21st Century Academic Forum Conference Proceeding
2015 Conference at Harvard

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.

References

Aboderin, O., Fadare, O. & Kumuyi, G. (2012). A pedagogical appraisal of Internet and computer usage among secondary school teachers and students in the Southwest Nigeria. *World Journal on Educational Technology, 4(1), 56-65.*

Adejuyigbe, O. & Majasan, J. A. (1970). Curriculum innovation in Nigerian high school geography. university of Ibadan, Paper presented at the High School Geography Conference at University of Ibadan.

Ajaps, S. O., Ibezim, C. C. & Udoye, A. (2010). Implementation problems of the infusion of environmental education concepts in the senior secondary school geography curriculum in Nsukka Urban Area. Unpublished undergraduate dissertation, Department of Social Science (Geography) Education, University of Nigeria, Nsukka.

Alaba, J. O. (1988). *Problems of implementing the new (1985) geography curriculum with special reference to Awka Educational Zone.* University of Nigeria, Nsukka.

Benson, A. & Wright, E. (1999). "Pedagogy and policy in the age of the wired professor," *T.H.E. (Technological Horizons in Education) Journal*, 27(4). http://www.thejournal.com/magazine/vault/A2372.cfm.

Brabazon, T. (2007). *The University of Google: Education in the (post) information age.* Aldershot: Ashgate.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use and user acceptance of information technology. *MIS Quarterly, 13(3), 319-340.*

Fan, F. A., Monday, V. I. & Tandu, M. A. (2014). Generating socio-economic values and skills in learners through geography, civic and environmental education. *Global Advanced Research Journal of Educational Research and Reviews, 3(5), 102-109.*

Gersmehl, P. (2014). *Teaching geography*. Guilford Publications.

Gregory K.J (2000). The Changing nature of physical geography. London: Arnold.

Kubiatko, M., Mrazkova, K. & Janko, T. (2012). Gender and grade level as factors influencing perception of geography. *Review of International Geographical Education Online, 2(3), 288-302.*

Lenhart, A., Madden, M. & Rainie, L. (2006). The Internet and education: Findings of the Pew Internet and American Life Project, September 2001. Accessed on 9 September 2006 from http://www.pewtrusts.com/pubs

Loertscher, D. (2003). The digital school library. *Teacher Librarian*, 30(5), 14.

Mabogunje, A. (1970). Systems approach to a theory of rural-urban migration. *Geographical analysis, 2(1), 1-18.*

Mohammed, N. (2014). Some issues on gender and the teaching of geography in secondary schools in Kano state, Nigeria. *American Journal of Humanities and Social Sciences*, *2*(2), 105-110.

Nganji, J. T., Kwemain, R. & Taku, C. (2010). Closing the digital gap in Cameroonian secondary schools with the CIAC project. *International Journal of Education and Development Using ICT (IJEDICT), 6(2), 106-114.*

Obama, B. H. (2012). Excerpt from President Obama's speech at the 2012 National Geographic bee: http://geographyeducation.org/2012/09/06/president-obama-on-geography-education/

Ofomata, G. E. K. (1971). *Jobs for geographers.* Department of Geography, University of Nigeria, Nsukka.

Okpala, J. (1988). Research in geographical education in Nigeria from 1981 to 1986, in Gerber, R. and Lidstone, J. (eds) *Developing skills in geographical education*, Brisbane: International Geographical Union Commission on Geographical Education, Jacaranda Press.

Okpala, J. (1990). Geography in general education in Nigeria. *GeoJournal*, 20(1), 37-43.

Okunrotifa, P. O. (1970). Programmed learning in the teaching of geography. *West African Journal of Education, 14(30), 283-293.*

Ologe, K. O. (1984). Jobs for geographers. Career outlets for geography graduates in Nigeria. *The Nigerian Geographical Journal, 27(1), 3-11.*

Olojo, O. J., Adewumi, M. G. & Ajisola, K. T. (2012). E-learning and its effects on teaching and learning in a global age. *International Journal of Academic Research in Business and Social Sciences, 2(1), 203-210.*

Shittu, A. J., Gambari, A. I., & Sule, A. O. (2013). Students' attitude and behavioural intention on adoption of Internet for learning among Al-Hikmah University Students in Nigeria: A test of technology acceptance model. *Malaysian Journal of Distance Education, 15(2), 89-107.*

Smiths, P. (1997). A review of geography in secondary schools in England. *Teaching Geography, 22(3), 123-124.*

Sofowora, O. A. & Egbedokun, A. (2010). An empirical survey of technology application in teaching geography in Nigerian secondary schools. *Ethiopian Journal of Environmental Studies and Management, 3(1), 46-54.*

Stafford, B. (1999). Information for people or profits? In S. Hawthorne & R. Klein (eds),Cyberfeminism: Connectivity, Critique and Creativity. North Melbourne: Spirofex.