Postgraduate
2. Student status
    - Full time
    - Part time
3. Age group
    - 18-24
    - 25-35
    - Over 35

Section 1: Experience of Using Blended Learning

1. Do you have knowledge or experience of using blended learning prior to attending this course/module?
    - Yes – *If Yes, please provide more details:*
    - No
2. Do you think you have sufficient training and guidance in the use of blended learning methods?
    - Yes
    - No – *If No, please state what type of training you would like to have:*
3. Blended learning teaching method is sufficiently explained in a module handbook.
    - Strongly agree
    - Agree
    - Not sure
    - Disagree
    - Strongly disagree
    - Not applicable
4. A module handbook provides sufficient resources for this specific blended learning module.
    - Strongly agree
    - Agree
    - Not sure
    - Disagree
    - Strongly disagree
    - Not applicable

Section 2: Overall Satisfaction with Blended Learning

1. Given the opportunity, I would take another blended learning module in the future.
    - Strongly agree

- Agree
- Not sure
- Disagree
- Strongly disagree
- Not applicable

2. Overall, I am satisfied with the use of blended learning as a teaching method.
    - Strongly agree
    - Agree
    - Not sure
    - Disagree
    - Strongly disagree
    - Not applicable

Section 3: Comments on Blended Learning

1. In your opinion, what are the advantages of using blended learning as a teaching method? (Please identify up to THREE advantages.)
    - Convenience of not having to come to campus as often
    - Flexibility of being able to complete assignments any place/any time
    - It is a requirement for course/module
    - It was the only available option course that fitted into my timetable
    - Job responsibilities and other commitments make it difficult to attend face-to-face classes
    - I have a disability that makes travel inconvenient
    - Other – *Please specify:*
2. What was the MOST effective aspect of the use of blended learning as a teaching method?

3. What was the LEAST effective aspect of the use of blended learning as a teaching method?

4. What suggestions can you provide to help strengthen this blended learning module?

Section 4: Comparison of Blended Learning to Face-to-Face Learning

1. In comparison to the traditional classroom teaching, how would you describe the QUALITY OF FEEDBACK on coursework assessment that is received if the module is taught by blended learning?
    - Increased
    - Somewhat increased
    - No difference
    - Somewhat decreased
    - Decreased
    - Not applicable

2. In comparison to the interaction experienced with STUDENTS in other modules that do not use blended learning, how would you describe the AMOUNT of interaction experienced with other students?
    - Increased
    - Somewhat increased
    - No difference
    - Somewhat decreased
    - Decreased
    - Not applicable
3. In comparison to the interaction experienced with LECTURERS/TUTORS in other modules that do not use blended learning, how would you describe the AMOUNT of interaction experienced with the lecturer(s)/tutor(s) in this module?
    - Increased
    - Somewhat increased
    - No difference
    - Somewhat decreased
    - Decreased
    - Not applicable
4. In comparison to the interaction experienced with STUDENTS in other modules, how would you describe the QUALITY of interaction experienced with other students in this module?
    - Increased
    - Somewhat increased
    - No difference
    - Somewhat decreased
    - Decreased
    - Not applicable
5. In comparison to the interaction experienced with LECTURERS/TUTORS in other modules, how would you describe the QUALITY of interaction experienced with the lecturer(s)/tutor(s) in this module?
    - Increased
    - Somewhat increased
    - No difference
    - Somewhat decreased
    - Decreased
    - Not applicable
6. How would you describe the relationship between the online learning and in-class learning?
    - Online and in-class work enhanced each other
    - Online and in-class work were relevant to each other
    - The connection between the two was not always clear
    - There was no connection between the two

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