

Perceptions and Professional Use of Electronic Communication Media in Education: A Study of Secondary School Teachers in Machakos County, Kenya

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Abstract

The proliferation of electronic communication media in the 21st century means that we can no longer ignore its impact on society, organizations, families and individuals. However, while evidence shows a dramatic increase in investment in electronic communication media in education, literature reveals that relatively few teachers use them regularly. This raises the question; why don't teachers make wider use of electronic communication media? This study investigated the perceptions, extent of use and factors influencing use of electronic communication media by teachers in Kenyan secondary schools. A mixed method research approach was used where both qualitative and quantitative data was concurrently collected and analysed. Machakos County was the study site with a sample of 59 schools and a questionnaire was administered to 227 teachers, an in- depth interview involved four purposively selected principals and an observation guide collected data on the availability and use of electronic communication media. Findings suggest that although secondary teachers perceived electronic communication media to be useful, they were skeptical on its ease of use, compatibility and teachers rarely used or never used it at all. The underutilization may have been attributed to factors such as availability of hardware and software, teacher training, time and technical support. This study recommends the development of a coherent policy, provision of accessible ICT Infrastructure and that for teachers to continuously use electronic communication media in their work, teacher training and continuous professional development oriented policies that support the integration of electronic communication media be put in place.

Keywords: *Teachers' perception, electronic communication media use, ICT, secondary school teachers, Kenya*

Introduction

This study investigated the perceptions and professional use of electronic communication media by teachers in secondary schools in Kenya. The study focused on three electronic communication media, that is, the radio, television and computer. The three types of electronic communication media were looked at in their various forms such as live broadcast for radio and television and generic software applications such as audio cassettes, CDs, tapes, videocassettes, DVDs, satellite, the Internet, and web-based content. Electronic devices such as the Radio, Television, computers, telephones, video tapes, audio tapes, projectors are classified as ICTs (Unesco, 2004; ITU, 2010 and Adomi, 2010).

In the education sector, ICT is regarded as an engine for growth and tool for empowerment with profound implications for education change and social-economic development. Its impact has been felt as one of the most immediate imperatives and as a major trend shaping education, overtaking agriculture as a key African industry (Gesci, 2013 a). ICTs have influenced education and every facet of the curriculum, instruction and student engagement (Kidd, 2007; UNCTAD, 2011). Instructional media such as interactive radio, television, e-learning and videoconferencing dramatically expand options for engaging in teaching and learning at all levels (Srivastava and Kumari, 2004). It is generally agreed that the use of technology in the instructional process could promote innovative approaches to teaching and learning by going beyond the classroom teacher (Gesci, 2013 b; Kidd, 2007; Tina, 2004). Therefore, the potential that ICTs offer to improve accessibility and delivery of education in developing economies is enormous (Gasco, 2006).

In the knowledge age developments in ICT do not only affect what needs to be learnt, but also how we will learn in the future and one aspect that characterizes it is lifelong learning (Redecker et al., 2011; Unesco, 2004). This means that with the ubiquity of technology, learning will be accessible

anywhere, anytime, and there will be a shift from having institutions of learning to 'classrooms without walls'. Johnson, Smith, Willis, Levine, and Haywood (2011) also predict massive technological transformations influencing education in the coming decade, where abundance of resources and relationships made easily accessible through the Internet will affect teachers' roles. It is also believed that the role of ICTs in education not only leads to the transformation of teachers' functions to that of an instructional managers but also changes the whole school environment by giving teachers new instruments for the analysis and continuous monitoring of the learning process (Gasco, 2006; Van, 2008; Adam et al., 2010).

However, although ICT is a critical tool in learning and teaching, and a facilitator for major education and development reforms, it is not a sufficient condition as it calls for focusing on the changing roles of the teachers. Several studies have pointed out that teachers are agents of change in the adoption and use of ICTs in education (Adomi, 2010; Gesci, 2013 a). Therefore, their perceptions determine whether or not they will integrate electronic media in teaching

The use of the radio in African schools began only in the 1960s after the countries gained independence, for example, radio broadcasts were introduced in Kenya in 1963 (Thompson and Mugiri, 1982) and Nigeria in 1960 (Jegeede, 2002). It is worth noting that the educational radio continues to be used more in the developing countries than in the developed world (Selwyn, 2011; Wanzala, 2013).

Television has been in use for education for over 40 years. In Kenya, video programmes for schools were introduced in 1976 (Thompson and Mugiri, 1982). Ethiopia has also introduced satellite television broadcast programs in Mathematics and Science subjects in High schools (Melesse, Teshome, Simachew and Eshete (2011). Currently in Kenya, TV Educational programmes are broadcast live through the EDU Channel from the Kenya Institute of Curriculum Development studios launched in 2010, a dedicated educational broadcast channel on the digital platform (Republic of Kenya, 2010 b). In addition, under the Kenya Education Sector Support Programme (KESSP), the Government's objective is to strengthen the existing educational broadcasting equipments, at Kenya Institute of Curriculum Development and establish an educational broadcasting channel that will enhance the delivery of the curriculum by supplementing teachers efforts (Republic of Kenya, 2012 a).

In Kenya, the use of computers and ICTs in education in general tops the Government's agenda. According to ICTs in Education options paper of 2005, integration of ICTs in education not only help learners acquire the 21st century skills of critical thinking, collaboration and problem solving, but also improve the quality of curriculum delivery (Republic of Kenya, 2005). While the initial plans to introduce ICTs especially computers were aimed primarily at developing ICT skills, the focus over time has shifted to leveraging ICTs to address issues of access aiming at improving teaching and learning (Republic of Kenya, 2006; 2007; 2012 b).

The integration of information and communication technologies in all sectors of the economy has been emphasized in Kenya under the country's Vision 2030 blueprint (Republic of Kenya, 2007). This commitment is re-emphasized in the education sector as stipulated in the National ICT Strategy for Education and

Training, Sessional Paper No.14 of 2012, and the task force report on the re-alignment of the education sector to the 2010 Constitution (Republic of Kenya, 2006; 2012 a; 2012 b; 2010 a).

Consequently, a great deal of time and money is spent on the quest to provide appropriate ICT tools to teachers and students. This leads to an expectation that teachers will use these electronic communication media effectively in teaching and learning. Thus, teachers are required to integrate electronic communication media into instruction at all levels of education (Republic of Kenya, 2012 a). However, only a few of them fully exploit the opportunities offered by use of technology for learning and teaching, or as an alternative method for the delivery of the curriculum (Becta, 2007; Gesci, 2009 b; Zhao and Cziko, 2001). The question therefore is; why are teachers not integrating electronic communication media in learning and teaching?

A lot of communication research done in developed countries and some parts of Asia indicate that teachers' perceptions and other factors affect the extent to which electronic communication media may be used (Kortrijk and Redmann, 2005; Li and Ni, 2011; Uys, 2003; Kumari, 2004; Dron, 2007; Rogers, 2003; Jones, 2012). Currently in Kenya, there are no studies (that I know of) concerning teachers' perceptions and the use of the three electronic communication media that is; Radio, TV and computers in secondary schools.

Objectives of the Study

The research had the following objectives:

1. To investigate teachers' perceptions on the use of electronic communication media.
2. To find out the extent to which secondary school teachers use electronic communication media.
3. To establish the factors that influence the use of electronic communication media by secondary school teachers.

Literature Review

Perceptions on Use of Electronic Communication Media

Perception is a process by which individuals organize and interpret their sensory impressions in order to give meaning to their environment, and it is influenced by perceiver's attitude (which may be positive or negative) interest, experience or situation (Kondalkar, 2007).

Teachers play an important role in the implementation of electronic communication media in schools. As a result, their attitudes are major predictors of the utilization of technologies in instructional settings (Almusalam, 2001; Al-Zaidiyeen, Mei & Fook 2010). Positive attitudes often encourage less technologically capable teachers to learn the skills necessary for the implementation of technology based activities in the classroom.

As far as the television is concerned, many teachers do not see TV as a serious instructional technology, and in some cases they are openly hostile to it (Bates, 2005). Bates contends that although the TV has been in use for over 40 years, decision makers underestimate the costs of producing quality educational TV programmes (Bates, 2005). Therefore Educational TV is not seen as exciting. This perception is reinforced by the belief that it is an expensive medium. A review of literature by Chu and Schramm (2004) on learning from television concluded that teachers have both favorable and unfavorable perceptions towards the use of the television in the classroom. In some instances, the teachers may resist the use of the television, depending on whether their roles or position are affected by the television, or if prominence is given to the medium (Chu and Schramm 2004).

Other studies carried out among teachers on use of computer technology indicate that teachers who viewed it positively had high levels of use while those who viewed it negatively did not integrate it into their classroom teaching (Kumar, Rose and Silva, 2008; Hsu and Hwang, 2007).

Teachers' perception of technology use is also affected by their belief about the way the subject content should be taught and whether they are willing to change their teaching styles (Anderson, 2005). Therefore, if teachers want to successfully use technology in their classes, they need to possess a positive attitude towards the use of technology. Such an attitude is developed when

teachers are sufficiently comfortable with technology, and are knowledgeable on its use. However, if teachers lack the technological proficiency needed to use

new technologies in the classroom, their perception will be affected. Mundy et al. (2012) and Albirini (2006) confirm this argument and assert that lack of technological proficiency and competency leads to underutilization in the classroom.

In America, new forms of technology like the computer have been in use in the educational system since the 1980s. However, as Cuban puts it in his book *"Oversold and underused: computers in the classroom"*, teachers have been infrequent and limited users of this technology in the classroom (Cuban, 2001). Sinclair (2009) seems to concur with Cuba's assertion, there is increased funding and provision of computers to schools to satisfy the needs of teachers and students and no meaningful strategies to institutionalize their use.

The role of the teachers is therefore important. This is supported by another study by Cuban, Kirkpatrick and Peck (2001) who found that a teacher's belief structure about teaching and learning is one of the most important factors that inhibit his or her adoption of the technology integration pedagogy. This coincides with research from Zhu (2010), Becker (2001), Windschitl and Sahl (2002) and Hernandez-Ramos (2005). However, Cuban et al. (2001) did not find teacher resistance or technophobia, reasons often cited in studies on teachers' use of computers. This view is also supported by the study on Spanish teachers' beliefs and practices on computer use in the classroom (Cummings, 2008). Cummings showed that teachers no longer have technophobia as they believe in computers and do not fear them.

On the other hand (Rogers, 2003) argues that the diffusion of an innovation is a social process and that "an important factor regarding the adoption rate of an innovation is its compatibility with the values, beliefs and past experiences of individuals in the social system". Rogers (2003) explains that acceptance of a new technology in a society depends on how well the proposed innovation fits the existing culture. Consequently, there must be a match between organizational culture and new technology in an organization.

Tearle (2003) concurs with Rogers' argument that within the school set up, the institutional culture is an important consideration as regards ICT integration. According to Tearle, the school culture consists of: norms and values, traditions and cultural artifacts that are shared by members of the school community. These meanings and perceptions indirectly affect attitudes and behaviour in the organization of schools (Devos, Bouckenoghe, Engels, Hotton & Aelterman, 2007). Hence, if a technology is not received well by teachers in a school, there must be a mismatch of values between the culture of the school and

the technology. With this understanding of the rate of adoption technology, integration will most likely take longer than expected because most teachers will have to change their belief structure.

Other studies indicate that although teachers hold positive attitudes towards technology, there are other constraining factors such as the use of teacher instead of student-centered pedagogical practices, and lack of professional development for teachers that focuses on instructional design and technology integration (Li & Ni, 2011). Elsewhere, Ajelabi and Agbatogun (2010) strongly argue that e-learning for instruction in secondary schools improves instruction, and that there is no significant gender difference in teachers' perceptions.

Another factor that determines a teacher's perception on the use of electronic communication media is the social system within the society he or she lives in. According to Rogers (2003), there are change agents within the social systems.

Change agents must, if possible, communicate to opinion leaders a convincing argument in favour of the innovation which must be compatible with the society's belief systems and norms. Cuba, Kirkpatrick and Peck (2001) found out that teachers' belief structure about teaching and learning inhibited their adoption of technology integration pedagogy. The opinion leaders will then be able to use this argument, which will hopefully resonate with the masses, to support their own adoption decision. Is it therefore important to find out the change agents in schools and see how they can assist in teacher's adoption of technology. Charalambos and Glass (2005) explain that schools have support systems and their interrelationship with the society as a whole form a complex environment. This interrelationship contributes to difficulties and complications when teachers are adopting innovations such as technology. It is this complexity that raises concern on the successful use of instructional technologies in schools.

Methodology

The study used mixed methods research approach where a survey was conducted to collect both quantitative and qualitative data. The study was carried out in Machakos County. Machakos County is an administrative County in the Eastern region of Kenya, located 61 kilometers from Nairobi ,the capital city of Kenya. In total 59 schools were sampled which was about 20% of the study population. This is in line with Gay et al.(2009) recommendation of 10-20% sample size for survey research.

The instrument used in the survey was a self-administered questionnaire to 227 teachers consisting of four sections. Teachers' perception was measured using a five-point likert scale with 21 item statements.

The case study involved an in depth interview conducted among four Principals while an observation guide was used to collect both qualitative and qualitative data from the 59 sampled schools.

Quantitative data mainly from the survey and other quantifiable qualitative data was analyzed using Statistical Package for the Social Sciences (SPSS) Version 18. For the qualitative data, thematic analysis was used.

Results

The results presented in this paper only covered the first objective of the study, which was investigating teachers' perception on the use of electronic communication media. The results on teachers' perceptions are presented with three main themes which are; teachers' perception on the usefulness ,ease of use, compatibility and visibility of electronic communication media use.

Perception on the usefulness of electronic communication media

Perceived usefulness is a major determinant on whether a user will use or reject a system (Davis, 1985). On the perception on usefulness the responds were asked on a five likert scale.

The results of the perceived usefulness of electronic media indicated that majority of the respondents strongly agreed that it; enhanced students' learning(64.4%), offered advantages over traditional methods of instruction(60.8%), made the subject matter interesting(62.1%), contained appropriate content to help teaching and learning in the various subjects(88.6%), was helpful in assisting them to carry out their teaching and learning tasks(76.5%). In addition(86.3%) strongly disagreed and disagreed that electronic communication media cannot improve the quality of students learning(Appendix 1).The combined mean and standard deviation was of it's usefulness was 4.36 and 0.51 respectively..

Further, principals, just like the teachers, were in agreement that electronic communication media were useful. One of the principals stated that he taught CRE and Geography in addition to handling administrative duties. The principal said that electronic media helped learners conceptualize the subjects better in the course of the teaching:

When I am teaching, they are watching and learning, so that they are able to perceive better. They understand concepts better through demonstrations. For example, when teaching the passion of Jesus during a Form 2 CRE lesson, learners are able to grasp the idea even when the teacher is not clear. Again, when teaching how the heart works in Biology, students understand better when they can see and hear. In addition, teachers can use ICT to create content in abstract areas such as glaciation in Geography to help learners conceptualize difficult concepts [P4].

Another Principal [3], confirmed that teachers were interested in using electronic media, as they were then now requesting for some equipment like projectors:

Teachers are eager to use electronic equipment because since we opened school, the teachers in our school have been requesting the management to buy a projector to enable them prepare Power Point presentations. At the heads of department meeting, I encouraged teachers to buy personal laptops since it is now a requirement for a teacher in the modern world [P3].

The Principal [P 3] also asserted that electronic media can complement the classroom teacher:

Students can play the CDs in the absence of the teacher and hold group discussions especially during weekdays [P3].

On the other hand, although electronic media offers several benefits in education, the principals felt that electronic media could kill the reading culture and may be misused in spite of its advantages. Principal [P 4] said this concerning electronic media:

It discourages, it kills the reading culture, but to me this is a minor thing. It is not really a major one. Electronic media sometimes does not give learners sufficient homework. Unless one takes initiative, it is very easy for a teacher to just use media and not give homework. You have to occupy students by giving them assignments. You have to look for exercises which will be mainly drawn from textbooks and not ICT materials [P4].

Principal [P 3] also explained:

One of the disadvantages of electronic communication media is loss of classroom control by the teacher. This creates loopholes for students because come with their own CDs. Some teachers can also abuse it when they are not prepared to teach, although this is rare [P3].

Some of the perceptions from the principals' interview concurred with the teachers' responses. In spite of the fact that Principal [P1] felt electronic communication was useful, it was noted that for it to be effective it required teacher supervision which must be enhanced:

Sometimes electronic communication is misused because teachers leave students to interact with the materials without guidance. It distracts students if unsupervised since they may start watching their own content such as music and movies [P1].

Principal [P1] observation is very critical, as the use of electronic communication media or any technology is not meant to replace the teacher. It is a tool to assist in learning and the teacher's role becomes that of a facilitator and guide.

In addition, Principal [P 4] felt that the electronic media provides the teacher with more content and assists the students who are below average in performance. The Principal noted that teachers generally had positive perceptions on the use of electronic media in education:

The advantages of using electronic media are that teachers find them as a better resource compared to textbooks. Electronic materials are also faster, more interesting, and facilitates the coverage of the syllabus in a shorter time. Finally, it helps weak students to learn faster. [P4].

In conclusion, teachers generally agreed that electronic communication media was useful in education. However, these perceptions appear to contradict the low level of use of electronic communication media. Whilst the majority of them believed that the electronic communication media were useful, the low levels of use clearly indicate disinterest in the materials. This contradiction could possibly be as a result of lack of training, attitude or other factors such as accessibility or availability of materials.

Perception on ease of use of electronic communication media

The perceived ease of a system determines whether the user will accept or reject a technology (Davis, 1985). Rogers (2003) calls it the complexity attribute of an innovation. On a five-likert scale the respondents perceived ease of use of electronic communication media was measured on a five-likert scale . The mean score of the perceived ease of use of electronic communication media was 3.4948 and standard deviation was 0.4732. This was an indication that majority of the teachers were not sure whether or not electronic communication media was easy to use.

Findings from some of the principal's in depth interviews also pointed to reluctance among teachers to use electronic communication media in the classroom due to lack of confidence and being overwhelmed by the complexity of electronic media In one of the schools involved in the study, the principal [P2] requested the researcher to see the questionnaire the teachers had filled and said:

I am not sure you needed to give some teachers the questionnaire to fill. I doubt whether they understand because some don't like even using the computer laboratory to teach their lessons simply because they find it too difficult to use computers [P2].

In another school the principal reported:

The teacher who normally finds it easy to use the computer laboratory and who carries the key is the one in charge of computer studies in this school. This teacher also takes visitors around to see the computer laboratory [P1].

However, another principal [P4] explained that teachers enjoy using the programmes in CDs format and prefer them to live radio broadcasts because they allow flexibility:

Our school had only one radio, which was stolen. Therefore, teachers cannot use the radio broadcast. However, they prefer using the CDs that we bought from Kenya Institute of Education because they can schedule them at their own convenient time and they are easier to use. I am not sure whether they can use the computer to teach because right now I hear there is content that we can use on those computers which we don't have in this school [P4].

Although Principal [P3] said that the teachers were enthusiastic about using electronic communication media, it was still not practical because it was not easy to use as they only possessed one radio and TV in a six-streamed school:

It is not easy for the teachers. This school has over 700 students, with one radio and one TV set. The teachers therefore find it very difficult to teach during the normal classroom lessons using electronic media

.This is a six-streamed school and using live broadcast means having six radios or TVs. We have not even attempted to experiment this because it is practically impossible. However, the languages have a DVD Player which teachers can use to teach using pre-recorded programmes at their own convenient time [P3].

The above responses from the participants shows that teachers were not sure whether electronic communication media was easy to use because in most of the sampled schools there were other factors that hindered the full utilisation. These factors were for example inadequate hardware, lack training and even lack of time, details are explained in Chapter Six.

Perception on compatibility of electronic communication media with teachers' current practices

Compatibility of any system to the users' current practices influences their perception towards it. Responses in Appendix 3, indicate that majority of the respondents were not sure, disagreed or strongly disagreed that the use of electronic communication media was very similar to their past educational or professional experience. The mean score was 2.5849 and Median of 2.500. This meant that the respondents disagreed that the use of electronic communication media in school was similar to their past educational and professional experience. Probably, one reason why the respondents felt that the use of electronic media was not similar to practices they were used to could have been the failure to pretest the use of electronic communication media before implementation. The study went further to find out whether these programmes were piloted in the schools before roll out. Although some respondents agreed that electronic communication media had been piloted in their institutions, others were not sure, disagreed or strongly disagreed.

In addition, the principal's response during the in-depth interview on teachers' perception on compatibility of electronic communication media use indicated that there was a general feeling that majority of the teachers could not integrate electronic communication media in teaching due to lack of exposure. Principal [P 4] expressed this as follows:

Our teacher training programmes those days were designed in such a way that most of the teachers who trained that time in this school lack prior exposure to the technology you see around. Personally, the only technology I was exposed to when I was a student in primary school was the school radio broadcast which I never found after joining secondary school [P4].

Principal [P3] also referred to how the teachers were trained at the teacher training institutions:

Most teachers in this school were trained more than 10 years ago.

Computers were very rare in the universities by then. The only thing that

I can remember was that in the communication technology department we used to have micro teaching. The stress by then was how to use other teaching methodologies apart from the lecture method, and not ICT [P3].

One of the Principals, [P1], strongly felt that the best way to ensure successful implementation of electronic communication media in schools is to first pilot the programme:

I would suggest that before introducing any new technology in schools, it should be piloted first. A few schools could probably be sampled for this pilot. It also calls for proper preparation of the teachers since teachers are change agents who must first buy the idea. Exposing teachers to electronic media helps them change their mindset. Otherwise most teachers will just use the methods they were trained while at the University or college [P1].

Perceptions on observability/visibility of electronic communication media

The degree to which the benefits of a system are observable to others can influence users' perception (Rogers, 2003). Ajzen, (1991) attributes this to the social influences of other peers and perceptions on what other significant people in one's life believe in. In this study, two perception indicators were merged together to explain the theme of visibility or observability.

From the findings, only 24.5% strongly agreed, while 11.2% strongly disagreed that they had opportunities to observe fellow teachers using ICT. Again, only a small percentage (23.3%) strongly agreed and 8% strongly disagreed that they received feedback from other experienced teachers with experience in teaching using electronic media (Appendix 4). The mean was 3.8087 and the standard deviation was 0.9660. This meant that the teachers were split between not being sure while others disagreed that the use of electronic communication media in their school was visibility.

During the In depth interview Principal [P4] also commented on the issue of whether there was feedback or observation of other teachers using electronic communication media:

In this school, the ICT champion came and trained the teachers for a short time. So, I am not sure whether the teachers can effectively use the computer to teach. Probably, we need to see more of its use to gain confidence [P4].

In another school, there was only one teacher who could confidently show others how to use the computers.

The Principal, [P2], said:

In this school, only one teacher is fully proficient in the use of computers and we heavily rely on him. The problem is that the teacher still has many lessons to teach and hardly gets time to assist other colleagues. [P2].

Through observation and in-depth interviews conducted among the principals, there was minimal visibility on the use of electronic communication media by teachers. In all the 59 schools sampled for this study, none was using electronic media at the time the study was carried out.. One of the principals [P4] said:

Use of electronic communication media, especially the computer, and the internet, is very new not only in this school but also in the neighboring ones. None of the schools use the computer in teaching and learning even though most of us use the computer to perform administrative functions. [P4].

Discussion of Findings

The findings regarding the usefulness of electronic communication media are similar to those of other studies conducted in Kenya that indicate that teachers were positively predisposed to the use of ICT in education. For example, a study on national schools conducted by National Council for Science and Technology in 2009 found that teachers looked forward to the establishment of the classroom of the future and what was needed was institutional reforms at the school level which were critical to leverage ICT use in schools (Republic of

Kenya,2009). Sulungai et al. (2011) asserts that teachers have positive attitudes towards the use of computers in teaching mathematics. They see it as a tool for enhancing teaching and learning. Masinde (2012) also found that teachers of English had positive attitude and were willing to integrate ICT in teaching. Boswony (2012), found out that 93.6% of the respondents agreed that ICT can enhance teaching while Mulwa (2012) concurs that secondary school teachers generally had positive attitude towards the adoption of e-learning in schools.

Similar results from other parts of the world have also been reported. Lau and Sim(2008) in a study done among Malaysian secondary school teachers found that 75% of the teachers agreed that the use of ICTs makes them more effective in teaching, 48% of the teachers agreed that it makes them meet the varying needs of their students while 55% agreed that the use of the internet and technology makes their lessons richer. Another study among secondary

school teachers in Europe found out that 100% of the teachers in Lithuanian institutions were interested in incorporating ICT in language teaching and they also believed that it was helpful for their students (Kumar and Tammelin, 2008). Other findings among mathematics teachers in Australia revealed that majority of the teachers(57%) agreed that using technology motivated the students where 86% thought it made mathematics more enjoyable while 2% of the teachers disagreed with none of them strongly disagreeing(Pierce&Ball,2009). Gundy and Berger (2013) also found that teachers believed that those who had integrated the laptop programme courses in their teaching attained the following: they made teaching approaches to be more varied, learning styles of a wider variety of students were being met and finally, learning was more interesting for the students and easier for them to prepare. Another study ,through a survey conducted of 300 teachers in India found out that most of the teachers agreed (59.3%) and strongly agreed (33.7%) that computers organized their work better, made their teaching effective, and facilitated use of variety of instructional strategies to maximize learning, saved time and effort, enhanced students productivity and generally did more good than harm(Bhalla,2013). In this study, teachers expressed their views on the usefulness of electronic communication media with a mean score of 4.3651 and standard deviation of 0.5114, which meant that majority of them were of the opinion that electronic communication media was useful.

These results were similar to Albirini (2004) who conducted a study among teachers in Syria on their attitudes towards use of the computer. The teachers in the Syrian study were very positive about the relative advantage of computers as an educational tool, with a mean score of 4.04 and Standard Deviation of 0.59. Other similar studies by Al-Zaidiyeen(2010) indicate that 64% of the teachers believed that teaching with computers offers real advantages” , 72% of the participants answered that they “agree or strongly agree” with that they ,help them organize their work, 67.8% helps them save time and effort and 39.1% helps to make subject matter interesting.

The above findings reflect positive perception toward use of ICTs by teachers. However this is contrary to the study on application of ICTs in Nigerian secondary schools whose results indicate 70 respondents(40%) citing poor perception and widespread ignorance and misconception about ICTs among teachers and administrators(Adomi and Kpangban,2010). Bringimlas(2009) also in his review of literature found out resistance to change and negative attitude as a significant barriers toward integration of ICT by teachers.

Other studies predict that teachers' perception towards ICT could be influenced by training and on the other hand attitude affects level of use. For example, Shaunessy (2007) study of participating teachers of gifted children found out that teachers had positive attitude toward ICT attitude which was significantly affected by their training, while Isleem (2003) discovered perceived attitude towards computers as a significant predictor of level of computer use.

However Albirini(2004) asserts that, teachers' responses were split between positive and neutral regarding whether it was easy to understand the basic functions of computers, operate them, and use them in teaching with a mean score of 3.48 and Standard Deviation of 0.67, which is consistent with the results of this study. This study had a mean score of 3.2408 and a standard deviation of 0.5891 regarding whether teachers' perceive the use of electronic communication media to be easy.

Similar findings on whether teachers' perceived electronic communication media to be compatible with their past professional experience were also noted. In his study, Albirini reported that teachers were less positive on the compatibility of computers with their current practices with a mean of 3.54 and Standard Deviation of 0.54. Most teachers were uncertain about whether or not computer use fits well in their curriculum goals. The majority reported that class time is too limited for computer use (Albirini,2004). Scrimshaw(2004) explains that one possible explanation of slow uptake of ICTs in schools is the notion that ICT is seen as incompatible with some teachers' wider educational beliefs. Similarly, this study found that most teachers were apprehensive about the compatibility of electronic communication use with their past professional experience with the majority disagreeing that they were compatible with a mean score of 2.5849 and standard deviation of 0.8066.

Lastly, the findings of this study differ from Albirini's with regard to observability of electronic communication media. Albirini(2004) study on teachers' responses on the observability indicate somewhat positive perceptions with a mean score of 3.70 and a Standard Deviation of 0.68. Most respondents reported that they regarded computers as work and educational tools .However in the current study, the teachers were split between not being sure and disagreeing with a mean score of 3.8087 and standard deviation of 0.9660.

In conclusion, the study reveals that teachers believe there is value in integrating electronic communication media in teaching and learning.

Conclusions

This study investigated teachers' perception and electronic communication media use .From the study, it appears that majority of them believe electronic media offers real advantage over traditional methods of instruction, they are effective tools in enhancing students' learning ,they contain appropriate content in teaching different subjects, they make learning interesting and they would generally use them if they were available in their schools. However, most of them believe that teaching with electronic communication media is not easy and is not compatible with their past professional experience and training. They also feel that the use of electronic communication media was not visible in most of the schools and there is general lack of awareness on the materials and programmes which are available.

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