

Impact of Permanent Vocabulary on Acquiring a New Language – An Empirical Evaluation

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Abstract

This paper aims to make a local contribution to the theories that have an impact on the teaching and learning experience of teachers and students. One difficulty that students of non-English-speaking background encounter is related to Phonology. Phonology explains the variations in pronunciation from a number of perspectives. This paper tests dialectic impact on vocabulary assimilation in non-English speaking students whose higher education is in English. Accordingly, standard UK English, as the reference point, is the English dialect against which the research criteria are based. While accents cannot be completely eliminated; an individual's accent is a part of who they are and the cultural influences also have a part to play. However, when learning a new language, the permanent vocabulary (mother tongue) creates inefficiencies in pronunciation of another language. The research question assesses the "*Impact of permanent vocabulary on acquiring a new language*". The theory of Phonology can be evaluated in a number of ways, however, the limited aspect of this research analyses the symptomatic effects of phonemes (syllables). Students are exposed to word complexities. The same students are then asked to pronounce the same words in a symbiotic manner employing syllables (phonemes) to assess any differences. Three hypotheses are tested for significance, i.e. the extent of symbiotic effects on spoken English. Results suggest students are more efficient at pronouncing words symbiotically, employing phonemes (syllables), which then significantly improve word pronunciation and aids in accent reduction. Educators may wish to consider embedding a symbiotic approach to teaching English to non-English speaking students.

Keywords: Phonology, Phonemes, Syllables, English dialects

Introduction

Many languages across the globe share a common ancestry. In linguistics, this ancestry is referred to a genetic relationship that is distinct from its biological equivalence. Thus, a genetic relationship between languages proposes the same linguistic grouping, known as a language family (Nichols, 2012). For instance, Spanish and Italian share their genesis in Latin.

Accordingly, the basis for linguistic commonality can be determined through an analysis of words in the target languages that demonstrate lexical and grammatical similarities (Ruhlen, 1994). However, while research suggests that a historical relationship exists between English and Arabic, nevertheless they are both considered to belong to different language families (Jassem, 2012). Similarities between languages on the basis of genetic relationship can be analyzed from many different perspectives. However, three potential means by which a genetic relationship can be established is, most importantly, through common origin, convergence, and linguistic crossover and borrowing (Yule, 2006). Accordingly the aim of this research is to evaluate the “impact of permanent vocabulary on acquiring a new language”. As such four distinct research objectives are achieved employing the theory of Phonology.

Objective 1 assesses pronunciation of specially selected words that exhibit “aspirated” sounds, i.e. the “*h*” after the first letter as in the word “*kill*” which should be pronounced as “*k^hill*” as opposed to an unaspirated word such as “*skill*”. Moreover, pronunciation of English words, in general, presents added inefficiencies for English language acquirers where the complexity of a word increases the inefficiency. In this regard the use of phonemes assists language acquirers in attaining efficiency in the English language. Accordingly, the efficiency of pronunciation is evaluated qualitatively employing morphological analysis (Fritz Zwicky, 1967, 1969).

Objectives 2-4 employ statistical techniques for evaluating efficiencies in language skills where ex-ante and ex-post assessment of words pronunciation is statistically tested to determine possible significance in the difference between word and phoneme pronunciation. The importance of these tests will demonstrate the efficiency of translation skills in users of the English language.

Theoretical Framework

Theory of Phonology

This paper serves an important utility and essentially tests the impact of permanent vocabulary on the transient stages of acquiring a new language. This is enabled through the theory of Phonology that can be evaluated in a number of ways, however, the limited aspect of this research analyses the symptomatic effects of phonemes (syllables) on acquiring English efficiency predicated by a person’s permanent vocabulary. A group of randomly selected sample of students is subjected to word complexities. The same participants are then asked to pronounce the same words employing syllables (phonemes) to assess any differences in pronunciation.

A phoneme is an abstraction of speech sound. Each abstraction is referred to as a syllable. A group of syllables come together to form a phoneme. For example, the English word “*Respectful*” consists of three syllables: the initial “*ris*” sound, the “*pect*” sound, and the “*ful*” sound (culminating in: *ris-pect-ful*). Note that the syllables in this and many other English words do not always correspond directly to the letters used to spell them (English language contains many words in which some letters are silent e.g. walk and talk where the letter “*T*” is silent). This presents added complexity for those in the process of acquiring English language skills. As such, the next section, the literature review, discusses

relevant and pertinent themes on phonology and its implications for learners of the English language.

Literature Review

Mass movement and convergence of people across the globe due to economic, political and social reasons have highlighted the inefficiencies of linguistics convergence, for instance, due to historical, sociological, and political reasons. As an example, South Asians have a higher control of lexical and semantic effects of their permanent vocabulary on the efficiency of spoken English as compared to, say, Chinese speakers of English (Crystal, 2010).

In higher education in particular, the effects of lexical, semantic and cultural differences present additional inefficiencies in spoken and written English. This is quite apparent in Arabic-speaking students of higher education. However, in a contemporaneous linguistics environment due to globalization, mass movement of people, and the social reliance on technology, has led to unprecedented scale of linguistics convergence (Chambers, 2002; and Baron, 2003).

Tagliamonte and Denis (2008) suggest that the adaptation of own language, and its variation, is reflected in its online use. This social phenomenon (online IT media) is predominantly found in today's youth. The younger members of society are much more "tech savvy" and hence are much more aware of stylistic, lexical and semantic developments in languages that differ from ordinary language. Indeed, Van Herk and OIP (2006) argue that online subcultures exist. Accordingly, users of social media, such as Facebook and Twitter for example, are able to converse more efficiently on platforms employing adapted semantics and lexicons that previously did not exist; say, twenty years ago that do not exist, at least, not in the common vocabulary.

The Process of language Transliteration; Translation; and Formulation

The process of conversion of the source language to a target language passes through two distinct stages to achieve the desired syntactic structure, namely, "transliteration" and "translation". This process eventually results in "formulation", and it is an iterative process that develops over time leading to lingual efficiency (McGinnis, 2001).

Transliteration

The process of transliteration is the like-for-like conversion of words by the perceiver. Transliteration attempts to employ one-to-one correspondence from the source language (SL) to the target language (TL). This process of conversion can have two meanings. Firstly, the word(s) matching that of the TL is sought in the databank (mind) of the perceiver. Secondly, the perceiver converts the word(s) from the SL to the TL, thus converting a whole sentence on a like-for-like basis.

The process of transliteration may cause inefficiency in the conversion process. This inefficiency may be due to multitude of factors but predominantly due to lack of prior knowledge of the TL. Catford (1965) suggests that "In transliteration, SL graphological units are replaced by TL graphological units; but these are not translation equivalents, since they are not selected on the basis of relationship to the same graphic substance".

Translation

Translation may be defined as the replacement of textual material in one language (SL) by equivalent textual material in another language (TL). However, translation is not transliteration (Venuti, 1998). Translation attempts to adopt a meaningful conversion from the SL to the TL. Thus, reciprocal structure on conversion is adopted by the perceiver so that the receiver of the TL can readily understand the message being conveyed.

However, as Culler (1976) points out that "one of the troublesome problems of translation is the disparity among languages. The bigger gap between the SL and the TL, the more difficult

will be the transfer of message from the former to the latter.” Accordingly, translation attempts to give meaning to ideas that formulate in a sentence/paragraph from the SL to the TL, thus leading to formulation and eventual articulation.

Formulation

This process of language conversion is sometimes referred to by linguistics as “formulation” in which the source language has been converted to the target language to a desired degree of efficiency (Garrett, 1975; and Ferreira & Pashler, 2002). Once transliteration has been achieved, the next stage is lingual translation. In executing transliteration and translation, literature suggests that an intermediate stage occurs that enables the planning of the utterance and its eventual articulation. Thus, the cycle of transliteration – translation – formulation is complete when verbal articulation takes place.

Phonetic Complexities

The various theoretical explanations of linguistic inefficiencies due to “convergence, borrowing and common origin” provide some level of understanding and explanation that subsists in the written and spoken abilities of an acquired language (Ruhlen, 1994). One notable outcome of using an acquired language is related to the phenomenon of word-pronunciation. Phonetic complexities are many and varied; however, principle variations include four distinct types of complexities that arise due to:

Evaluated complexities

- Aspirated and Unaspirated
- Multi-Syllable words

Other complexities unevaluated

- Stressed and Unstressed syllables
- Tonality and Tonicity

1. Complexities due to Aspirated and Unaspirated words

The English language is filled with complexities that are confusing at best. The mix of consonants and vowels provide much of this complexity. Additionally, lexical stress on sounds provides further complexity such as in the word “increase”. Lexical stress is phonemic in English (van der Feest & Fikkert, 2015). For example, the noun *increase* and the verb *increase* are distinguished by the positioning of the stress on the first syllable in the former, and on the second syllable in the latter (Jaaskelainen, 2005).

Additionally, some words when used singularly are aspirated but when combined with other letters to form a new word which then are unaspirated. For example, “K^hILL” and “SKILL” and “P^hOT” and “SPOT” where the words KILL and POT are aspirated and SKILL and SPOT are unaspirated (Guillaume, 2011). Accordingly, Objective 1 is evaluated theoretically and that:

Proposition: Acquirers of verbal English language skills demonstrate weak efficiency in recognizing aspirated words.

2. Complexities due to Multi-Syllable words

Like many languages, English orthography can be complex. Orthography relates to a set of conventions upon which a written language is based. Typically, rules for spelling, punctuation, word-breaks, hyphenation, capitalization, and emphasis. Letters such as A, B, and C are referred to as orthographic units (Pitt & Samuel, 1990). Different letters produce different sounds in most cases. However, differences in pronunciation may seemingly not differ such is the case as in the pro-noun Catherine and its other version Katherine (Pitt & Samuel, 1990; Pallier, 1997).

Combinations of letters form words which themselves can be atomised in their equivalent phonemes. Thus, the word “*subjective*” can be expressed in its phonetic equivalent as “*sub-jek-ti*”; hence the word has three syllables. How the phonetic version of the word is

spelt largely rests with the researcher, as long as the phonetic expressiveness is achieved (ClarkYallop & Fletcher, 1995; Cruttenden & Gimson, 2008).

Syllables represent a special case in linguistics. Syllables correspond to the unit of sounds desired from the word. This principle enables the desired phonetic outcome (Cahill & Rice, 2014). Thus, the null hypotheses 1–3 test for homogenous characteristics of respondents in word pronunciation containing three to five syllable phonemes, and that:

Objective 2:

H1_o: Respondents demonstrate no difference in phonetic verbal articulation in three-syllable English words and their equivalent phonemes

H1_a: Respondents demonstrate strong phonetic verbal articulation in three-syllable English words and their equivalent phonemes

Objective 3:

H2_o: Respondents demonstrate no difference in phonetic verbal articulation in four-syllable English words and their equivalent phonemes

H2_a: Respondents demonstrate strong phonetic verbal articulation in four-syllable English word and their equivalent phonemes

Objective 4:

H3_o: Respondents demonstrate no difference in phonetic verbal articulation in five-syllable English words and their equivalent phonemes

H3_a: Respondents demonstrate strong phonetic verbal articulation in five-syllable English words and their equivalent phonemes

Hypotheses 1-3 test specific issues in the efficiency of word pronunciation with their equivalent alternate hypotheses. Additionally, to the stated four objective, an ANOVA analysis tests for the variation in pronunciation efficiency due to word complexity i.e. between groups (the three; four and five syllable groups). Accordingly, hypothesis 4 states that:

H4_o: Respondents demonstrate no difference in verbal articulation across the 3-5 syllable range of phonemes

H4_a: Respondents demonstrate strong verbal articulation across the 3-5 syllable range of phonemes

3. Complexities due to Stressed and Unstressed syllables

A further complexity that arises and creates difficulties for acquirers of the English language is the phenomenon on *stressed* and *unstressed* syllables. Traditionally, a word complexity is measured by the number of syllables it contains (phoneme). As such each syllable in the phoneme is ascribed one of three levels of stress: primary, secondary or unstressed. It is often found that in a complex phoneme, there will be one syllable with primary stress, possibly one syllable having secondary stress, and the remaining syllables are unstressed.

Accordingly, words such as COMMA and LETTER exhibit stressed and unstressed characteristics. In this instance, notice that in the former case, the whole word is pronounced i.e. COM-MA, however, in the latter case the pronunciation creates an unstressed syllable i.e. the word “LETTER” is pronounced as “LET-TA”. Acquirers of English languages must adapt this characteristic in their English language efficiency in proper pronunciation.

4. Complexities due to Tonality and Tonicity

Additional complexity arises due to contrasts involving boundaries between intonation of phrases (tonality), placement of pitch accent (tonicity), and choice of tone or tones associated with the pitch accent in the various dialects of English (Halliday, 1963; Grice, Ridouane and Roettger, 2015). Benward and Saker (2003) suggest that “tonality” is an

organized system of tones (e.g. the tones of a major or minor scale) in which one tone (the tonic) becomes the central point for the remaining tones. In tonality, the tonic (tonal centre) is the tone of complete relaxation, the target toward which other tones lead”. In contrast to Tonality, however, it is suggested that Tonicity relates to the placing of the principal accent on a particular syllable of a word, making it the tonic syllable. This is the domain also referred to as prosodic stress or sentence stress (Bao, 1999). The diagram below is a representation of some important complexities in language acquisition skills.



Diagram 1 - Exhibits a theoretical view of this research. It depicts the complexities and stages i.e. transliteration, translation and formulation, that impact upon language efficiency on conversion between the source language to the target language

Methodology

Data

The primary data for this research has been obtained by a random selection of students in a higher education institute in the UAE. The sample group represents a mix of young male and female respondents. This research is enabled through the collection of primary data and as such some 84 students participated in the research, with the final sample-set comprising 70 participants representing useable data. Data collection was enabled through recording of responses to a set of pre-determined English words which the students were asked to read.

In relation to objective 1, the purpose of the research was to qualitatively determine the ex-ante and ex-post differences in aspirated and unaspirated words. While a qualitative approach is employed in determining the features and characteristics of the responses by participants, nevertheless some simple statistical output enabled a quantified insight in the differences of before-and-after exposure to pre-determined words. The sample words used in this assessment are exhibited in **Table 1** below.

UNASPIRATED WORDS WITHOUT THE /h/	ASPIRATED WORDS WITH THE /h/
CAN	C ^h AN
POT	P ^h OT
KILL	K ^h ILL
TOP	T ^h OP
PILL	P ^h ILL
PAT	P ^h AT

Table 1 –Aspirated and Unaspirated Words

Table 1 (above) exhibits the morphological evaluation of some common English words with their corresponding phonemes. The unaspirated words are constructed in their common nomenclature. The same words are then aspirated with the /h/. Participants are asked to pronounce the unaspirated words without guidance from the researchers. They are then asked to articulate the same words with aspirations with guidance on how these words should be verbally articulated. Both sets of words are then assigned a score based on the quality of the verbal articulation.

In relation to objectives 2-4, data is gathered through quantification of responses to words and phonemes. This quantification was achieved by subjectively evaluating the quality of the responses to the pre-determined set of words ranging from three to five syllables in length. The quantification takes the form of marks from a scale 1-10, 10 being the highest quality pronunciation (Marten et al, 2007). While the quantification of the data may be subjective, rigorous means were adopted in quantification procedures. This included both researchers agreeing to the mark assigned to each respondent. The data gathered was then statistically analyzed to test the relevant set of hypotheses in relation to objectives 2-4.

Tables 2 – 4 exhibit the words employed in testing for verbal articulation efficiency. The tables are so arranged in order of complexity according to phoneme length as measured by the number of syllables they contain. Participants articulate the words and then the corresponding phonemes. The verbal articulations are analyzed and assigned a score ranging from 1 to 10. The scores are then subjected to statistical analysis and hypotheses testing.

WORD	PHONEME
JOURNALIST	JUR – NA – LIST
PRIORITISE	PRY – ORA – TISE
QUINTUPLET	QUIN – TUP – LET
RESPECTFUL	RIS – PECT – FUL
VISUAL	VIZ – U – AL
GASOLINE	GAS – O – LEEN
MAGAZINE	MAG – A – ZEEN

Table 2 - Three syllable words and their corresponding phonemes

WORD	PHONEME
NUMERATOR	NU – MA – RAY – TA
EVAPORATE	EVAP – OR – RATE
DELIGHTFULLY	DE – LITE – FUL – LEE
FUNDAMENTAL	FUN – DA – MEN – TAL
UKULELE	U – KA – LE – LEE
JUBILATION	JU – BI – LAY – SHUN
WATERMELON	WO – TAR – MEL – LON

Table 3 - Four syllable words and their corresponding phonemes

WORD	PHONEME
ACRIMONIOUS	AC – REE – MO – NEE - US
BIOLOGICAL	BI – O – LO – GI – CAL
DIAGONALLY	DI – AG – O - NAL – LY
EVOLUTIONIST	EE - VO – LOO – SHUN - IST
GEOMETRICAL	GEE – O – MET – RI - CAL
HIPPOTUMUS	HIP – PO – PO T– TU - MUS
VOCIFEROUSLY	VO – SIF – ER – US – LY

Table 4 - Five syllable words and their corresponding phonemes

Data was tested for the desired output and consistency. This was achieved through simple IF statement test in Excel that compared the output data to minimum – maximum range of 1-7 since no student was assigned a score greater than 7 in the data. The consistency test was achieved successfully without any further data checking or recourse to data modification.

Research procedures

Objective 1 is achieved through the adoption of Morphological analysis of linguistic efficiency. Recorded transcripts of pre-determined word pronunciation were evaluated for pronunciation efficiency employing unaspirated words. The quality of the pronunciation efficiency was then assigned a score of between 1to10. Respondents were then told how they should re-pronounce each word and were guided as to how the words should be re-pronounced employing aspirated techniques.

Objectives2 – 4 are achieved employing words of three to five syllables complexity and their corresponding phonemes. After evaluation of the recorded transcripts, scores were assigned to the pronunciation of the pre-determined words and their corresponding phonemes in order of word complexity. The statistical procedures adopted in answering the stated hypotheses are based on t-tests and analysis of variance (ANOVA) to test for statistical significance.

Objective 1 - Morphological analysis of linguistic efficiency

Objective 1 is to theoretically determine if improvements are noticeable when participants are asked to pronounce unaspirated words and then aspirated words. A Morphological approach is selected to achieve this task. As a methodology, morphological analysis enables freedom to analyze a phenomenon from numerous perspectives to make sense of that phenomenon (Zwicky, 1969; and Ritchey, 2006).

Fluency in reading should reflect the natural character of what is being read and mimic speech in its articulation and expressiveness. Reading efficiency is only possible if textual perceptions are efficient and little effort is expended in formulating verbal articulation. The level of efficiency in verbal articulation should also extend to unfamiliar words. Therefore, strong decoding skills are essential tools of reading and hence verbal articulation. As such, Morphological analysis lends itself readily to phonetic deconstruction of words that enables an understanding of phonetic articulation (Gut, 2009).

Objectives 2-4 - Statistical analysis of word and phonemes pronunciation

Objectives 2-4 rely on hypotheses testing to answer the main research question through empirical means employing t-tests and ANOVA. Participants are first asked to pronounce pre-selected words that ascend in complexity from three-syllable words to five-syllable words along with their corresponding phonemes. They are then explained how to pronounce the equivalent phoneme for each word. The quality of the words and phonemes pronunciation are assessed for quality and assigned a score ranging from between 1-10. The quantified responses are tested according to the relevant hypotheses stated in the literature review. Each word is tested for statistical significance to determine:

1. Significant in the difference between three-syllable word and phoneme pronunciation employing paired t-test (Hypothesis 1o&1a).
2. Significant in the difference between four-syllable word and phoneme pronunciation employing paired t-test (Hypothesis 2o &2a).
3. Significant in the difference between five-syllable word and phoneme pronunciation employing paired (Hypothesis 3o& 3a).
4. Significant in the difference between word and phoneme pronunciation using ANOVA across the three to five syllable words and their corresponding phonemes (Hypothesis 4o& 4a).

Findings and Results

Findings to Objective 1

Data was collected via a recording medium. Morphological analysis was restricted to vocal analysis of aspirated and unaspirated words using syllables and phonemes. Participants were not told how to read the pre-determined list of words and consequently it was noticed that there was not much variation in the quality of verbal articulation and thus the sample group exhibited a homogenous characteristic. This characteristic indicated a symbiotic effect of the permanent vocabulary (Arabic, the source language) on the target language i.e. English (Munro & Mann, 2005).

The participants were then explained how they should pronounce the corresponding aspirated version of the unaspirated words. Having quantified the responses, a measure of change was noticeable. Table below is a summary of the quantified responses on unaspirated and aspirated words:

Aspirated words average	Unaspirated words average	Improvement in articulation
4.13	5.19	26%

Table 5 – Findings of analysis of unaspirated and aspirated words

The articulation of unaspirated words yielded an average score of 4.13. However, participants average score increased to 5.19 on verbal articulation quality of the same, but aspirated words. This suggests that an increase in verbal articulation quality of 26%. It demonstrates that a simple technique employed widely as a tool for accent reduction has considerable impact on articulation quality of the English language (Pennycook, 1999; and Munro & Mann, 2005).

Objectives 2-4 provide further basis for employing linguistic skills in higher education to enable efficient use of the English language. The use of morphological analysis is extended to the analysis of words and their corresponding phonemes in objectives 2-4.

Results to Objective 2-4

Objectives 2-4 test the verbal articulation quality of familiar and less familiar words among participants. In so doing a picture emerges that demonstrates the impact of word complexity and pronunciation quality. Table 6 (below) shows the results of hypotheses tests for the objectives 2-4.

Type	Hypothesis 1		Hypothesis 2		Hypothesis 3	
	Word	Phoneme	Word	Phoneme	Word	Phoneme
Syllables	3	3	4	4	5	5
Observations	70.00	70.00	70.00	70.00	70.00	70.00
Mean	3.31	4.54	3.34	4.80	3.14	4.84
Variance	0.89	1.09	1.07	1.03	1.31	0.71
Pearson Correlation	0.63		0.51		0.35	
P(T<=t) two-tail	0.00		0.00		0.00	

Table 6 – Results of Hypotheses 1 – 3 exhibiting statistical output comparing *WORD* and *PHONEME* articulation quality

In all three cases the null hypotheses that there is no difference between word and phoneme verbal articulation quality is rejected as in all three hypotheses the significance is $p0.00 < 0.05$ at alpha 0.05 level. This suggests that phonetic nomenclature has an improvement effect on verbal articulation quality. Additionally, the results confirm that there subsists a positive correlation between the three sets of word/phoneme combinations i.e. 3; 4; and 5 syllable phonemes.

Additionally, it appears to be evidence that participants gained substantial efficiency in verbal articulation quality in relation to word complexity i.e. participants articulation improved as the number of syllables in the words increased. In this respect the Mean between the three sets of word/phoneme combinations has gradually increased while Pearson’s Correlation has declined. In the latter case evidence further suggests that the extent of verbal articulation, comparing the words to their corresponding phonemes, has improved significantly. This suggests that the use of phonemes, embedded within English medium education can improve pronunciation quality particularly within higher education.

Analysis of Variance test of Phonemes

Evidence from the data output suggests that participants verbal articulation quality improved and is statistically significant. Results also suggest that verbal articulation quality improved greater as compared with word complexity. Hypothesis 4 is tested employing ANOVA test to evaluate the significance in the difference between the 3; 4; and 5 syllable phonemes articulation quality. Table 7 (below) is a summary of the results output.

SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
4	69	314	4.55	1.10
4	69	332	4.81	1.04
4	69	335	4.86	0.71

ANOVA

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	3.74	2	1.87	1.96	0.14	3.04
Within Groups	194.17	204	0.95			
Total	197.91	206				

Table 7 – Results of ANOVA test comparing 3 – 5 syllable phonemes

Results in Table 7 indicate that $F_{1.96} < F_{crit} 3.04$, therefore, we accept the null hypothesis that respondents demonstrate no difference in verbal articulation across the syllable range of English words and their equivalent phonemes, since the F value of 1.96 is less than the F (Critical) value of 3.04. This suggests that while the mean across the syllable range has improved with word complexity, nevertheless, it is not substantial. Nevertheless, the improvement in verbal articulation has improved substantially across the syllable range.

Conclusion

The finding and results of this research present an interesting and justifiable reason to consider a more enhanced research in the same line of enquiry. The present research considered English language efficiency in participants whose permanent vocabulary is Arabic and are in the process of acquiring higher levels of English language skills. In this research, the theory of Phonology explains the impact of the permanent vocabulary on acquiring a new language and how lingual fundamentals affect language acquisition efficiency. Thus in this research the theory of Phonology is considered appropriate in explaining the barriers to acquiring new language skills

Policy Contribution

The present research covered two important research themes, namely, aspirated words and phonetic expressiveness. The research suggests that the observed phenomenon in this research is worth pursuing further. As such the following recommendations are drawn from this enquiry:

1. Vocabulary improvement techniques have an immediate and possible permanent impact on speech articulation and that awareness techniques of unaspirated and aspirated words help acquires of English to improve their pronunciation quality.
2. Decomposition of words in to their equivalent and corresponding phonemes (syllables) aid English language learners of becoming aware/familiar with phonetic articulation, thus enabling improved efficiency in learning English.
3. Research on phonology suggests that instructions in the use of phonetics should include explicit instruction in sounding out letters and blending letters to form words. Additionally, ongoing instruction in letter-sound correspondences for simple as well as more complex phonics patterns could vastly assist language skills to enable an increase in knowledge of word familiarity, thus further enable articulation improvements.
4. Furthermore, explicit instructions in English mentoring and regular practice in these areas should be encouraged. Students need frequent practice applying vocabulary skills that enables improved efficiency in English. Teaching activities that reinforce instruction in these areas play a key role in promoting students' ability to recognize words automatically.
5. Possible tools that can be used in teaching English language skills could include a range of techniques that encourage learning outcomes (Halliday, 1963; Jassem, 1994, 2012; Gimson, 2008). These could include the following techniques:
 - Clarifying the purpose and goal of instruction at the onset of the lesson
 - Using visual or concrete materials that will make learning the new phonics skill(s) more memorable i.e. Providing direct instruction of letter sounds.
 - Providing direct instruction in decoding of letter sounds in words
 - Planning for guided and independent practice.
 - Planning for student application of new phonetic skills in other contexts.

Additionally, research suggests that educators can use three important key indicators of fluency to assess students' fluency and articulation improvement (Catford, 1965; Clark, Yallop and Fletcher, 1995; Pallier, 1997; Bao, 1999; Cruttenden and Gimson, 2008):

- **Accuracy:** The student's ability to identify words in a text correctly.
- **Rate:** The student's ability to read at a rate appropriate for comprehension.
- **Prosody:** The student's ability to read phrases and with expression that both supports and reflects comprehension of the text.

Limitations of this Research

The limitations of this research principally extend to sample size of the data. However, restriction due to time pressures was also important in limiting the size of this research. Additionally, it would have been preferable to conduct research that included gender difference however this was not possible.

Recommendations for further research

This research has proved to be beneficial in terms of its policy contribution. Later researchers should consider enhancing this research by taking larger sample size that includes gender variable. Moreover, added utility would be gained through acquiring data from a range of educational establishments in the UAE that use English as a medium of teaching.

Additionally, this research could be enhanced by later researchers investigating other, but related areas, issues and themes in acquiring language skills and the process of learning a new language. For instance, later researchers could investigate the role of Tonality and Tonicity and its association with Arabic speaking students acquiring English speaking efficiency.

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