STUDENT'S ATTITUDE ON USE OF ICT IN TEACHING KISWAHILI PLAY IN SECONDARY SCHOOLS IN UASIN GISHU COUNTY, KENYA.

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ABSTRACT

This study aimed at to examine the student's attitude on use of ICT in teaching and learning Kiswahili play in secondary schools. The study used social learning theory by Bandura and the functionalism theory by John Dewey. Stratified sampling and simple random sampling was applied to select 275 students from a total of 918 from form three students in Eldoret West district representing 30% of the study population. The study revealed that student's attitude on the use of ICT in teaching and learning Kiswahili play was a positive however, students indicated that they rarely use ICT in learning Kiswahili plays and others have never used any form of ICT during their learning of Kiswahili plays. They also felt that the use of ICT is interesting during teaching and learning of Kiswahili plays. The students also agreed that by seeing they can remember more than just writing notes down, and ICT improves there thinking and creativity in them and also ease the learning as well as reducing boredom and sleep in class during Kiswahili play lessons. Therefore, there is need for Kiswahili play teachers to embrace and fully adopt use of ICT in their teaching and learning activities in secondary schools in order to enjoy the benefits of ICT in schools and to meet the national goals of education and vision 2030.

Key Words: ***Attitude, ICT, Kiswahili, Play, Students***

1.0 Introduction

There is an irreversible trend among countries in Asia and the Pacific to transform their teaching force and educational staff into technology literate and skilled workers. In almost all countries in the region, including emerging countries, teachers in primary, secondary and tertiary levels are being trained in the use of information and communication technologies (ICT) in education with varying degree and scope. (Coban, L. (2001).

While information and communication technology (ICT) is not a panacea for all educational problems, today's technologies are essential tools for t teaching and learning. To use these tools effectively and efficiently, teachers need visions of the technologies' potential, opportunities s to apply them, training and just-in-time support, and time to experiment. Only then can teachers be informed and confident in their use of new technologies (Bowes, 2003). Teaching is becoming one of the most challenging professions in our society where knowledge is expanding rapidly and much of it is available to students as well as teachers at the same time (Perraton, Robinson, & Creed, 2001). As new concepts of learning have evolved, teachers are expected to facilitate learning and make it meaningful to individual learners rather than just to provide knowledge and skills. Modern developments of innovative technologies have provided new possibilities to teaching professions, but at the same time have placed more demands on teachers to learn how to use these new technologies in their teaching (Robinson & Latchem, 2003)

In the recent years, there has been growing interest in the integration of information and communication technology (ICT) in the education systems of countries across the globe. Such interest has often been premised on the assumption that ICTs have a great potential for improving the quality of education. Moreover, education is presumed to cause socio-economic development. Indeed empirical studies confirm that education can make an important economic contribution (Kozman, 2005).

Successful integration of ICT in the teaching- learning process, among other things, is dependent on the preparation of teachers. In Tanzania, teachers are prepared at two major levels, the college and university levels. In the college level, graduates from ordinary level are trained as certificate teachers for pre - primary or primary schools while the advanced level leavers are trained as teachers for secondary schools. At the university level, depending on their Teachers' perceptions on ICT.

Kenya's Ministry of Education launched a national ICT Integration and Innovation Centre (NI3C) at the University Nairobi. The centre has been established as a development hub for effective use of ICT in education and training. In partnership with the Flemish Development Cooperation (VVOB), Smoothen and other education stakeholders, the centre was officially launched by former Minister for Education Prof Sam Ongeri.The education sector is key to the overall achievement of Kenya' s ICT Policy. In the formal education sector, the need for application integration is key above application development. For this particular purpose, the centre is expected to enable developers demonstrate the application of ICT technologies and new pedagogic aspects of ICT in teaching and learning. In addition, the centre is expected to provide guidance to education managers on ICT innovations and integration aspects

ICT have become common placed entity in all spheres of life. Over the past twenty years, the use of ICT has fundamentally changed the practice and procedures of nearly all forms of endeavourers (Misoi.j.2013). Education approaches in the 21st century requires the integration of ICT in the delivery and access to the content. Play is a social oriented activity and quality play has traditionally been associated with strong teachers having high degree of personal contact with learners. But with the world moving rapidly into digital the role of ICT in instructing plays is becoming more important which will continue to grow and develop in the 21st century. There is need to build the awareness of the benefits of internet technology to enhance the life chances of all, otherwise inequality in the use and application of digital technologies is potentially a significant new driver of social exclusion in the 21st century, which risks accelerating existing social divides and creating new ones-(Digital Britain 1,2009).

The Kenyan Ministry of Education and Culture (MoEC) unveiled its project for compulsory ICT training in secondary schools during a stakeholders workshop held in Nairobi in 2014 whose theme was " The future of ICT in Secondary Schools - Strategizing for Implementation" . The workshop gathered participants from a broad spectrum of ICT stakeholders in Tanzania, including eighteen students from five selected secondary schools in Dar es Salaam. The workshop which was conducted in a highly participatory approach provided a platform for stakeholders in the sector to present useful input towards a strategy for implementation.

1.1 Statement of the Problem

Research shows that the integration of ICT has not taken roots among the Kiswahili teachers compared to the science and computer related areas despite the government through the ministry of education trying to equip schools with computer facilities. The benefits of integrating ICT are many as indicated in other findings however the Kiswahili teachers have not fully realized the benefits and therefore the level is still low. Barak (2006) reveals that while teachers exploit ICT for their own learning, they are cautious about integrating advanced technologies in schools. The study also suggests that while teachers recognize the potential of technology in stimulating students' learning and making school studies relevant to real-life contexts, they do not think that ICT is preferable for class-based instruction for promoting cooperation and reflection in learning. Students of Kiswahili have not been performing well in Eldoret West Sub-county yet teachers are using other learning resources.

Use of ICT in teaching Kiswahili plays can improve the performance of Kiswahili in the district. The purpose of the present research was to investigate the extent to which secondary schools Kiswahili teachers' used ICT in teaching plays in the classroom level in Eldoret West sub county Uasin-Gishu County. The study sought to answer the following questions;

(i) What are the student's attitudes towards the use of ICT in teaching and learning plays?

2.0 Use of ICT in Teaching Kiswahili Play.

Kiswahili language in Kenya plays an important role as a national language and it contributes to the broad national goals of education in all aspects of life in Kenya. It is a compulsory subject in the national curricula of primary and secondary levels of education. Language is part and parcel of human life as it is the most effective means of human verbal communication. It is through language that people express their feelings, emotion, like and dislikes. Without language people would find it difficult to exchange ideas, share experiences and participate in cultural activities. While teaching Kiswahili play, the art of language is the key factor. The power of ICT in promoting teaching and learning in the developed countries has been recognized as the Chinese say:

" When I am told I forget, what I see I remember and what I do builds a castle in my head"

This is much the same with teaching Kiswahili plays, if students are merely told concepts verbally they may easily forget, if they are given an opportunity to see the relationship they will remember, but more importantly if they practice what they are told and shown, they internalized it. ICT bridges the gap between theory and practice.

In Kenya the Ominde commission (1964) placed emphasis on the use of instructional resources for teaching. The commission called upon the ministry of education to avail the relevant instructional resources which could be used for teaching. ICT is expected to play a critical role in enhancing teaching and learning; it forms a vital ingredient in instructional process and ultimately reflects on student' s performance. Since this is the age of digital the desire for quality is still on.

The digital technology has influence all aspects of human life, education is not an exceptional. Now the technology is in the process of change from digital to photon. Shortly photon technology will be available for the use of the society. At present majority of devices are based on digital technology.There is an irreversible trend among countries in Asia and the Pacific to transform their teaching force and educational staff into technology literate and

skilled workers. In almost all countries in the region, teachers in primary, secondary and tertiary levels are being trained in the use of information and communication technologies (ICT) in education with varying degree and scope. Collis, and Pawlowski. Fishbein, and Ajzen (1995).

Over the past two decades, Information Technology (IT) has broadened to become Information and Communication Technology (ICT), and has become better established within schools Albirini, A. (2004).). Many claims have been made about its potential contribution to pupils' learning (Pachler, 1999) and official rhetoric has presented it as set to transform education' (Blair, 1997). Much current policy and practice reflects a technocratic determinism in which technology is seen unproblematic ally as providing relatively immediate tools for teachers and students, and its use as calling primarily for development of technical skills. However, others see successful educational applications of the computer as involving a complex interplay of context, people, activities, machines and available software within specific settings. While quality and level of ICT resource continue to improve in many schools, provision of equipment alone is likely to be of limited value unless more is understood about the interactions and processes engendered by using technology in different settings, and how pedagogical strategies to enhance students' learning might be developed effectively through them.

Students constitute a significant group within this social system, and their perspectives play an important part in framing the activity that takes place in school settings. Indeed, it has been argued that young people should be seen as active participants in shaping social and educational processes rather than viewed as passive recipients of them (Pollard & Tann, 1993). Research has demonstrated that, from an early age, young people are capable of insightful and constructive analysis of their experience of learning in school and are able to comment on teaching approaches and contexts that are helpful in their learning (Brown & McIntyre, 1993; Harris et al., 1995; McCallum et al., 2000; Rudduck & Flutter, 2000). A key component in acquiring such understanding may be attention to the ' pupil voice' (Keys & Fernandes, 1993; Blatchford, 1996; Rudduck et al., 1996). Rudduck and Flutter (*op cit*) maintain that ' we need to tune in to what pupils can tell us about their experiences and what they think will make a difference to their commitment to learning and, in turn, to their progress' (p. 75).

Recent research on pupils' perspectives in the UK has been linked either to the development of school-based strategies based on consultation with pupils on effective classroom practice, or to aspects of curricular evaluation (see Lord and Harland (2000) for a review) but few studies have focused specifically on secondary pupils' views on their current classroom use of ICT in teaching and learning. Where students' perspectives have provided the focus for such inquiry in other educational settings (for example the Canadian technology-enhanced Secondary Science instruction (TESSI) project), pupils' enhanced participation in learning activities and their development of successful learning strategies were attributed to the combined influences of – and interactions between – the technologies employed and the pedagogical and social milieu of the classroom (Pedretti et al., 1998).

The popular image of young people – the ' screenagers' referred to by Rushkoff, (1997) – growing up in an increasingly technology-dependent society, connected by sophisticated telecommunication networks in a culture mediated by television and computer, is that of natural computer users from a ' digital generation' . Recent studies (Holloway & Valentine, 1999; Becta, 2001; Facer et al., 2001; Wellington, 2001) have begun to examine the nature and extent of young people' s use of ICT outside school and the influence that it may have

upon their learning with ICT in school. Whilst results indicate that some children (often those who use computers extensively at home) are capable of integrating their use of ICT in balanced and sophisticated ways (Furlong *et al.*, 2000), the indications are that this further accentuates inequities between such young people and their peers who lack similar access to these technologies.

Findings also show that whilst boundaries between home knowledge and school knowledge are being eroded, learners' experience of ICT takes on a different character depending upon the context of its use. Furlong et al (*op cit*) found that at home, young people tend to control their own time, how they use technology and the content of what they do. In school, however, the locus of control lies elsewhere; emphasis is on learning activities managed by the teacher, metered by timetable constraints, designed to meet curriculum criteria and attainment targets and incorporate the mandatory use of ICTs.

Today, a variety of ICT can facilitate not only delivery of instruction, but also learning process itself. Moreover, ICT can promote international collaboration and networking in education and professional development. There's a range of ICT options – from videoconferencing through multimedia delivery to web sites - which can be used to meet the challenges teachers face today. In fact, there has been increasing evidence that ICT may be able to provide more flexible and effective ways for lifelong professional development for today' s teachers. Because of rapid development in ICT, especially the Internet, traditional initial teacher training as well as in-service continued training institutions worldwide are undergoing a rapid change in the structure and content of their training and delivery methods of their courses. However, combining new technologies with effective pedagogy has become a daunting task for both initial t teacher training and in-service training institutions. (Kozman, 2005).

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The United Nations Educational, Scientific and Cultural organization [UNESCO] (2009) argues that ICT can help to enhance the quality of education with advanced teaching methods, improve learning outcomes and enable reform or better management of education systems (p.9). In addition, ICT support to education is perceived to be critical for reaching Education for All goals by boosting the current rate of progress in developing countries especially through accelerated distance teacher-training.

Tilya (2008) attests that the world has entered the knowledge and information society, driven by information and intellectual products as raw materials. In this context, he argues that the ability to transmit data over an information and communication infrastructure is a crucial resource for any nation to participate effectively in the global information society and to address development challenges (p.1146). UNESCO (2009, p.16) points out that although the

benefits of ICT use in education cannot be clearly measured, many countries continue to introduce it based on the assumption that citizens should be able to function adequately in a rapidly evolving information society.

According to Luvisia (2003), there SEFE SS XFGCare three factors that determine the quality of teaching and learning. These are physical facilities, competent teachers and adequacy of instructional resources. He argues that availability of adequate instructional resources, physical facilities and competent teachers are prerequisites to quality teaching and by extension learning unfortunately, the complex nature of literature calls for a wide range of instructional materials that are not accessible in most schools (Murphy, Staya and Boget, 2004).

One of the best ways to develop teachers' ICT skills and promote ICT-pedagogy integration in their teaching is the provision of ICT-based training environments where on-demand access to materials, peers, and networks of experts where expertise and advices can be obtained and active discussion can take place in relation to 99 technology or pedagogy. In this regard, the approach of using ICT to support teachers' on-going professional development and networking can be very effective as long as organized support is provided (Pacey, 1999).

Education approaches in the 21st century requires the integration of ICT in the delivery and access to the content. The use of computers in the teaching process has gave birth to the computer assisted instruction, computer managed instruction, computer based instruction (Heyes 1997).Prabhakar (1995)highlighted that use of ICT is more effective compared to the lecture method, but how will this be proved in regard to the use of ICT in teaching Kiswahili plays? It is this and related concerns that this research sought to answer.

2.1 Students Attitudes on Use of ICT in Classroom Level

Student's attitude is one of the main factor that determines their success in learning (Muthusamy and jusoff, 2009).Attitude towards the content may all play part in the explaining their success or failure (Candling and Mercer, 2001).Attitude has cognitive components; it involves beliefs, emotional reaction and behavioral tendencies related to the object of the attitudes (Mc Groaty,1996) Jamaluddin (2009) found that teachers used more student-centered approach in class compared to teacher-centered strategies that created a better learning atmosphere and improved students perception and motivation towards literature.

The potentials of information and communication technology (ICT) to facilitate students' learning, improve teaching and enhance institutional administration had been established in literature (Kazu & Yavulzalp, 2008; Kirschner & Woperies, 2003). The use of information and communication technology as a tool for enhancing students' learning, teachers' instruction, and as catalyst for improving access to quality education in formal and non-formal settings has become a necessity.

Recognizing the impact of new technologies on the workplace and everyday life, teacher education institutions try to restructure their education programmes and classroom facilities, in order to husband the potentials of ICT in improving the content of teacher education. Information and communication technology as tools within the school environment include use for school administration and management, teaching and learning of ICT related skills for enhancing the presentation of classroom work, teaching/learning repetitive tasks, teaching/learning intellectual, thinking and problem solving skills, stimulating creativity and imagination; for research by teachers and students, and as communication tool by teachers and students (Collis & Moonen, 2001; Derbyshire, 2003; Moursund & Bielefeldt, (1999).

3.0 Research Methodology and Methods

This study employed a descriptive research design. This design was considered appropriate for the study because it facilitate collection of a wide range of information or data from a large population with different characteristics and from different geographical background (Mc Burney 2007). Neuman 2007 echoed this view and suggested that it is a useful fact finding method, which determines and reports on things the way they are describes behavior, attitudes, opinions, perception and characteristics the way they are presented.

Similarly Cohen and Manion (2008) observe that a survey research reports the status of issues of a particular time and applies it to the existing condition. This was applicable in the case because this study aimed at establishing the level of ICT use in teaching and learning Kiswahili literature plays in secondary schools. This is further supported by the fact that according to Neuman (2007) the design is appropriate for studies of this nature where the data sought does not have to be captured over several data collection round.

4.0 Findings and Discussion

This study was guided by the following objective;

i. To examine the student's attitude on use of ICT in teaching and learning Kiswahili plays.

4.1 Availability of ICT Facilities for Teaching Kiswahili Play

The study shows that teachers can only use instructional resources they are made available to help the teacher achieve the instructional objectives. As such effective learning and teaching demands that resources are made available to the students. The study also revealed that many secondary schools are experiencing acute shortage of the necessary instructional resources, there is therefore need to improvise resource materials which are not available as shown in the following table.

Table 1 Availability of ICT facilities for teaching Kiswahili play

FORMS OF ICT AVAILABLE	COMMENTS
CDs	**37.5%**
DVDs	**37.5%**
Computers	**15%**
Projectors	**5%**
Smart boards and pens	**5%**
Total	**100%**

The results showed that CDs and DVDs are equally available in the schools, Computers were only 15%, Projectors and Smart boards and pens were 5% which implied that at least there are forms of ICT in schools which needs to be utilized during teaching and learning Kiswahili play in secondary schools.

4.2 Students attitude on the use of ICT in teaching and learning Kiswahili play

Student's Attitude on Integration of ICT

Statement	Agreed	Disagreed	Undecided
Plays creates stress free environment because we cheer up.	68.4%	31.6%	
Use of ICT in teaching play creates freedom of expression.	73.7%	21%	5.3%
Use of ICT in teaching play is interesting.	68.4%	31.6%	
ICT use reduces boredom and sleep in class.	79%	21%	
ICT make learning easy.	68.4%	31.6 %	
ICT improve my thinking.	68.4%	31.6%	

Students were asked to comment on the use of ICT in their respective schools in teaching and learning of Kiswahili play, 200,75% said that they rarely use ICT in teaching and learning Kiswahili play and 40,25% said that they have never used any form of ICT during teaching and learning of Kiswahili plays. They were also asked whether the use of ICT is interesting during teaching and learning of Kiswahili play, 15.6 60% of the students accepted that use of various forms of ICT during teaching and learning is interesting while 70.4 40% said that it is not and should not be used.100% of the students agreed that by seeing they can remember more than just writing notes down, 88, 50% of the students agreed that ICT improves their thinking and creativity in them and also ease the learning as well as reducing boredom and sleep in class. 17.6 20% of the students were undecided and 52.8 30% disagreed that ICT promotes creativity, improve thinking and ease the learning of Kiswahili plays in their respective schools.

5.0 Conclusion

There is need for Kiswahili play teachers to embrace and fully adopt use of ICT in their teaching and learning activities in secondary schools in order to enjoy the benefits of ICT in schools and to meet the national goals of education and vision 2030. Therefore Kiswahili play teachers should change their attitude and should be ready to be trained to ensure that they have the right skills to integrate ICT in their teaching and learning activities. This may increase focus on interaction between teachers and their students leading to improved quality of education.5.3 Recommendations

From the findings, it is clear that ICT integration in teaching and learning of Kiswahili play is important to teachers in secondary schools. Therefore there is need for it to be adopted and use in secondary schools at all levels of operations. In order to do this the following are recommended from the study;

a) Teacher education institutions and curriculum developers should be properly related and linked. This would ensure that the curriculum developers work as partners with teacher education institutions so that both parties initiate the use of ICT in the curriculum. This would lead to easier adjustments in the curricular.
b) In the process of the curriculum review, curriculum developers should address the issues of using ICT in teaching and learning of Kiswahili play in secondary schools.
c) There is need to review the curriculum to take into account the teachers' views about the use of ICT in teaching Kiswahili play. The reservations of the teachers raised should be taken into account in all the stages of curriculum development so that there is easier movement from the planning stage to the implementation stage of use of the curriculum in the schools.

d) Since the government has provided computers to the schools, it is recommended that ICT champions in specialized subjects especially Kiswahili plays be sent to every division to monitor and advice the teachers on ICT usage.

e) Computer technicians should also be contracted in secondary schools to aid in maintenance of ICT facilities and also build confidence in the teachers.

f) The K.C.S.E examinations used for the evaluation of students learning at the end of form four should be designed in such a way that they reflect student achievement in the use of ICT during teaching and learning.

g) Kiswahili play teachers should be in-serviced in all forms of ICT integration like power point presentation, You Tube, Animations, smart boards and pens, social media and internet should be made available to both teachers and students.

REFERENCES

Albirini, A.A (2004). *Teachers' Attitudes toward Information and Technology. The case of Syrian EFL Teachers. Journal of Computers and Education, 47,373-398.*

Fishbein, M. & Ajzen, I. (1995) *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice- Hall.

Barak (2006). *The intergration of ICT in teaching and learning*

Baylor, A.L. & Ritchie, D.(2002). *' What factors facilitate teacher skill, morale and perceived student learning in technology use in the classrooms?' Computers and Education.*

Blair, (1997). *A Review of the Research Literature on Barriers to the Uptake of ICT by Teachers. British Educational Communications and Technology Agency*.

Blatchford, (1996). *Educational research: An introduction (8th ed) omazon.com*

Bowes, (2003). *Instructional Design. Principals and Applications.* New York:Englewood Cliff.

Brown & McIntyre, (1993). *Key past and current initiatives supporting the use of ICT in schools in African Commonwealth countries.*

Collis & Jung, (2003). *Development of an instrument to measure preservice teachers' technology skills, technology beliefs, and technology barriers. Computers in the Schools*, vol. 25, pp.112 - 125.

Collis, B. & Pawlowski, J. (2001). *Flexible learning in a digital world*: *Experiences and expectations.* London: Kogan Page.

Coban, L. (2001). *Oversold and Underused: Computers in the Classroom. Cambridge. Harved University Press.*

Collis, B, & Pawlowski. Fishbein, M. & Ajzen, I. (1995). *Belief, Attitude, Intention and Behavior Reading, MA: Addison.* Wesley Publishing Company, Inc.

Dyck, J. L. & Smither, J. A. (1995). *Older adults' acquisition of word processing*. The contribution of cognitive abilities and computer anxiety. Computer in Human Behavior, 12 (1), 107-199.

Harris et al., (1995). *Producing Teaching materials: A handbook for Teachers and trainers.* London*:* Kogan

Harrison and Rainer (1992). *National policy for using ICT to support teaching and learning in primary and secondary schools in East Africa.*

Heyes (1997). *'Teacher pedagogical beliefs:* The final frontier in our quest for technology integration?', *Educational Technology Research and Development* vol. 53, no. 4, pp. 25- 39.
Kadel, R. (2005, February). *How teacher attitude affect technology*. Learning and Leading with Technology, 39 (5), 34-47.
Keys & Fernandes, (1993). *An analysis of the primary school teachers' usage of instructional software*. International Journal of Emerging Technologies, 3 (1), 45-53.
Khine, M. S. (2001). *Attitudes toward computers among teacher education students in Brunei*
Kozman, 2005). *Factors influencing the success of computer skills learning among in-service teachers*. British Journal of Educational Technology, 28, 139-141.
Kumar, P. & Kumar A. (2003). *Effect of a web-based project on preserves and in-service teachers' attitudes toward computers and technology skills*. Journal of Computing in Teacher Education, 19(3), 87-92.
Mc Burnei H.D and Theresa L.White (2007). *Research methods.*Delhi.Akash press.
McCallum et al., (2000). *Will new teachers be prepared to teach in a digital age?* Santa Monica. Milken Family Foundation.
Misoi.j. (2013). *Importance of ICT in education v0l.2*
Neuman,L.W.(2007). *Basics of social Research: Qualitative and quantitative approaches*. Boston: Allyn and Bacon.
Pacey, (1999). *School Radio programmes: A Case study of its use in selected institutions in Nyanza Provinced Kenya. Unpublished* MPHil Thesis*:* Wales*:* Great Britain
Pachler, (1999). *A survey of Resources available for Teaching Reading in English in Secondary schools in Kenya. Unpublished M.Ed Thesis:* Eldoret: Moi University
Palak, D. and Walls, R. T. 2009. *Teachers' beliefs and technology practices*: A mixed-methods approach, Journal of Research on Technology in Education, vol. 41, pp.157 - 181.
Perraton, Robinson, & Creed, (2001). *The development of information technology skills in trainee teachers for further education sector.* Research in Post-Compulsory Education, 3 (2), 240-251.
Sang et al. (2010). Fostering *girls' computer through laptop learning – Can mobile computers help to level out the gender difference?* Retrieved 17 July 2008 from
Teo, (2008*).* United Nations Educational, Scientific and Cultural Organization (2008a). *ICT competency standards for teachers: Policy framework. United Kingdom:* Author. Retrieved 23 January 2009 from *http://www.oei.es/tic/competencias_tic_docentes_marcos_politicas.pdf*
Watts- Taffe, S., Gwinn, C. B. and Horn, M. L., 2003. *Preparing preserves' teachers to integrate technology with the elementary literacy program.* The Reading Teacher, vol. 5.
Zammit, S. A. (1992). *Factors facilitating or hindering the use of computers in schools*. Educational Research, 34, 57-66. Correspondence: Mudasiro O. Yusuf, Associate Professor of Educational Technology, Department of Science Education, Faculty of Education, University of Ilorin, Kwara State, Nigeria.