

THE USE OF CLOUD COMPUTING TOOLS AND TEACHERS EFFECTIVENESS IN THE TEACHING OF ENGLISH LANGUAGE IN CROSS RIVER TERTIARY INSTITUTIONS

¹Dr. Paulinus J. Etim, ²Upula, Beatrice Erema and ³Ekpo, Uwakmfon Samuel
^{1,2}Faculty of Education, Department of Educational Technology, University of Uyo,
³Department of Curriculum Studies, Education Management and Planning,
University of Uyo, Nigeria.

Corresponding email: beatriceupula@yahoo.com

Abstract

The study examined the use of cloud computing tools and teacher's effectiveness in the teaching of English Language in tertiary institutions in Cross River State-Nigeria. The study adopted a descriptive survey design and used all the 45 English Language teachers in the three Tertiary Institutions in Cross River State. Three research questions were set to guide the study. A questionnaire instrument tagged Use of Cloud Computing tools and teaching effectiveness of English Teachers Questionnaire (UCCTTEETQ) was used for data collection. The questionnaire had three sections to ascertain the extent of use of cloud computing tools. The items were developed on a four point rating scale responses used to examine knowledge of use, frequency of use and extent of use of cloud computing tool. The instruments were validated by experts in Information Communication Technology and Measurement and Evaluation and also had reliability co-efficient of .70 using split half method and Chronbach Alpha statistics. Their responses were analysed using frequency counts, percentages and graphical representation. The results shows that many lecturers lack knowledge of use of computing tools while others seldom used the tools. However use of the tools enhanced teaching effectiveness of English teachers.

Keywords: cloud computing; cloud tools; teachers effectiveness

Citation: Etim,P. J., Upula, B. E., and Ekpo, U. S. (2016). The use of Cloud Computing Tools and Teachers Effectiveness in the Teaching of English Language in Cross River Tertiary Institutions. *Equatorial Journal of Education and Curriculum Studies*: 1(2): 30-40

Introduction

The importance of English Language cannot be underscored enough in any educational system. It is an essential instrument in communication, science, technology, medicine, tourism as well as a medium of instruction in schools (Altbach, 2010; Udosen and Ekpo, 2016; Udoh and Udensi, 2016). The teaching of English Language in our tertiary institutions is increasingly a necessity which enables learners to communicate fluently, independently and accurately in everyday life (Nigeria Educational Research and Development Council NERDC, 2004). The use of English as a course refers to the conventional English Language programme taught to new entrants in tertiary institutions. The approach is general and not geared to any specific group of student despite the diversity in their academic pursuit and language needs, hence requires various strategies such as cognitive, linguistic, logical and critical which must be mastered by the learners for effective communication (Rao, 2007).

As a language of globalization, Integration of technologies into the teaching and learning of English Language has become an urgent need in this information and communication technology age, thus must be enhanced through the use of technological resources (Otagburuagu and Eze, 2007). These resources enable effective understanding of the contents and the contexts of its study and have been found as a veritable tool for effective teaching and learning of English Language. One of such

technological resources is cloud computing.

According to Diaz (2011), cloud based or web 2.0 technologies refer to the vast array of socially oriented, free or nearly free web- based tools. It is a collaborative environment in which users have the opportunity to contribute to a growing knowledge base, assist in the development of web base tools and participate in online communities. The cloud service provides users with different levels of control, flexibility and management which include Infrastructure as a Service (IaaS), Platform as a Service (PaaS) and Software as a Service (SaaS). The cloud can be referred to as a metaphor for the internet. It is a computing paradigm in which tasks are assigned to a combination of connections, software and services accessed over a network.

There are several free cloud computing office application tools that allow for online document, spreadsheet and presentation creation. They include: Drop Box, Sugarsync, Amazon Cloud Drive, Windows Live Mesh, Box Net, Spider Oak, Icloud, Google Docs, Google Drive amongst others. Also, cloud computing as collaborative tools include: webmail, instant messaging, wiki, blog, virtual meetings, instagram, adobe creative, flicker, skype, shared documents, Microsoft office web applications, social networks, phone systems and calendar management. These tools provide asynchronous and synchronous collaboration which offers online peer feedback and discussion features. They have the potential to afford collaboration as well as promote

the development of a discourse community within the classroom.

Although university teachers benefit from the instant access to the internet, digital libraries are available and online authentic teaching materials are enormously present, still the existing literature explains a number of challenges hampering the effective use of cloud computing tools in the teaching of English Language. Studies have revealed that a lot of English language teachers lack the prerequisite knowledge of cloud computing tools and how it works. Teachers' knowledge is an essential element in imparting knowledge to learners. Knowledge in online tools is a must among teachers. The central question is, do teachers have the required knowledge of cloud computing?

According to Diaz (2011) teachers knowledge in the use of cloud computing tool is very low. The findings revealed that a lot of language teachers lack the required knowledge on how to manipulate cloud application software and that the most widely used applications among teachers is social networks, emails and Microsoft word processing thus little attention is given to other cloud software. Also, Lyman-Hager and Davis (1996) asserted that knowledge of multimedia applications creates efficient readers, gives knowledge about background text as well as effective reading strategies. The authors opined that these applications serve as an effective tool in the teaching of reading comprehension for both students and teachers.

The frequency of use of cloud computing tools has a significant effect on the teacher who becomes more familiar with the application, thereby making them more competent and skillful in using the tools. A study was carried out by Mowaffaq, Abdduleleah and Hassan (2015) on 'The Frequency of English Language Teachers use of internet applications in teaching comprehension skills'. The Responses of participants to the first construct were analyzed. The study revealed that 68.7% of teachers repeatedly (always) use the internet in teaching reading comprehension. Only 31.3% were found not using the internet always. The authors therefore concluded that teachers should be encouraged to explore a variety of internet applications as well as use them frequently in order to improve their teaching instructions.

A study by Robbin (1998), on The Effect of Usage of cloud computing tools reveals that Google Drive documents is effective for teachers for different forms of creative, persuasive and expository writing as well as inquiring project research. Also Google presentations incorporating images and videos were commonly employed to demonstrate and communicate project learning. Warschauer, (2011) argued that the use of cloud computing tools such as Google Drive has been found constructively collaborative, fun and engaging among users. Using Google application makes the lesson motivating, innovative and challenging in a positive way. These applications when used in the language class, teaches the students a new cooperative

and innovative way of learning which leads to swapping and negotiating of ideas associated to their work. Gilakjani (2013), argued that the use of cloud computing tool creates a platform where teachers are able to communicate and collaborate with their students through emailing services, file sharing and working on documents which has enabled them develop their digital and social abilities. Also, Kenning (2007) posits that Blogs are a potentially valuable tool for teaching writing in a second language class. Their capacity for allowing users to publish and share their writings quickly and easily opens a number of possibilities for the learning of second language writing skills.

Several studies have been carried out to ascertain the use of cloud computing tools in the teaching of English Language. In a study carried out by Diaz (2011), the author opined that Google Drive which is regarded as a premier cloud-based productivity application tool helps Language teachers to collaborate among each other using discussion, editing, peer review, collaborative writing, projects, reflections, journals and other learning activities.

Cloud computing has also been used in higher education to enhance the teaching of English Language. Fox (2009), in a pilot study reported that Wc Berkely used Amazon Web Services (AWS) to teach a software project course. In the class, students focused on developing the software as a service and it was found that it is easier to assign real-life projects such as large data base server development through

cloud computing platform. This helps in exchange information, ideas, resources and materials with each other. Thorne, Black and Skyes (2009), argued that majority of second language classroom teachers are often committed by new technologies. Informal use of social-networking sites have been built and maintained overtime and distance in the teaching of English Language. The authors added that social-networking sites such as facebook, livemocha, whyville and others promote interactions and collaboration in the classroom thereby helping novice teachers develop discrete linguistic competence as well as sensitivity to patterns of interaction; the tool allow users to develop online communities of shared interest (Stevenson and Liu, 2010).

A study by Bosch (2009) investigated the use of facebook application on teaching and learning at a South African University. The researcher explored virtual ethnography and qualitative content analysis. The sample of the study involved facebook application profiles of 200 students as well as semi-structured interviews with a sample of 50 undergraduates students and 5 lecturers in the university. The findings of the study revealed that facebook application is widely used and has a positive effect on teaching and learning among participants in practicing social connectivity. This study explained the importance of teachers using modern internet applications with the students in the teaching and learning process. Another study by Cao, Ajjan, and Hong's (2013) study focused on the

educational outcomes in enhancing social media use and examined a research model of the outcome of social media use. It analyzed the 268 quantitative responses of 168 faculty members using social media in their teaching. The result of the study revealed that the use of social media had a positive effect on students learning achievement and student satisfaction. The study was chosen as evidence to raise the learning outcomes via the use of technology and the exploitation of internet applications as an effective tool in raising student achievement.

Studies on the application of cloud computing have also been studied by researchers in some areas. In their research, Berenfield and Yazijian (2010) reported that a cloud-based global lab was used to carry out a web-based tele-collaborative science project to engage middle-school students in learning environmental science. The cloud platform allowed students to meet, interact and conduct online scientific investigation using shared resources and protocols. Also, a study was carried out by Stein (2013) in university of North Carolina where "Spanish 101" instruction was taught online using skype. It was revealed that a number of enrolments were 46% higher over the comparable terms using a text book. In terms of retention, it was claimed that learning from cloud classroom was interesting, active as well as participatory.

A study carried out by Baim (2004), argued that "Blogging" which is one of the innovative cloud computing tool is an effective strategy

teachers can employ to manage writing skills. It is an effective way to manage the lodgment, marking and return of student assessment with no fuss. Blogging using google blogger.com, live journal.com and wordpress.com. The platform is free and easy to manage and update without additional support. Blogs make use of a "publish-subscribe" model in which the subscribers receive notifications when new content is posted in the writing classroom.

Also, Google Docs which is a feature provided by Google enable teachers work on one document simultaneously, a lot of teachers have explored this application to check their language students essay or writing as it provides them the opportunity to see the revision history of the document revealing all the changes made to the document. This means the teacher can monitor the writing progress of the student and their various contributions as well track related information by viewing the revision history of the document. Also studies on the use of google docs have it that language teachers can create quizzes and lessons including multimedia elements by using google forms. They can also use document section of google drive for collaborative projects. In this study, cloud based resources are provided which are designed to assist teachers to engage learners in the learning process but how effective have teachers been able to utilize these tools in the teaching of English Language? Many institutions have trained their teachers to use cloud computing tools in several subject areas but little or no

study is done in English Language thus their teaching effectiveness in doubt. Based on the above three research questions has been formulated to guide the study.

1. What is the teachers level of knowledge in the use of cloud computing tools in teaching English Language
2. What is the frequency of use of cloud computing by English Language teachers in tertiary institutions
3. How does cloud computing enhance teaching effectiveness of English Language teachers in tertiary institutions

Materials and Methods.

The study employed a descriptive survey design. This type of design allows generalization to be made from large population when representatives sample are drawn. The targeted population of the study consisted of English Language teachers in University of Calabar, Federal College of Education Obudu and College of Education Akamkpa, all in Cross River State. All the 45 English Language teachers in the three tertiary institutions were used for the study. A questionnaire instrument tagged use of cloud computing tools and teaching effectiveness of English teachers was used for data collection. The instrument was divided into three sections. Section A measures knowledge level, B measures frequency of use and C measures effect of usage. The instrument was used after being

validated by experts and split half reliability was employed to test its reliability. The scores were subjected to Chronbach Alpha Co-efficient analysis and yielded a reliability co-efficient of .70 which showed that the instrument was reliable for use in the study. Data was analyzed using frequency counts and percentages to answer the research questions.

Discussion

Table 1: Lecturer's Level of Knowledge of Cloud Computing Tools (N = 45)

The level of teacher's knowledge about cloud computing tools was determined through careful computation and analysis as shown in Table 1. Results show that awareness of cloud computing tools was high in two out of the nine key areas measured. These include: Email (8.8%) and social networks (4.4). while in the other hand teachers awareness of cloud computing tool was low in seven areas. Google Sites (6.6%), blogs (6.6%), skype (4.4%) Google Docs (8.8%) Amazon Cloud Drive (11.8%), Drop Box (8.9%), and i Cloud (8.9%), generally, the result indicates low level of knowledge in cloud computing tools. The result of this finding simply confirmed the proposition of Diaz, (2011) who reported that the most widely used cloud applications by teachers is the use of social networks, emails and Microsoft word processing, and that little attention is given to other cloud softwares.

Table 1. Lecturer's Level of Knowledge of Cloud Computing Tools (N=45)

Cloud Computing Application Tools	High Knowledge		Low Knowledge		Remark
	Frequency	Percent (%)	Frequency	Percent (%)	
Google Docs	1	2.2	4	8.8	Low Knowledge
Social Networks	2	4.4	1	2.2	High Knowledge
Google Sites	3	6.6	3	6.6	Neutral
Email	4	8.8	2	4.4	High Knowledge
Amazon Cloud Drive	1	2.2	5	11.8	Low Knowledge
Blog	2	4.4	3	6.6	Low Knowledge
Drop Box	1	2.2	4	8.9	Low Knowledge
i Cloud.	1	2.2	4	8.9	Low Knowledge
Skpe	2	4.4	2	4.4	Low Knowledge
Total	17	37.4%	28	62.6%	

Source: Field Survey, 2016

Table 2: Frequency of Usage of Cloud Computing Tools (N=45)

Table 2: Teacher's frequency of usage of cloud computing tools shows that the frequency of usage is high in only Email and social networks with a mean score of 4.4 and 4.13. While there was a low frequency usage in Google Sites, blogs, skpe, Google Docs, Amazon Cloud Drive, Drop Box and i Cloud with a mean score of (3.60, 3.11, 3.87, 3.75, 3.82, 3.75,

and 3.87). Generally, the result indicates low frequency usage in cloud computing tools. The result. of this finding simply confirmed the proposition of Diaz, (2011) who reported that the most widely used cloud applications by teachers is the use of social networks, emails and Microsoft word processing, and that little attention is given to other cloud softwares.

Table 2. Frequency of Usage of Cloud Computing Tools (N=45)

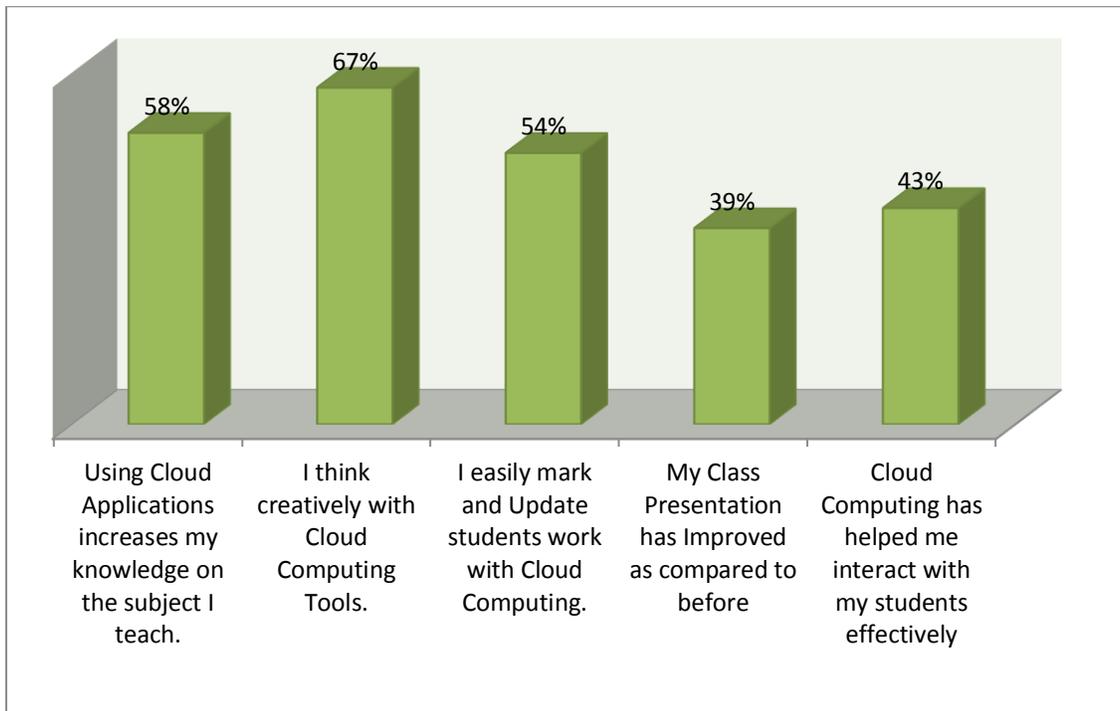
Cloud Computing Application Tools	Never Used	Once a month	Weekly	Mean
Google Docs	35(77.7)	7 (15.5)	3(6.6)	3.75
Social Networks	8(17.8)	15(33.3)	22(48.9)	4.4
Google Sites	22(48.8)	8(17.7)	15(33.5)	3.60
Email	10(22.5)	13(28.8)	22(48.8)	4.13
Amazon Cloud Drive	37(82.2)	3(6.6)	5(11.1)	3.82
Blog	18(40)	15(33.3)	12(26.6)	3.11
Drop Box	35(77.7)	7(15.5)	3(6.6)	3.75
i Cloud.	38(8.4)	3(15.5)	3(6.6)	3.75
Skpe	38(84.4)	5(11.1)	2 (4.4)	3.87

Source: Field Survey, 2016

Table 3: Extent of Usage of Cloud Computing Tools

Table 3 shows respondents' opinion on extent of Usage of Cloud Computing Tools. It is clear that extent of cloud computing usage is high in three of the measures- I think creatively with cloud computing tools (67%), Using cloud applications increases my knowledge on the subject I teach (58%), and I easily mark and update students work with cloud computing. (54%). Cloud computing has made me interact with my students

effectively was moderately high (43%), and my class presentation has improved as compared to before was relatively low in terms of its extent of usage. (39%). From the result, it implies that cloud computing tools has huge potential to teacher's wishing to adopt and embrace it. Thus, the use of platform where teachers are able to communicate and collaborate with their students through emailing services, file sharing and working with documents which have enabled them develop their digital and intellectual abilities. (Gilakjani 2013).

Table 3: Extent of Usage of Cloud Computing Tools

Conclusion

The focus of this research study was to find out how the use of cloud computing tools could enhance efficient teaching of English Language in Cross River Tertiary Institutions. Based on the study, it is concluded that the use of cloud computing tools has a huge importance to teachers and serve as a veritable tool in teaching and learning. In addition the study has shown teachers low level of knowledge in the use of cloud computing tool. Majority of the teachers lacked adequate knowledge of the tools or were not ready to adopt it in teaching, others feel the tool were not relevant to their teaching needs. Thus, it could be concluded that the teachers have not gained wider acceptability of using the

tools in teaching. On the other hand, teacher's frequency of usage of cloud computing tool is also relatively low. In terms of effect of usage in the use of cloud computing tools, results revealed that only three of the measures (I think creatively with cloud computing tools , Using cloud applications increases my knowledge on the subject I teach , and I easily mark and update students work with cloud computing) were highly significant in predicting the effect of usage. The researchers were of the view that the use of cloud computing tools by teachers has not been encouraging. Since the study concludes that cloud computing tool has a huge importance to the teachers, modalities should be put in place utilize cloud computing tool in language instruction.

Recommendations:

Based on this study, the following recommendations are suggested.

- Cloud Computing tool is an effective instructional tool than traditional classroom teaching. Therefore cloud computing should be used as a communication model to enhance the teaching of English Language.
- Workshops for practicing teachers should be organized by government through the Ministry of Education to create awareness on the importance of cloud computing tools in teaching as well as train and retrain teachers on how to use and integrate these tools into their own language teaching environments.
- ICT facilities should be provided to enable English teachers access and use cloud computing tools for effective teaching.

References

- Altbach, P. (2010). Notes on the future of SQU: Comparative Perspectives. In Towards a Long-term Strategic Plan for Sultan Qaboos University. *Proceedings of the International Workshop* (9-10th November 2010). Muscat: Sultan Qaboos University Press.
- Baim, S. (2004). Blogs help Create Learning Community. *Online Classroom*. 2(8): 5
- Bosch, T. E. (2008). Using Online Social Networking for Teaching and Learning Facebook use at the University Communication. 35(2): 185-200
- Berenfield, B. & Yazijian, H. (2010). Global Lab: Harnessing the cloud and Social Networking for K-12 Science Learning since 1991. In: D. Gibson & B. Dodge (Eds). *Proceedings of Society for Information Technology and Teacher Education International Conference 2010*. Pp. 3544-3547
- Cao, Y., Ajjan, H., and Hong, P (2013). Using Social Media Applications for Educational Outcomes in College Teaching. A Structural Equation Analysis. *British Journal of Educational Technology*. 44 (4): 581-593
- Fox, A. (2009). Cloud Computing in Education. Berkely iNews. Retrieved from <https://news.berkeley.edu/articles/spring2009/cloud-computing>
- Gilakjani, A. (2013). Teachers Use of Technology and Constructivism. *Modern Education and Computer Science*. 4(1): 49-63
- Kenning, M. (2007). ICT and Language Learning. From Print to Mobile Phone. New York: Palgrave Macmillan
- Lymar-Hager, M & Davis J. N. (1996). The Case for Computer- Mediated Reading: Une Vie de Boy; The French Review. 69(5): 775-790

- Mowaffaq. M.M., Abduleleh. A. F, and Hassan. M.Q (2015). The Frequency of English Language Teachers using some Internet Applications in Teaching Reading Comprehension Skills. *European Scientific Journal*. 11(13): 1857-7881
- Okon, S.S., Efremfon, A. J and Akaninyene, A. U. (2016). Determinants of Online Advertising Effectiveness in Nigeria: Implications for Consumer Buying Behaviour. *Equatorial Journal of Marketing and Insurance Policy*, 1(1): 146-157.
- Otagburuagu, E.J. & Eze V. O. (2007). English Language Teaching in Nigeria Universities and the ICT revolution. In: Eze D. N and Onyegebu, N. (ed) *Information and Communication Technology*
- Robbins, V. (1998). The Development of Information Technology Skills in Trainee Teachers for Further Education Sector. *Research in Post-Compulsory Education*. 3(2): 240-257
- Rao, R. A (2007). Training in Brainstorming and Developing Reading Skills. *ELT Journal*. 61(2): 100-106
- Stevenson, M. P., & Liu, M. (2010). Learning a Language with Web 2.0. Exploring the Use of Social Networking Features of Foreign Language Websites. *CALICO Journal*. 27(2): 233-259
- Thorne, S. L., Black, R.W., & Skyes, J. (2009). Second Language Use, Socialization and Learning in Internet Interest Communities and Online Games. *Modern Language Journal*. 93(6): 802-821
- Udoh and Udensi (2016). Mass Media and the Paradigmatic Shift in Nigerian Values and Morality. *Equatorial Journal of Communication Technology*. 1(1):109-124
- Udosen, A. E. and Ekpo, U. S. (2016). Instructional Games: Implications for Curriculum and Instruction. *Equatorial Journal of Education and Curriculum Studies*. 1(1):24-42
- Warschauer, M. (2011). *Learning in the Cloud: How (and why) to Transform Schools with Digital Media*. New York: Teachers College Press. P74
- Yazijian, H. (2010). Global Lab: Harnessing the Cloud & Social Networking for K-12 Learners. *Proceedings of Society for IT and Teachers Education International Conference*. Pp. 130-137