

**THE EXTENT OF COMPUTER USAGE AMONG SCHOOL TEACHERS
AND STUDENTS IN ILALA MUNICIPALITY, DAR ES SALAAM**

CHRISTINA JAMES WAMBURA

**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF MASTER OF EDUCATION IN
ADMINISTRATION, PLANNING AND POLICY OF OPEN UNIVERSITY
OF TANZANIA**

2017

CERTIFICATION

The undersigned certifies that he has read and hereby recommends for acceptance by Open University of Tanzania a dissertation entitled: “**The Extent of Computer Usage Among School Teachers and Students in Ilala Municipality, Dar es Salaam**” in Partial Fulfillment of the Requirements for the Degree of Master of Education in Administration, Planning and Policy Studies (M.Ed - APPS) of the Open University of Tanzania.

.....
Dr. Kassim A. Nihuka

(Supervisor)

.....
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DECLARATION

I, Christina Wambura, do hereby declare that this dissertation is my own work and that has not been presented and will not be presented to any other University for similar or any other Masters Degree awards.

.....

Signature

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Date

DEDICATION

This work is by dedicated to my husband Waryoba for the financial support and love for my studies. The work is also dedicated to my children Mhuri and Wambura who showed love and encouragement in pursuing this task, without care and enough support from the above mentioned people this task would have been impossible. May God bless them all.

ACKNOWLEDGEMENT

I would like to thank the Almighty God the creator of everything for enabling me to successfully complete my dissertation with good health. Also with respect, I would like to thank my supervisor Dr. Kassim A. Nihuka who tirelessly read my work, provided me with expert recommendations that helped to shape my study to this standard. I wish also to express my sincere thanks to my course lecturers and all members of staff at the Open University, for consistent advice, support and encouragement they accorded me during the whole programme.

Special acknowledgement goes to my family for their kindness and moral support during the study period, much thanks to my dearest husband Mr Waryoba and my sons Mhuri and Wambura for their constant understanding and patience when I was busy with my studies. Lastly, I wish to acknowledge all class members for their friendly co-operation I enjoyed from them during the whole study period. Further appreciation should be extended to all Management and respondents from the selected primary schools in Ilala District for their cooperation during field work.

ABSTRACT

The study assessed the extent of computer usage among school teachers and students in Ilala Municipality. The objectives of the study were to identify the attitude of teachers towards computer use; to identify the attitude of students towards computer integration; to determine the benefits of using computers in education from teachers and students perspectives and to determine teachers and students access to computers. A sample of 138 respondents was used sampled randomly. The study used case study approach or design, the methods of data collection applied were interviews, data collection tools/instruments used were structured questionnaires, and an in depth interview for primary data while for secondary data were collected from previous studies, internet and relevant documents. It was revealed that, teachers agreed with welcoming computer use in primary school's education and strongly disagreed; using computers makes primary students worse. Again, from student's point of view, computer integration in education facilitates learning for primary school. Also, the benefits of computer integration includes enhancing academic works, improves the lesson plans, promotes independent learning, but also leads children to obscene materials such as pornography. Moreover, teachers and students in primary schools are skilled in using computers but lack of trainings been among the major factor that facilitate to unprofessional skilled teachers, majority access computers from home while others access from at school's library and internet café. It was recommended that, the ministry of education should prioritize computer subject as amongst the most significant lessons to be taught in primary schools which will improve the attitude of students also develop a policy to guide the use of computer in public primary so as to heighten ICT knowledge and competence in all primary schools in the country.

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CHAPTER ONE

INTRODUCTION

1.1 Overview

The chapter introduces the study about the extent of computer usage among school teachers and students at Ilala Municipality. The chapter is organized into the following sections; background to the study, problem of the study, objectives of the study, research questions, significance, limitation and delimitation of the study and definition of key terms.

1.2 Background of the Study

New and innovative technologies such as computer technology have challenged traditional approaches to teaching and learning (Huang & Liaw, 2005). Computers provide opportunities that bring about new approaches and strategies in teaching and learning (Zhao, Tan & Mishra, 2001). The success of any initiatives to implement computer technology in teaching and learning depends on the attitudes of teachers and students involved (Alghazo, 2006). It has been suggested that if teachers believe computers not to be fulfilling their own or their student's needs, they are likely to resist any attempts to introduce computer technology into their teaching and learning (Askar & Umay, 2001).

In most cases, the teacher is key to effective implementation of the use of computers in the educational system and given that teachers have tremendous potential to transmit beliefs and values to students, it is important to understand the biases and stereotypes that teacher may hold about the use of computers and the factors that act as facilitators to teachers positive computer usage (Huang & Liaw, 2005). Teachers

attitudes towards computers affect the successful use of computers in the classroom and these attitudes, whether positive or negative, affect how teachers respond to technologies. This in turn affects the way students view the importance of computers in schools and affects current and future computer usage (Teo, 2006).

In support of the importance of teacher's attitudes towards computer use, Zhao Tan and Mishra, (2001) provide evidence to suggest that the teacher's attitudes are directly related to computer use in the classroom. For example, teachers often view the computer as a tool to accomplish housekeeping tasks, manage their students more efficiently, and to communicate with parents more easily. The success of student learning with computer technology will depend on the attitudes of teachers, and their willingness to include the computer technology in their teaching (Teo, 2006). Gaining an appreciation of the teacher's attitudes towards computer use may provide useful insights into computer technology integration, acceptance and usage of computer technology in teaching and learning (Teo, 2006). No matter how sophisticated and powerful the state of computer technology is, the extent to which it is implemented depends on teachers having a positive attitude towards it (Huang & Liaw, 2005).

Developing positive attitudes toward school and learning is an important precursor to academic success. Indeed, research has demonstrated that positive attitudes increase the potential for academic success (Fco, 2001). Conversely, negative attitudes make academic success less likely. Technology in general has changed the educational landscape, providing some solutions and creating new problems to solve. Thus, researching teachers' and students' attitudes toward technology in general and in

education specifically is an important endeavor, providing insight and direction for all educational stakeholders (Zhang & Espinoza, 1998).

Research has shown that positive attitudes toward technology and self efficacy with computers are among important prerequisites into helping students to learn about computers and to successfully integrating technology in their learning (Tsitouridou & Vryzas, 2004). In fact, Wenzlaff (1998) argues that teachers' attitudes are among critical factors that determine the formal and informal curriculum in the classroom. Further, if teachers do not confront these attitudes and beliefs, they remain steadfast even when change abounds. Therefore, this literature review synthesizes findings from studies of teachers' attitudes toward technology in general and in the context of the classroom.

For students, researches in traditional curriculum subjects such as mathematics demonstrate a strong link between students' attitudes toward the subject matter and their achievement in that area (Cognition & Technology Group at Vanderbilt, 1992). Similarly, students' attitudes toward technology are indicators of their willingness to use the technology as part of their learning process in school (Alghazo, 2006) and to adopt technology as part of their lifelong learning strategy (Fco, 2001). This is particularly important as schools and universities around the world are investing significant time and money in instructional technologies, thus, students' attitudes toward technology in general and toward using technology in the learning process (McDonald McPhail, Maguire, & Millett, 2004).

Technology in primary schools (ICT) is supported by one group whereas another opposes it. The reasons for opposition are somewhat vague, but they have to do with

traditional methods which help us to build skills of reading and writing. Opposing party fears that once children are heavily exposed to technology alone (not to mention given tweeting and blogging lesson in class), they will lose touch with their basic skills like communication with depth, for example. Using Twitter is naïve as per some authorities because it steals the focus from more important activities which pupils were taught a generation ago (Tsitouridou & Vryzas, 2004).

However, on the other hand, Bergen (2000) argues that, there is considerable research that points to the positive effects of technology on children's learning and development. The full potential of technology's tools is only realized, however, when they are used effectively and in ways that connect meaningfully to the ongoing curriculum of the classroom and support creativity and critical thinking. It is necessary, therefore, for teachers of young children to be knowledgeable about the range of appropriate technology applications. It is our responsibility as educators to help children understand how to use technology in safe and enriching ways.

1.3 Statement of the Problem

Developing positive attitudes toward school and learning is an important precursor to academic success. Indeed, research has demonstrated that positive attitudes increase the potential for academic success. Conversely, negative attitudes make academic success less likely. Computer Technology in general has changed the educational landscape, providing some solutions and creating new problems to solve (Alghazo, 2006).

The study by Okorie and Agah (2014) suggests that, there is fear that computer technology will impose a rigid and impersonal regime on the classroom and even

replace teachers. Because of this fear, Okorie and Agah (2014) argue that it would take a long process of education and motivation to make the teachers realise and accept the contributions that computers could make to education. Okorie and Agah (2014) advised that teachers must learn to turn over much of their rights, duties, and responsibilities to the computer over which they have little control and towards which some of them were hostile.

Indeed, McDonald, McPhail, Maguire and Millett (2004) in their study found that, teachers who have extensive prior experience are more positive and enthusiastic about technology and more easily recognize the educational benefits. Conversely, they found that teachers without prior technology experience have negative attitudes about the computer in general and about technology's effect on young children's intellectual and emotional development. Computer-related attitudes influence students' desire to use computers, their desire to enroll in computer-related subjects and courses, and their choice of career path. Students' computer-related attitudes are also directly related to their prior experiences and use of computers (Bergen, 2000).

Many studies have focused on the attitude of teachers and students on the use of computer technology in primary schools elsewhere but limited studies report on the Computer Attitudes of Primary School Teachers and Students in Tanzania (For example, the study of Mwalongo, 2011 on the perception of teachers and students on the use of ICT for teaching). Thus, researching primary school's teachers' and students' attitudes toward computer technology is an important endeavor, providing insight and direction for all educational stakeholders within the technological attitudes of teachers and students in primary schools. The study therefore, went

further on identifying and filling the gap on the extent of computer usage among school teachers and students.

1.4 Purpose of the Study

The major objective of this study was to assess the extent of computer usage among school teachers and students at Ilala Municipality in Dar es Salaam.

1.5 Specific Objectives

Specifically, the study intended;

- (i) To identify the attitude of teachers towards computer use;
- (ii) To identify the attitude of students towards computer integration;
- (iii) To determine the benefits of using computers in education from teachers and students perspectives;
- (iv) To determine teachers and students access to computers

1.6 Research Question

The main research question of the study was what are Extent of Computer usage among school Teachers and Students In order to address this main research question, the following-sub-research questions were used;

- (i) What is the attitude of teachers towards computer use?
- (ii) What are the attitudes of students towards computer integration?
- (iii) What are the benefits of using computers in education from teachers and students perspectives?
- (iv) What is the situation of teachers and students in accessing computers?

1.7 Significance of the Study

The study has the following potential benefits. In the first place, the study will highlight the extent of computer usage among school teachers and students, the attitude of teachers towards computer use; the attitude of students towards computer integration; the benefits of using computers in education from teachers and students perspectives and teachers and students access to computers.

The study will be usefully document to the education policy framework, the recommendations to be identified will be practical in policy formulation. The study will also open new ideas for those who wish to conduct further studies and provide other researchers with areas for future research and literature that will be addressed on the extent of computer usage among school teachers and students. Finally, the study will provide an empirical analysis of the the extent of computer usage among school teachers and students in Primary Schools as the way of making primary education prepare youth on the technological challenges and development.

1.8 Limitation of the Study

The study encountered several challenges as discussed below:

Design of the study was one of the limitations that contributed to delay in finishing up the study since the whole designing process demand and a lot of time, therefore, time was expected to hold back the researcher in several stages of designing the study, especially from the proposal write up, data collection and final report write up. In fact, the period given for data collection weren't sufficient.

Again, the sample size was another issue which limited the study, sampling was costly prohibitive to the study, since all instances of a phenomenon were depending

on the object of one's research. This situation places limitation in which the researcher is compelled to select a certain proportion as the sample of study.

Data collection techniques was another issue which limited the study, as the entire procedure of collecting data required enough financial means and the willingness of respondents to respond to questionnaire for some respondents took long time to fill and return the questionnaires, and others misplaced the questionnaires and some provided biased answers as the study touched their personal interest and areas of specialization. Time for interviews and how to retain the integrity of each respondent's responses during an interview constituted a challenge to researcher.

Another factor for limitation was analysis techniques, sometimes the case of analysis techniques limited the researcher, after completing interpretation of the findings, the researcher discovered that the way in which data was gathered inhibited an ability to conduct a thorough analysis of the results. For instance, researcher regretted not including a specific question in a study that, in retrospect, could have helped address a particular issue that emerged later in the study. Acknowledge the deficiency by stating a need for future researchers to revise the specific method for gathering data.

1.9 Delimitation of the Study

A researcher explained the significance of the study to the participants. This increased the participation of respondents to the study. Moreover, the study used online sources instead of text books from the library. Furthermore, the purpose statement of the study was to fill the gap on the computer attitudes and the extent of usage among teachers and students of Ilala Primary School.

1.10 Definition of Key Terms

The study used the following key terms as the most significant basing on the Computer Attitudes of Primary School Teachers and Students.

1.10.1 Attitudes

According to Hogg & Vaughan (2005), an attitude is defined as a relatively enduring organization of beliefs, feelings, and behavioural tendencies towards socially significant objects, groups, events or symbols.

Allport (1935) as cited in Albarracin, Johnson, Kumkale & Zanna, (2005) mentioned that an attitude is a mental or neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related.

1.10.2 Computer

Computer is a device that transforms data into meaningful information. Data can be anything like marks obtained by you in various subjects. It can also be name, age, sex, weight, height of all the students in a class (Parsons, June & Dan, 1999).

Computer can also be defined in terms of functions it can perform. A computer can accept data, store data, process data as desired, and retrieve the stored data as and when required and print the result in desired format (White, 1998).

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview

The chapter presented literature review that was in line with the objectives of the study. The chapter will give theoretical and empirical literature review. The first section of the chapter provided conceptual framework of the study, theoretical review and discusses the concepts on the extent of computer usage among school teachers and students and the empirical review of the study.

2.2 Conceptual Framework

The study assumed that, there are different factors influencing the Extent of Computer usage among school Teachers and Students. These involve the Attitude of school teachers and students' willingness about computer integration in education, the +benefits of using computers in education from teachers and students perspectives, teachers and students competences in using computers and access to computers within primary schools. These assumptions are summarized in Figure 2.1.

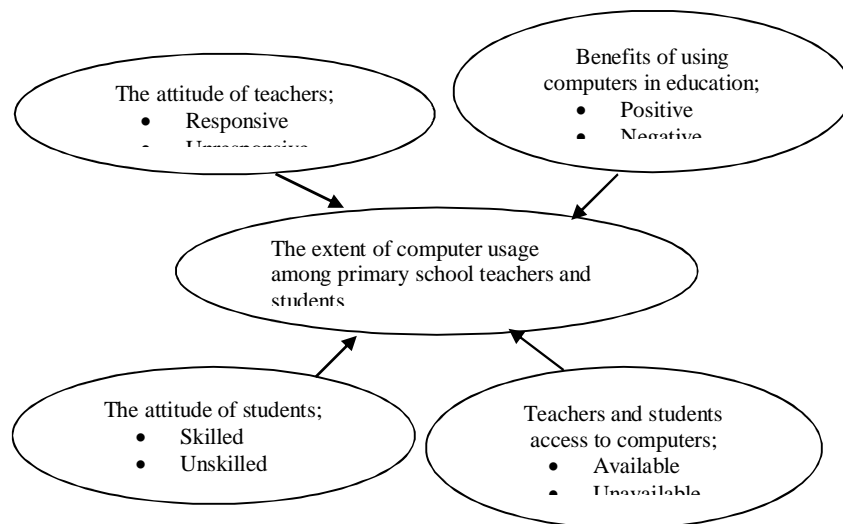


Figure 2.1: Conceptual Framework
Source: Researcher own Design (2016).

2.1.1 Description of Conceptual Framework

Figure 2.1 above presents the conceptual framework of the study, the framework explains the relationship between the problem under study which is dependent variables and other variables (independent) which influence that phenomenon the researcher is willing to solve from the findings.

The Extent of Computer Usage among Primary School Teachers and Students

This is the problem which is under study, in other words, the extent of computer usage among primary school teachers and students is the variables which depends on other to provide the meaning which is significant for education development in Tanzania, without understanding the attitude of primary school's teachers and students the implementation of ICT (Computer) and education integration will be difficult.

The Attitude of Teachers towards Computer Use

The attitude of teachers towards computer use in primary school education is the independent variable it influences computer attitudes within primary schools and the willingness of school teachers in the sense of responsive or unresponsive on computer usage in primary school. According to the study of Alghazo 2006; Fouzieh, & Gilakjani, (2013) it was found that, relatively few teachers (20%) report feeling well prepared to integrate technology into classroom instruction. Although computers have been put in the classroom, many teachers are still skeptical of the value computers have provided for teaching and learning. Studies indicate that the level of feelings teachers have toward computer use range from euphoria to uncertainty, to hostility and fear.

The Attitude of Students towards Computer Integration

Another independent variable which influences Computer Attitudes of Primary School Teachers and Students is Teachers and students competences in using computers, their competence if it's skilled or unskilled in using computers will determine their attitude. Francis-Pelton & Pelton (1996) argued that, although many teachers believe computers are an important component of a student's education, their lack of knowledge and experience lead to a lack of confidence to attempt to introduce them into their instruction. Gobbo & Girardi, (2001) results showed that both personal theories of teaching and the level of competence with technology play a major role in how teachers implement technology and in their perception of their own and their pupils' motivation.

Benefits of using computers in education

Computer Attitudes of Primary School Teachers and Students will depend on the benefits Teachers and Students gets from using computers in education, Primary School Teachers and Students attitudes on using computers in education will depend if the benefits are positive or negative. Mehdipour, & Zerehkafi, (2013) argued that the benefits of using computer in education from teachers and students perspectives is sometimes negative since computer in education leads to increased moral degradation within the local communities, from computer uses now days students are affected by internet pornography, cyber bullying and other anti-social behaviors is a worrying emerging problem to the uses of computer for education. However, the study of Askar & Umay (2001) revealed that, on average, students who used ICT-based instruction scored higher than students without computers. The students also

learned more in less time and liked their classes more when ICT-based instruction was included.

Teachers and students access to computers

Computer attitude of primary school teachers and students is influenced by the accessibility to those computers, for successful attitude of primary school teachers and students in using computers will depend on the availability and unavailability of the facilities. Fco, & Garcia, (2001) argued, Effective adoption and integration of ICT into teaching in schools depends mainly on the availability and accessibility of ICT resources such as hardware, software. Obviously, if teachers and students cannot access ICT resources, then they will not use them. Therefore, access to computers, updated software and hardware are key elements to successful adoption and integration of technology.

2.2 Literature Review

2.2.1 The Attitude of Teachers towards Computer Use

The study of Andiema, (2015) revealed that, in East Africa, most teachers do not adopt ICT into their instruction as it should be, because of several interconnected factors, such as manipulative, non-manipulative and teacher factors. Manipulative factors include beliefs, skills and commitment of teachers, ICT knowledge, availability of ICT resources, whereas non-manipulative factors include age, gender, religion, educational experience, computer experience, national policy and external supports. This implies that ICT integration is not dependent on one factor, but to several interrelated factors that directly or indirectly affects the use of ICT into classroom instructions.

According to the report of International Society for Technology & Education (2001), relatively few teachers (20%) report feeling well prepared to integrate technology into classroom instruction. Although computers have been put in the classroom, many teachers are still skeptical of the value computers have provided for teaching and learning. Studies indicate that the level of feelings teachers have toward computer use range from euphoria to uncertainty, to hostility and fear (Alghazo 2006; Fouzieh, & Gilakjani, 2013).

Some teachers show little interest in using instructional technology, while others are obviously resistant to its use. Some positively accept the concept, but feel somewhat bound by lack of training for effective integration (Alghazo 2006). Still others have ambivalent feelings toward technology. Feelings of uncertainty, hostility and fear naturally lead to many teachers' reluctance or resistance to technological innovation. They will continue to adhere to their traditional practices with which they feel more confident and comfortable.

The effective use of computer technology enables teachers to facilitate and adjust their instructional strategies to optimize students learning (Fouzieh, & Gilakjani, 2013). In this respect, when teacher's role and activity in the process is taken into account; it is important to know teachers interest in technology and their attitudes, affective features towards technology (Fouzieh, & Gilakjani, 2013). According to Albarracin (2005), teachers' attitudes on the willingness appear to lie at the heart of teaching and tend to be associated with a congruent style of teaching. Teachers' attitudes and emotions also build the meanings they bring to innovations such as technology integration. Hence, changes to teaching style, as might be required by

working with technology, may necessitate changes to teachers' attitudes (Cavas & Kesercioglu 2003).

The studies of Fouzieh, and Gilakjani, (2013) & Teo (2008) believes that, willingness towards computers and trust in using them in education are two major predictors for teachers' future use of technology in classrooms. Fouzieh, and Gilakjani, (2013) emphasize the importance of a clear focus on teachers' attitudes, values, and beliefs as a primary focus in supporting teacher learning. A negative attitude of willingness may lead to computer resistance a phenomenon that can be found among experienced as well as inexperienced users. A negative attitude may even lead to defamation or sabotage of computer technology. Gaining an appreciation of the teachers' attitudes towards computers use may provide useful insights into technology integration, and acceptance as well as usage of technology in teaching and learning (Teo 2008).

Nevertheless, the study of Ocak and Akdemir (2008) explored that teachers have positive willingness towards ICT in education and their attitudes were predicted by computer attributes, cultural perceptions, and computer competence. Moreover, the results clearly emphasized the importance of teachers' vision of technology itself, their experience in using it, and the cultural conditions surrounding its introduction into schools, on shaping teachers' general attitude towards technology and its subsequent diffusion in their educational practice.

In their study, Cavas and Kesercioglu (2003) revealed that, the Turkish science teachers have positive attitudes toward ICT; no gender differences have been traced

in their attitudes towards ICT but differences were found in terms of their age, their computer skills (experience) and their ownership of computers at home.

Asan's, (2003) results showed that, many teachers were not computer users and lacked a functional computer literacy background upon which to build new technology and skills. The study also indicated that the use and willingness teachers and students on the use of computer and related technologies was not routine part of their teaching and learning environment.

The science teachers' attitudes toward computer assisted learning (CAL) were investigated by Cavas and Kesercioğlu (2003). The results showed that the majority of science teachers had positive attitudes toward CAL and no gender difference exists between science teachers' computer-assisted learning attitudes. Ocak and Akdemir (2008) expressed that science teacher's computer literacy level is related to their computer use. And also computer literacy level of the teachers increases their integration of computer applications in their teaching. In the study, most of the teachers use Internet, email, and educational software CDs as computer applications in the classrooms. They found statistically differences in the integration of computer applications as an instructional tool. Nonetheless, Study by Teo (2012) on teachers' attitudes towards computer use in Singapore, found that teachers were more positive about their attitude towards computers and intention to use them, than the helpfulness of computer towards teaching and learning.

Technology is the main support for the students learning developments nowadays. With shifting from the teacher-centered instruction to child-centered instruction, the role, activities, attitudes, reflections of the students become more important concern

to overlook the effectiveness of technology in instruction. Computers are the main technology support as a tool for effective learning and teaching process. Computer based instruction and computers programs, tools as itself provides much facilities and supports to students' educational life (Işman, Mehmet, Fahme, Zehra, & Fahriye 2004).

Computers are update mechanism for the education and it is not only for education, these developments affect all global, cultural, economical life standards as well. The computer as productivity tool has great role in education. Computers include hardware and software, word processing functions, graphics, programmed instruction for problem solving, spreadsheets, databases, networking and telecommunications for today high technology developments as a reflective to education (Hogg & Vaughan, 2005). In addition to this, within the constructivist approach perspective, computers help the differentiate roles of students and teachers, application of instruction by providing equal standards, understanding, meaningful learning for all students. Computer help to convert teacher based instruction to child centered instruction with providing multiple intelligence atmospheres to the educational cycle. Within the today's application, it is important to get the meaningful learning for the students' learning cycle. It is not necessary to get information directly from the instructors, what is important today is that experiencing reality, discovering reality with technology guidance (Teo, 2008).

Teachers and Students Willingness about Computer Integration in Education is supported by the Constructivism is a theory of knowledge (epistemology) developed by Piaget (1980) which argued that, humans generate knowledge and meaning from

an interaction between their experiences and their ideas. During infancy, it is an interaction between their experiences and their reflexes or behavior-patterns. Piaget (1980) called these systems of knowledge schemata. Constructivism is not a specific pedagogy, although it is often confused with constructionism, an educational theory developed by Seymour Papert, inspired by constructivist and experiential learning ideas of Piaget (Askar & Umay 2001).

Piaget's theory of constructivist learning has had wide ranging impact on learning theories and teaching methods in computer education and is an underlying theme of many education reform movements such as computer introduction to primary school teachers and students in developing countries especially based on their attitude toward preparation to acceptance (Askar & Umay 2001).

2.2.2 The Attitude of Students towards Computer Integration

There is a relationship between teacher's attitudes toward computer technologies and their computer competence. In their study of the correlation between teachers' attitude and acceptance of technology, Francis-Pelton & Pelton (1996) maintained although many teachers believe computers are an important component of a student's education, their lack of knowledge and experience lead to a lack of confidence to attempt to introduce them into their instruction. A large number of studies showed that teacher's computer competence is a significant predictor of their attitudes toward computers (Berner, 2003; Na, 1993). Al-Oteawi (2002) found that most teachers who showed negative or neutral attitudes toward the use of ICT in education lacked knowledge and skill about computers that would enable them to make informed decision (Berner, 2003p. 253). Zammit (1992) said that a major obstacle to

successful technology integration was the lack of teacher confidence and skill when using technology. Supporting this result, in the study of Akpınar (2003) where he studied the level of primary school teachers using the technological opportunities, it is concluded that half of teachers do not use computers for educational purposes in activities outside the classroom and almost half of them never use computer software in educational activities. Again in another study (Erdemir, Bakırcı, & Eyduran 2009), pre-service teachers stated that they do not feel themselves adequate for using internet and computer for the purpose of teaching, while they felt that they are adequate for using search engines; they can prepare basic materials for teaching but not complex and multi-purpose educational devices.

The study of Cavas, Cavas, Karaoglan and Kislá (2010) suggested that, Students' confidence on ICT can be explained through the attitude and behaviors of their teachers. Teachers' behavior is a critical influence on students' confidence and attitude towards ICT as they provide important role model to their students. The literature suggests that lack of adequate training and experience is one of the main reasons why teachers do not use technology in their teaching. This also eventuates in teachers' negative attitude towards computer and technology (Cavas, Cavas, Karaoglan, & Kislá 2010).

The study of Gobbo and Girardi (2001) stated that there is a positive relationship between computer technology and teachers as well as students attitudes. Computers can significantly influence the ways in which a teacher includes technology tools in the classroom. In an examination of teaching styles and technology integration in Italy, results showed that both personal theories of teaching and the level of

competence with technology play a major role in how teachers implement technology and in their perception of their own and their pupils' motivation (Gobbo & Girardi, 2001).

The effective use of computer technology enables teachers to facilitate and adjust their instructional strategies to optimize students learning (Teo 2008). In this respect, when teacher's role and activity in the process is taken into account; it is important to know teachers interest in technology and their attitudes, affective features towards technology (Teo 2008; Cavas, Cavas, Karaoglan, & Kislal 2010).

Yildirim, (2000) and Gobbo and Girardi (2001) stated that there is a positive relationship between computer technology training and teachers attitudes. Training can significantly influence the ways in which a teacher includes technology tools in the classroom. In an examination of teaching styles and technology integration in Italy, results showed that both personal theories of teaching and the level of competence with technology play a major role in how teachers implement technology and in their perception of their own and their pupils' motivation (Gobbo & Girardi, 2001).

Teachers who lack the chance to develop professionally in the use of modern ICT feel under threat. Many schools face a challenge of shortages of ICT teachers and other IT professional that support adoption and use of it in classroom. Many schools continue losing well trained ICT teachers to private sector which seems to pay higher salaries (Andiema, 2015). A study carried out by Yildirim, (2000) that described the daily pedagogical practices of four teachers in the midst of implementing Information and Communication Technology (ICT) in their classrooms in Dutch,

found that the most important factor effecting teachers' use of ICT was teachers' attitudes regarding what should be taught and the way it should be taught. Computer related technical skills were found to be less important than skills related to the teachers' competence in managing activities and communicating lessons.

Teachers must be given the opportunity to become acquainted with newly introduced technologies. Levin and Wadmany (2007), in their study of teacher's use of computers to teach mathematics, found that overall attitudes towards using computers were very positive, although many of them had limited experience with computers. Levin and Wadmany (2005) stated that more training and support in information technology should be given to teachers and more value should be placed on the teacher as a role model for students.

Lack of in-service training and insufficient technological infrastructures were the factors that have a significant influence on the effective use of technology by teachers (Bakr 2011). Cavas, Cavas, Cavas, Karaoglan and Kislal (2010) had participants of twenty English as a second language and foreign language teachers in their sample. They used surveys and follow-up interviews on technology use in class.

They concluded that lack of time, support and resources prohibited the use of CALL by the teachers. Zhao, Tan and Mishra, (2001) discussed the training of teachers in Egypt about the use and applications of CALL. He said that an Egyptian university lecturer expressed his view as: we have the hardware, we have the software, but we lack the human ware. Derbyshire, (2003) stressed out the importance of training teachers and exploiting the use of computers more than as a word processor in the

classroom. Similarly, Bakr (2011) argued that teachers need to become informed users of technology and stressed the importance of technology training.

Hobbs and Haines, (2012) found that technical competence influenced Italian teacher's use of ICT in teaching. However, the teachers cited pedagogical and didactic competences as significant factors if effective and efficient educational interventions are likely to be implemented. In Portugal, teachers reported different views regarding the most important competences for teaching with ICT. The experienced and new teachers stressed the need for technical skills and attitude, the innovative teachers' emphasized curricula and didactic competences and the student-teachers cited technical competence and pedagogical efficiency as significant to integrate ICT in teaching and learning processes.

According to Hogg and Vaughan, (2005), teachers with more experience with computers have greater confidence in their ability to use them effectively. To conclude, Zhao, Tan and Mishra, (2001) reported that teachers competence relate directly to confidence. Teachers' confidence also relate to their perceptions of their ability to use computers in the classroom, particularly in relation to their children's perceived competence.

2.2.3 The Benefits of Using Computers in Education from Teachers and Students Perspectives

Technology comes in a range of forms in Primary Schools. Included in this range are the tools teachers use to deliver courses, develop course materials and manage classroom administration. Add to that list the office tools used to handle finances,

maintain communication, keep records and process documents and you have the main technology components used in schools (Fouzieh, & Gilakjani, 2013).

The study of suggested that, Askar and Umay (2001) Computers have been used to create electronic libraries and catalogues to enhance academic research work. “Many libraries now provide online resources to facilitate learning and research electronically”. Askar and Umay (2001) reported that ICT is a transformative tool and its full integration into the school systems is necessary to prepare students for the information society they will inherit. The Ministry of Education, Science and Sports implemented education reforms in September 2007 with emphasis on ICT. Currently, ICT has been incorporated into the school curriculum, beginning with the pre-tertiary institutions. ICT is now a subject on the schools’ timetable from primary to senior high school (Askar & Umay 2001).

Moreover, Teo (2008) revealed that, The Internet allows cost-effective information delivery services, collaborative and distance education, more than has ever been imagined. The Internet has myriad websites to help teachers develop or improve lesson plans, exchange ideas, obtain information, and find free animations and simulations to enliven their lessons.

According to Teo (2008) most Internet-based collaborative learning projects include teacher support and training, and conference proceedings are published regularly on the Web. Chat rooms or forums may become a laboratory for new ideas. Online study resources can also provide interactive tools for teachers to access feedback from students. Computer based assignments are an effective way of ascertaining

students' understanding of concepts. Students also learn more quickly, demonstrate greater retention, and are better motivated to learn when they work with computers.

Askar and Umay (2001) meta-analysis study revealed that, on average, students who used ICT-based instruction scored higher than students without computers. The students also learned more in less time and liked their classes more when ICT-based instruction was included.

In Iran, Fouzieh and Gilakjani, (2013) examined the efficiency of the use of paper and electronic dictionaries for learning vocabulary in an experimental study. The experimental group used electronic dictionaries while the control group used paper dictionaries. The results of the experiment revealed that the experimental group improved significantly regarding their vocabulary learning compared to the control group. Likewise, Gobbo and Girardi (2001) investigated the role of electronic dictionaries in English learning of undergraduates of engineering and humanities. They reported that the speed of reference was a very important merit of using electronic dictionaries while multimedia properties were not considered as a significant benefit.

Mehdipour and Zerehkafi, (2013) the usage of mobile tablets in the learning environment can yield many benefits for students in terms of improving their motivation, collaboration, creativity and developing IT skills. The overall learning experience can be improved through audio/video mediums; hence the use of mobile tablets in such environment helps them to learn in an interactive way. Moreover, mobile tablets are rich in sources of audio/visual tools, such as charts, graphs and

images. With these visual elements, learning experience becomes more engaging and fun for the students that ultimately promote them to learn and develop.

Moreover, teachers can also benefit from the technology such as in classroom management and organization, student evaluation, visual quality of teaching materials and finding a unique teaching approach with the use of mobile tablets in classrooms. As learning is no longer just a linear process but one in which all information is connected seamlessly and visually with mobile tablets, they enhance the way of processing and presenting information. In addition, they provide inexpensive opportunities like continuous and situated learning support, potentially a more rewarding learning experience, and improving students' participation (Rossing, Miller, Cecil & Stamper, 2012).

Nevertheless, from the study of Andiema, (2015) it was found that, the teacher candidates think that teaching environment will be enriched and also the Internet will make a positive impact on this situation. And also, according to students' feedbacks, it is observed that; when the flexibility provided to the students due the nature of mobile tablets is considered, they think the communication and joint studies/works will become easier in virtual environments.

Moreover, the study of Mehdipour and Zerehkafi, (2013) argued that the benefits of using computer in education from teachers and students perspectives is sometimes negative since computer uses in education leads to increased moral degradation within the local communities, from computer uses now days students are affected by internet pornography, cyber bullying and other anti-social behaviors is a worrying emerging problem to the uses of computer for education.

The Benefits of Using Computers in Education from Teachers and Students Perspectives is influenced by their planned behavior which influences their attitude toward the benefits of Using Computers in Education. According to Ajzen's Theory of Planned Behavior (TPB), behavioral intention is predicted by attitude toward the behavior, subjective norm, and perceived behavioral control. The theory to avoid inconsistent findings by using a specific target behavior by means of computers only to create and deliver lessons, and then used the Theory of Planned Behavior to investigate teachers' decisions (Lee, Cerreto, & Lee, 2010).

Results of the closed-ended questionnaire from the study of Lee, Cerreto and Lee, (2010) revealed that attitude toward the behavior, subjective norm, and perceived behavioral control all were significant predictors of teachers' intentions. However, attitude toward the behavior had twice the influence of subjective norm and three times that of perceived behavioral control. This finding suggests that teachers must have positive attitudes about using computers to create and deliver lessons. They are less concerned about what others think of this practice, and far less bothered by internal or external constraints. Results provide specific information that can be used to design effective teacher development programs and remind Theory of Planned Behavior researchers of the importance of using specific definitions of the target behavior (Lee, Cerreto, & Lee, 2010).

2.2.4 Teachers and Students Access to Computers

The study of Saunders and Pincas (2004) found that 81% of tertiary students had access to a personal computer off campus, while 97% described themselves as regular email users. A more recent survey of young people generally, rather than just

college students, shows that 93% of young adults (aged 18-29) in America use the internet.

Lloyd (2005) quotes figures from Australian research from 2003 which show that nearly 85% of students have access to computers at home every day, while only 9% are reported to never have access to computers at home. Two years later, Oliver and Goerke (2007) surveyed first year English and business students in Australia, and found that over 90% used online resources for study purposes, but also suggested that, while there was a growth in students' general use of social networking, the use was not for study purposes.

Hobbs and Haines, (2012) revealed that, 80% of these students own their own computer. Of these, over half own laptops, with 84% of all respondents having access to a computer at their home. Computer labs provide access on campus for those students who do not own a computer. Five computer labs with 24 computers in each are open at different times over a week for scheduled classes and for individual drop-ins.

Huang and Liaw (2005), In European Schoolnet (2010) survey on teachers' use of Acer net books involving six European Union countries, a large number of participants believed that the use of net book had had positive impact on their learning, promoted individualized learning and helped to lengthen study beyond school day.

Teachers' computer experience relates positively to their computer attitudes. The more experience teachers have with computers, the more likely that they will show

positive attitudes towards computers (Tsitouridou, & Vryzas, 2004). Positive computer attitudes are expected to foster computer integration in the classroom. According to Okorie, & Agah, (2014) for successful transformation in educational practice, user needs to develop positive attitudes toward the innovation.

Moreover, Effective adoption and integration of ICT into teaching in schools depends mainly on the availability and accessibility of ICT resources such as hardware, software. Obviously, if teachers cannot access ICT resources, then they will not use them. Therefore, access to computers, updated software and hardware are key elements to successful adoption and integration of technology (Fco, & Garcia, 2001).

A study by Yildirim (2000) found that access to technological resources is one of the effective ways to teachers' pedagogical use of ICT in teaching. Further a study of 814 faculty members in higher education in Turkey showed that majority of the teacher and student respondents reported having access to computers and the internet. 82.5% and 81.2% of faculty members had access to computers and internet respectively (Erdemir, Bakırcı, & Eyduran, 2009).

Nevertheless, the result from the study of Buabeng-Andoh, (2012) revealed that 57% of the respondents had computers at home and 33.4% had access to computers at school. This is an indication of teachers' inadequate access to computers. Further the National Centre for Education Statistics (2000 as cited in Afshari, Bakar, Luan, Samah, & Fooi 2009) report revealed that over 50% of the respondents used computers for research and lesson preparation in their schools. About 78% of the respondents complained of inadequate access to computers in classroom. Of this

percentage, 38% of the respondents stated that inadequate computers were not great barriers to ICT use in their teaching, but improved availability and fairness of access to technology resources by teachers, students and administrative staff is essential.

Access to hardware and software is not only important, but also the use of suitable kind of tools and program to support teaching and learning. "Access to appropriate technology means that affordances and constraints of a technological tool need to be carefully considered when the tool is incorporated in lesson". Also, it is necessary to make a distinction of access to ICT resources (Fouzieh, & Gilakjani, 2013). For instance, in a study of pre-service teachers by Buabeng-Andoh, (2012), revealed that 37.4% of the teacher had access to computers and 14.4% of the students had access to computers, implying that computers are more available to teachers than students. Obviously, to encourage student-centred technology learning, it is necessary that learners have access to quality technology resources.

Akpinar, (2003) revealed that, student's computer use and their academic achievement have a positive relationship. They also emphasized that for enhancing student's achievement the role of teachers in implementing use of computers should be high. Additionally, integrating computers into the classrooms and support students to use computers in reading rooms is more likely to occur at the primary rather than the secondary schools help to master basic skills for students that prepare them to apply complex concepts in the future.

Moreover, in their study of Albarracin, Johnson, Kumkale and Zanna, (2005) added that, The same is true for teachers and administrators as computer and internet services are not available in the sample schools. Especially, teachers and

administrators need computers and internet access for different purposes such as: teaching, studyment, attendance, to update their knowledge and practices. However, teachers, students and school administrators have not got any technological skills in the times of technology due its unavailability of computers and internet accesses.

The study of Andiemma, (2015) revealed that, in developing countries like Kenya Teachers and Students Access to Computers is limited by the fact that, Computers are still very expensive and despite spirited efforts by the government agencies, NGO, corporate organizations and individuals to donate computers to as many schools as possible, there still remains a big percentage of the schools unable to purchase computers for use by their pupils, in a country with a GDP of \$1600, majority of the individuals and schools cannot afford to buy a computer and consider it as a luxury item, more expensive than a TV. While 2nd hand computers cost as little as \$150 and branded new computers being sold at \$500 or higher.

Moreover, the study of Okorie and Agah, (2014) revealed that, there is still a strong perception especially by the older generation in developing countries that computers require highly skilled personnel to operate them, while this may not be the case, some school administrators also fear that their students will be exposed to adult sites and other undesired sites, through the use of the internet. Some also fear the infection of viruses to their computers leading to data loss, while this may be true to some extent, proper education on the safe use of computers and help alleviate some of this fear.

Nonetheless, the African community leaders who are charged with looking at the interests of a given community do not see the need to purchase and subsequent

installations of computers to their schools as a priority. They consider health care, provision of water and other amenities as more important than buying computers for their schools (Buabeng-Andoh, 2012).

However, on the other hand, the study of Andiema, (2015) on Teachers and Students Access to Computers revealed that, access to computer in many developing countries like Kenya has been hindered by factors like teacher in primary schools may fear being rendered irrelevant by the introduction of computers in his/her class. The 'feel' that the teacher still remains an authority and a 'know it all' in class is something that most teachers cherish, and anything that makes them otherwise is deemed an enemy of the classroom.

2.3 Empirical Literature Review

The study of Işman, Mehmet, Fahme, Zehra, and Fahriye, (2004) argued that, with the developments of Information High Technology, all applications of the instruction start to have tendency towards technology based instruction instead of directed, teacher-centered instruction. It is important to mention that computers are the main instructional support to the learning and teaching process. As a human being, there is an adaptation process of the new developments and implications as well.

Therefore; the research based study handled the attitudes of students towards computers and its new trends. By the way; attitudes towards teacher-centered instruction versus student centered instruction and tendency towards the place of technology in learning and teaching process can be determined with the reflections of the statistical surveys. Required research reflected the consciousness about the use of computer in every day of life and educational cycle as well. It is important to

mention that computers require more alternatives and advantages to students and their educational studies. Computers provide fast, easy research and analysis for the students studying field. As a technological tool, it provides the equal standards, opportunities and easy path for the successful understanding and also meaningful learning for students. In order to be reflective, the study recommends that, on the usage of computers and facilities, there should be examination of the thoughts, attitudes of students towards computer (Işman, Mehmet, Fahme, Zehra, & Fahriye, 2004).

Moreover, the study of Fouzieh and Gilakjani (2013) argued that, Computer technology is an important and necessary part in our personal and professional lives. It has made many of our everyday tasks easier and faster. In the classrooms, some important variables such as the classroom teacher and the teacher's attitudes towards the effective use of computer technology have not been paid attention. Their study examined how teachers understand the use of computer technology resources in English language teaching.

The aims of Fouzieh and Gilakjani (2013) study was to define the teachers' attitudes, explain teachers' attitudes and computer technology training, discuss computer technology and professional development, elaborate teachers' attitudes and computer technology integration, define teachers' attitudes and computer experience, discuss teachers' attitudes and computer anxiety and interest, and review teachers' attitudes and computer literacy. By reviewing the related literature, it is indicated that simply introducing computer technology resources does not guarantee teachers' use of these in practice. Knowledge of teachers' attitudes about teaching, learning, and computers

provides them the opportunity to design and implement English language teaching and learning.

In their study Fouzieh & Gilakjani (2013) concluded that, Technology resources do not guarantee EFL teachers language instruction. Teachers should be convinced of the usefulness and benefits of these resources in improving teaching and learning. This suggests the need for effective guidance, support and training for teachers in integrating computer technology resources into language instruction through direct practical experience.

Training should not be limited to how to use computer technology; it should show teachers how they can make use of computer technology in improving the quality and effectiveness of their instruction, as well as how such technology resources can be effectively integrated into the curriculum. There is a need for ongoing training and assistance in helping teachers to better employ computer technology resources in pedagogic practices.

2.4 Research Gap

Empirical literature review shows that, a good number of similar studies have been conducted concerning the computer attitudes of primary school teachers and students but there is no study that identifies the willingness, the benefits of using computers in education, competences in using and accessibility for both teachers and students to computers. Both studies above were conducted within the different surroundings compare to the current, Işman, Mehmet, Fahme, Zehra, & Fahriye, (2004) was

conducted in Turkey, Lee, Cerreto, & Lee, (2010) was conducted within USA environment while Fouzieh & Gilakjani (2013) was conducted in Malaysia, again, both were conducted more than three years, respectively, from the above gap established, the gap necessitated the need to conduct further study in Tanzania context since none of the author's objectives were focusing on Tanzania.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Overview

Chapter three presents methodology of the study which examined the extent of computer usage among school teachers and students in Ilala Municipality. The chapter provided the following subsections of information on the area of the study, research design, study population and the sample and sampling techniques as well as data collection and data analysis techniques of the study, reliability, validity as well as ethical consideration.

3.2 Area of Study

The study was conducted in Primary schools located at Ilala district in Dar es Salaam. Operationally, These Primary schools were selected because they are among the best Primary schools in Ilala district in terms of providing better primary education. Area of the study was Ilala Municipality; the study selected Ilala Primary schools because it is the familiar place where the researcher works and has access to significant information that supported the study findings.

3.3 Research Design

The study used case study research design to collect information in an attempt to tackle research questions related to the extent of computer usage among school teachers and students. Case study is an intensive description and analysis of a single situation (Adam & Kamuzora, 2007). The study preferred qualitative type of case study research design as the design facilitates careful exploration of problem under

study using a variety of data sources. The main advantage of using a case study is its ability to draw information from many different sources such as interviews, observations and documentary review including historical findings/data (Kothari, 2004).

3.4 Research Approach

The study used a mixed approach of qualitative and quantitative to bring meaning on the findings under study. Quantitative approach was adopted in an attempt to give meaning by presenting the findings in numerical terms through percentage, tables and figures. Again, the study used qualitative approach subjectively to assess the attitudes, opinions and behaviour of respondents. An approach was applied to generate findings especially from interviews as well as supporting the discussion of the findings (Barreiro & Albandoz, 2001).

3.5 Study Population

Population is the totality number of people under investigation while a sample is a part of the population. The population for this study involved all teachers and students in Six Primary schools in Ilala Municipality.

3.6 Sample and Sampling Techniques

3.6.1 Sample

A sample is a subset of the population and a representative. A sample must have properties that best represent the population, so as to allow for an accurate generation of results (Saunders, Lewis & Thornhill, 2009). The sample size of the study

included 38 teachers and 100 students from Six Primary schools in Ilala district, the study selected the sample basing on the fact that in those six schools to have a reasonable number of teachers and students available, from the sample, the study selected six teachers and seventeen students approximately from six primary schools at Ilala District.

According to Yamane (2000), qualitative investigations typically involve the use of small samples; choice of sample size still is an important consideration because it determines the extent to which the researcher can make each of the four types of generalizations , sample size should be as large as possible and for this study sample size was calculated as follows below;

$$n = N / (1 + Ne^2)$$

Where: N= the entire population

n= Number of sample size

e= Error

$$\text{Hence; } n = 400 / (1 + 400 \times 0.09^2)$$

$$n = 138$$

The sample size of the study was presented in Table 3.1;

Table 3. 1: Sample Distribution

Type of Respondents	No of Respondents
Teachers	38
Students	100
Total	138

3.6.2 Sampling Techniques

This is the process of choosing the sample so as to make it representative of the population (Barreiro and Albandoz, 2001). This refers to the procedures used to select people, place or thing to study in the target area. It involved a process of selecting a subgroup from a large population with elements necessary for the study.

The study randomly selected 38 teachers and 100 teachers and students from Six Primary schools in Ilala district in sampling techniques. Furthermore, 10 key informants were randomly selected for interview. The study used random sampling; the technique was used because the study assumed that, all the elements of the population have the same probability of being chosen to belong to the sample and that the element cannot be selected again after being selected once.

3.7 Data Collection Techniques

This study used methods for collecting data which included a structured questionnaire with both open and close ended questions supplemented by in depth interviews for teachers, students and with key informants. The use of multiple instruments ensured validity and reliability of data collected (Adam & Kamuzora, 2007). Two sets of data were collected as follows.

3.7.1 Structured Questionnaire for Teachers

A questionnaire is a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents (Kothari, 2004). The study selected questionnaires because a large amount of information can be collected from a large number of people in a short period of time and in a relatively

cost effective way (Saunders, Lewis & Thornhill, 2009). Questionnaires were organized in a more likely so as to provide open and honest feedback in a more private way. The questionnaire was designed in such a manner that helps to minimize open-ended questions so as to get well structured responses. This approach helps in capturing information and subsequently analysis of the same. Self-administered questionnaires were designed.

3.7.2 Interview for Students

In-depth interviewing is a qualitative research technique that involves conducting intensive individual interviews with a small number of respondents to explore their perspectives on a particular idea, program, or situation (Barreiro and Albandoz, 2001). The study opted to use an structured interview because it provides much more detailed information than what is available through other data collection methods, such as surveys (Kothari, 2004). The study conducted in-depth interviews that involve some selected respondents. The researcher prepared the interview guide questions in connection to research questions. Interview helps to get reliable and valid information relevant to the research. Researcher made an appointment with respondents; each respondent was interviewed separately. Vital information was obtained based on the research questions as presented in chapter four.

3.8 Data Analysis Techniques

The collected data were qualitative and then coded; numbers were assigned to each answer in the questionnaire with a corresponding number on the coding sheet. The processing of data was aided by the use of (Microsoft Excel), this was computer

applicable software preferred because of its consistency and virtues of providing compatibility mode in problems analysis. The information that was coded from the questionnaire then transformed to the Ms-excel helping in drawing diagram that help in analysis and discussions of findings. Frequency tables, and graphs were worked out basing on the data entered into excel. The tables and graphs were used for presentation of findings.

The study collected qualitative data to provide explanation and clarifications of information appropriate by using quotation where necessary. Qualitative data were analyzed by using manual sorting and organizing the information based on the themes emanating from the data.

3.9 Data Reliability and Validity

Reliability refers to ability to obtain similar results by measuring an object, trait or constructed with independent but comparable measures (Kothari, 2004). This was determined as in measurement procedures, to certain whether or not the quality of an instrument to produce the same results when employed under the same conditions is attained.

Validity is the ability of the measuring instruments or research study to measure what it claims to measure (Adam & Kamuzora, 2007). To ensure validity, the measuring instrument (questionnaire) was pilot tested so as to able to refine it and ensure that respondents will not have any problem in responding to the questions. It ensured, to a certain extent, validity of questions and reliability of data to be collected.

3.10 Ethical Consideration

The study considered ethical issues when collecting data from respondents, the information provided were treated with high confidentiality as well as avoiding biases, respondents were treated fairly by the researcher.

CHAPTER FOUR

PRESENTATION OF FINDINGS

4.1 Overview

This chapter presents findings of the study that investigated the Extent of Computer usage among school Teachers and Students in Ilala Municipality, the study presented the findings based on research objectives and questions.

4.2 The Attitude of Teachers towards Computer Use

From the first specific objective the study was paying attention in determining the attitude of teachers towards computer use within the education. In order to capture data, the questionnaires were administered to teachers, who were required to respond to a 5 point likert scale, provided as strong agree (19), agree (16), neutral (1) to disagree (2) and (0) that strongly disagree. The higher the score on the likert scale, the higher the willingness to integrate computers in the educational system. Findings are provided in Table 4.1;

Table 4. 1: The Attitude of Teachers

Option	Frequency	Percentage (%)
Strongly Agree	19	50.0
Agree	16	45.7
Neutral	1	2.6
Disagree	2	5.3
Strongly Disagree	0	0
Total	38	100

Source: Field Data (2016).

Findings from table 4.1 indicate that, the willingness of primary school's teachers on integration of computers within the education based on the fact that computer is essential for teaching in primary schools. The study found 5.3% of respondents that

disagreed with the fact that, the use of computer is important for teaching while on the other hand, 2.6% of the respondents were neutral with the notion that, the use of computer for teachers in classes as 0% of respondents did not strongly disagreed with the concept.

However, the study found 45.7% of respondents that agreed with the fact that, the use of computers in primary schools is essential in teaching, as one of the respondents argued during an interview;

“You know, many teachers prefer using computers in teaching because it help us to deliver relevant materials to students on time compare to the traditional techniques which required a lot of time to prepare and difficult to store”.

Nonetheless, the study found a large number of respondents (50%) that strongly agreed, the use of computer is essential for teaching, as one of the respondents lamented during an interview;

“The application of computer in primary school education helps students to understand the lesson quickly with enjoyable mood which is very significant to the whole education system in the country”.

On the other hand, the study wanted to determine the willingness of teachers in primary schools about computer integration within the education. Respondents were asked if at any time they are welcoming the use of computer in primary schools, in

their reply, the study found 44.7% of the respondents that agreed with welcoming computer use in primary school's education. Again, the study found 7.9% number of respondents that strongly disagree with the concept that at any time teachers welcome the application of computer in primary education. Nonetheless, the study also found 0% of respondents that were neutral with welcoming the use of computers at any time in primary school's education.

Moreover, the study found 21.1% number of respondents that disagree with them as teachers welcoming the use of computers in primary education at any time, as one of the respondents lamented during an interview;

“The introduction of computer into primary school's education at any time is not essential; the foreword of the technology should take time considering the negative effects which may happen as the aftermath”.

On the other hand, the study found 26.3% of respondents that strongly agreed with the welcoming of computer use in primary school's education at any time. However, the study found 44.7% number of respondents agree that, at any time teachers welcome the use of computer in primary education, as one of the respondents argued during an interview;

“It very true at any time, we welcome the use of computer in primary education because it helps us in preparation of teaching materials and providing education information to students easily compare to manual way which is outdated”.

The study was also paying attention in understanding from teacher's point of view, if using computer makes primary school students worse. Respondents were asked if using computer in primary school education leads to worst students, in their response, the study found 5% of respondents that were neutral when asked if using computer makes students in primary school worse. On the other hand, the study found 11% number of respondents that strongly agree, using computer makes primary students worse, as one of the respondents argued during an interview;

“You know, any use of computer in primary education will make students more badly, because in computer there are many things which are negative also, students may spend a lot of time playing games instead of doing home works which may affect his or her performance”.

Moreover, the study found 16% of respondents that agreed with the fact that using computers in primary education will make students worse. However, the study found 26% number of respondents that disagree, application of computer technology in primary schools will make students worse than now. Nonetheless, the study found 42% number of respondents that strongly disagree with the perception that using computer technology in primary school education make students worse, as one of the teacher of Bunge Primary school revealed during an interview;

“Computer application in primary is very essential for the students, for instance, here at Bunge Primary school, students learn mathematics and science subject

through television which is specifically programmed for that job, the result is encouraging compare to before”.

Again, the study was interested in finding out if teachers don't prefer the use of computer integration in primary schools. Respondents were asked if they don't prefer the use of computer integration in primary schools, in their response, the study found 7.9% respondents that strongly agree with the fact that, teachers in primary schools don't prefer the use of computer integration while on the other hand; the study found 13.2% agreeing with them as teachers don't prefer the use of computer integration in primary education. Also, the study found 2.6% number of respondents that were neutral on the notion that, teachers in primary schools don't prefer the use of computer integration, as one of the teacher from Uhuru Mchanganyiko Primary School revealed during an interview;

“For me, I am confused between the positive impact computer technology brings to primary education and it's negative effect which may leads to poor performance of students, so preferring the application of the technology in primary education, I will prefer been neutral”.

Nevertheless, the study found 28.9% of respondents that disagree with the fact that, as teachers of primary schools, they don't the use of computer integration in education. However, the study found 47.4% number of respondents that strongly disagree with the fact that, teachers in primary schools don't prefer the use of

computer integration, as one of the respondents from Olympio Primary School argued during an interview;

“No, my sister we are very much preferring the application of computer in primary education because the technology helps students to obtain vital education skills which facilitates better education performance within the country”.

Furthermore, the study was also paying attention in finding out if ICT knowledge is the factor that leads to slow willing on adopting computer. Respondents were asked to identify if ICT knowledge is the factor that leads to slow willing in adoption of computer use in primary schools, in their reply, the study found 3% of respondents that were neutral with the concept; on the other hand, the study also found 10% number of respondents that strongly agreed with the fact that, ICT knowledge is the factor that leads to slow willing in adoption of computer use in primary schools.

Moreover, the study found 24% number of respondents that agreed with the concept that, ICT knowledge is the factor that leads to slow willing in adoption of computer application in primary schools within the country, this implies some of the teachers don't fully understand the significance of computer integration in primary education.

Also, the study found 29% of respondents that disagreed with the conception that, ICT knowledge is the factor that leads to slow willing in adoption of computer use in primary schools. Again, the study found 34% number of respondents that argued, ICT knowledge is not the factor that leads to sluggish eager in implementation of computer utilization in primary schools within the country.

The study was paying attention in finding out the competencies of teachers especially in using computer technology in teaching students within primary schools in Tanzania. Respondents were asked to identify if teachers in primary schools are very skilled in using computers, the study found 13.2% of the respondents that disagreed with the fact, also, the study found 5.3% that were neutral with the idea that teachers in primary schools are very skilled in using computers.

However, the study found 31.6% of the respondents that strongly agreed with the statement teachers in primary schools are very skilled in using computers. The study also found 39.5% of the respondents that agreed with the fact that teachers in primary schools are very skilled in using computers.

On the other hand, the study was also paying attention in identifying if among the slow adoption of technology is the fact that primary school's teachers are unskilled in adopting computer integration. Respondents were asked to identify if primary schools teachers are unskilled in adopting computer integration within the country. In their reply, the study found 8% of respondents that strongly agree with the fact that primary school's teachers are unskilled in adopting computer integration. On the other hand, the study found 13% of respondents that agreed with the notion that primary school's teachers are unskilled in adopting computer integration. Again, the study found 19% of the respondents that were neutral with the notion above.

Moreover, the study found 26% of the respondents that strongly disagreed with the idea that primary school's teachers are unskilled in adopting computer integration. The study however found 34% number of respondents that disagreed with the fact

that primary school's teachers are unskilled in adopting computer integration within the country.

Furthermore, the study was also interested in finding out the competencies of primary school teachers in using computers. Respondents were asked if lack of trainings facilitate to unskilled teachers on the application of computer in education. In their response, the study found 2.6% of respondents that strongly disagreed with the fact. Also, the study found 10.5% respondents that disagreed with lack of trainings been the factor that facilitate to unskilled teachers. However, the study found 15.8% of respondents that were neutral with the fact.

Again, the study found 34.2% of respondents that strongly agreed with fact that lack of trainings facilitate to unskilled teachers. Also, the study found 36.8% number of respondents that agreed with lack of trainings been amongst the factors that facilitate to unskilled teachers in country's primary school, as one of the Teacher from Gerezani Primary School revealed during an interview;

“It true that one of the factor which slows down the adoption of computer integration in primary schools education is lack of sufficient computer training, many of us the technology is new in terms of application”.

Nevertheless, the study was interested in identifying if incompetence is a result of inappropriate ICT infrastructures within primary schools. Respondents were asked to identify if incompetence is a result of inappropriate ICT infrastructures. In their response, the study found 10.5% of the respondents that strongly disagreed with

incompetence been the result of inappropriate ICT infrastructures. Again, the study found 18.4% respondents that disagreed with incompetence been the aftermath of inappropriate ICT infrastructures. Also, the study found 15.8% of respondents that were neutral with the statement.

Moreover, the study found 23.7% of the respondents that strongly agreed with the fact that incompetence is the result of inappropriate ICT infrastructures within schools. Nonetheless, the study found 31.6% number of respondents that agreed with incompetence of primary schools teachers on using computer technology been the result of unfortunate ICT infrastructures within these schools.

The study was also paying attention in findings out from teacher's perspectives if students are skilled enough on the use of computer in education. Respondent were asked to identify id their students are skilled enough on the use of computer in education. In their response, the study found 8% of respondents strongly agreed with the statement while 11% also agreed with students been skilled enough on the use of computer in education. Again, the study found 21% of respondents that were neutral with the fact that students are skilled enough on the use of computer in education.

Also, the study found 26% of respondents amongst teachers in primary schools strongly disagreed with students been skilled enough on the use of computer in education. However, the study found 34% number of respondents that disagreed with the fact that primary school students are skilled enough on the use of computer in education.

Furthermore, the study was also paying attention in findings out if students in primary schools have poor computer knowledge. Respondents were asked to identify from the statement if students at their schools have poor computer knowledge. In their reply, the study found 11% of the respondents that strongly disagreed with students having poor computer knowledge. The study found 13% number of respondents that disagree with students having poor computer knowledge. Also, the study found 18% of respondents that strongly agree with students having poor computer knowledge.

Moreover, the study found 24% of respondents that were neutral with statement students have poor computer knowledge. Again, the study found 34% number of respondents that agreed with the fact that students in primary schools have poor computer knowledge.

4.3 The Attitude of Students towards Computer Integration

The study was also interested in determining the attitude of students towards computer integration. The respondents were asked if Computer integration in education facilitates learning, as presented in Table 4.2;

Table 4. 2: The Attitude of Students

Option	Frequency	Percentage (%)
Strongly Agree	57	57
Agree	22	22
Neutral	7	7
Disagree	10	10
Strongly Disagree	4	4
Total	100	100

Source: Field Data (2016).

The study found 4% number of respondents that strongly disagree with the idea that computer integration in education facilitates learning; also the study found 10% of respondents that disagreed with the conception, again the study found 7% number of respondents that were neutral with the notion that computer integration in education facilitates learning for primary school students.

However, the study found 22% number of respondents that agreed with the fact that, computer integration in education facilitates learning. Again, the study found a large number of respondents 57% which strongly agreed with the fact that, computer integration in education facilitates learning for primary school students, as one of the student of Boma Primary School revealed during an interview;

“The introduction of computer in primary education facilitates improvement in academic profession, as students we will be able to find different materials in the internet which are relevant to their studies”.

Nevertheless, the study was also paying attention in finding out; if the use of computer leads to enough sources of materials. Respondents were asked if the application of computer directs to sufficient sources of materials. In their reply, the study found 7% disagree with the use of computer which leads to enough sources of materials. Also, the study found 5% number of respondents with the fact while the study found 6% that strongly disagreed with the fact that, the use of computer leads to enough sources of materials.

Again, the study found 33% of the respondents that strongly agreed with the use of computer leads to enough sources of materials. Also, the study found 49% number of

respondents that agreed with the fact that, the use of computer leads to enough sources of materials for students within the country's primary school.

What is more, the study was interested in finding out, if the computer integration enhances student's understanding of subjects. Respondents were asked, on the Computer integration enhancement student understands, in their reply, the study found 3% of the respondents that were neutral with the conception that, Computer integration enhances student's understanding. Also, the study found 10% that strongly disagree with the fact that, computer integration enhances students understanding. Moreover, the study found 8% of the respondents that disagreed with the notion that, Computer integration improves student's understanding.

Again, the study found 28% number of respondents that, agreed with the fact, Computer integration enhance students understanding. Also, the study found 51% number of respondents that strongly agreed with the fact that, Computer integration augment student's understanding within primary schools in the country.

Once more, on finding out the willingness of students about computer integration in primary schools education, the study was also paying attention in identifying if ICT integration for students is a waste of time. The study found 9% of respondents that were neutral with the conception that ICT integration within primary school's education is the waste of time. Again, the study found 10% as number of respondents that strongly disagreed with the fact that, Information and Communication Technology (ICT) as the waste of time for students in primary schools.

Moreover, the study found 14% of respondents that strongly agreed with the fact that, Information and Communication Technology (ICT) as the waste of time for many primary school students. Again, the study found 17% of respondents that agreed with the statement that, ICT integration in education for country's primary schools is the waste of time, as one of the student from Gerezani Primary School revealed during an interview;

“As a primary school student to be introduced in the application of computer may lead to other negative impact, some of us may take a lot of time watching pornography which is contrary to the purpose of introducing the technology at first place; therefore, it is a waste of time to be integrated into primary education”.

However, the study found 50% of the respondents that disagreed with the conception that, ICT integration is a waste of time for primary school's students, as one of the student from Uhuru Wasichana Primary School lamented during an interview;

“The application of computer in primary schools will assist us as students to have the chance of learning effectively with enough materials which are relevant for many subjects, for instance, computer my assist us to find out many historical information”.

Again, the study was also interested in finding out if the use of Information and Communication Technology (ICT) in primary school's education leads to bad

behavior to students. Respondents (students) were asked to identify if the application of computer technology in primary school leads to bad behaviour. In their response, the study found 5% of respondents that strongly agree with the fact that, use of ICT in education leads to bad behavior while 7% of the respondents agreed with the fact. Again, the study found 14% number of the respondents that were neutral with the idea using ICT in education leads to bad behavior for students.

Nonetheless, the study found 30% as number of respondents that disagreed with the fact that the application of ICT in education leads to bad behavior. However, the study found 44% number of respondents that strongly disagreed with the fact that, the implementation of ICT in primary education leads to bad behavior for students. This implies that students don't view the introduction of computer in education as the sign of negative learning rather positive.

The study was also interested in testing the views of primary school students on their competencies in using computer technology. Respondents were asked to identify if students are skilled enough on the use of computer in education, the study found 3% respondents strongly disagree with students having enough skills on the use of computer. The study on the other hand, found 10% respondents that disagree with students having enough skills on the use of computer in education. Also, the study found 14% number of respondents that were neutral with students having enough skills to use computer in education.

Again, the study found 17% of respondents that strongly agreed with the fact that students are skilled enough to use computers in education. However, the study found

a more than a half number of respondents 56% that agreed with the fact that students in primary schools are skilled enough on the use of computer in education.

The study was also paying attention in determining the view of students on the fact that home background determines their competency in using computers. Respondents were asked to determine their competency on using computer if it is the result of home background. In their reply, the study found 2% of respondents that strongly disagreed with the statement. Also, the study found 5% number of respondents that disagree with home ground been the determining factor for student's competency in using computers. Moreover, the study found 8% of respondents that were neutral with the statement that home background determines the competency of students in using computers.

Nonetheless, the study found 24% of respondents that agreed with the statement that home background determines the competency of students in using computers. However, the study found a large number of respondents (61%) that strongly agreed with the fact that home background determines the competency of students in using computers, as one of the student from Olympio Primary School revealed during an interview;

“Yes it is true, many of us becomes computer literate not from schools environment but from home ground, if at home there is no computer it very hard to get the chance in practicing what we have learn here in school”.

The study was also interested in finding out the fact that unskilled primary schools teachers in ICT lead to unskilled students. Respondents were asked to identify if unskilled primary schools teachers in ICT lead to unskilled students in primary school. In their response, the study found 1% of respondents that strongly disagree with the fact that unskilled primary schools teachers in ICT lead to unskilled students. Also, the study found 4% and 6% number of respondents that disagreed and other were neutral with the fact that unskilled primary schools teachers in ICT lead to unskilled students.

Again, the study found 21% of respondents that strongly agreed with the idea that unskilled primary schools teachers in ICT lead to unskilled students. Nonetheless, the study found a majority number of respondents 68% that agreed with the fact that teachers who are unskilled in primary schools especially in ICT lead to unskilled students, as one of the student from Uhuru Mchanganyiko argued during an interview;

“It is true that for us to be unskilled in ICT is the result of teachers who are not skilled enough in computer technology because we learn from what teachers taught us in classes, therefore, if teachers is killed enough then the result will be positive and vice versa”.

Moreover, the study was also interested in finding out if incompetence is a result of inappropriate ICT infrastructures. Respondents were asked if student’s incompetence is a result of inappropriate ICT infrastructure. In their response, the study found 4% of respondents that strongly disagreed with the idea incompetence in primary schools

are a result of inappropriate ICT infrastructures. Also, the study found 5% respondents that disagreed with the fact. The study found 13% number of respondents that were neutral with incompetence been the result of inappropriate ICT infrastructures.

Again, the study found 36% of respondents that strongly agree with incompetence been the result of inappropriate ICT infrastructures within primary schools. However, the study found 42% number of respondents that agreed with the fact that, incompetence is a result of inappropriate ICT infrastructures within primary schools in Tanzania.

Nevertheless, the study was also paying attention in finding out if poverty reflects lack of student's competency in using computers. Respondents were asked to identify if poverty reflects lack of students competency in using computers. In their response, the study found 2% and 4% of respondents that strongly disagreed and the other disagreed with the notion that poverty reflects lack of students' competency in using computers respectively. Also, the study found 11% number of respondents that were neutral with the fact that poverty reflects lack of students' competency in using computers.

Again, the study found 31% of respondents that strongly agreed with the statement while the large number of respondents 52% agreed with fact that poverty reflects lack of students' competency in using computers within primary schools in the country, as one of the student from Uhuru Wasichana Primary School argued during an interview;

“Many of us comes from poor families that cannot afford buying computers, this leads many of us to have insufficient competency on the technology due to lack of practices”.

On the other hand, the study was interested in finding out if students have poor computer knowledge. The respondents were asked to identify if student in primary schools have poor computer knowledge. In their reply, the study found 9% of respondents that strongly agree with students having poor computer knowledge. Also, the study found 16% number of respondents that agreed with the fact that in primary schools student have poor computer knowledge. Nonetheless, the study found 22% of respondents that were neutral with the fact that student have unfortunate computer knowledge.

Again, the study found 25% of respondents that strongly disagreed with the idea that student have poor computer knowledge. However, the study found 28% number of respondents disagreed with the statement that primary school’s student have underprivileged computer knowledge.

4.4 The Benefits of using Computers in Education from Teachers and Students Perspectives

4.4.1 The Benefits of using Computers in Education from Teachers Point of View

The study was paying attention in determining the benefits of using computer in primary school’s education from teacher’s point of view. Respondents were asked if

computer improves academic works in primary schools education, as Illustrated in Figure 4.1;

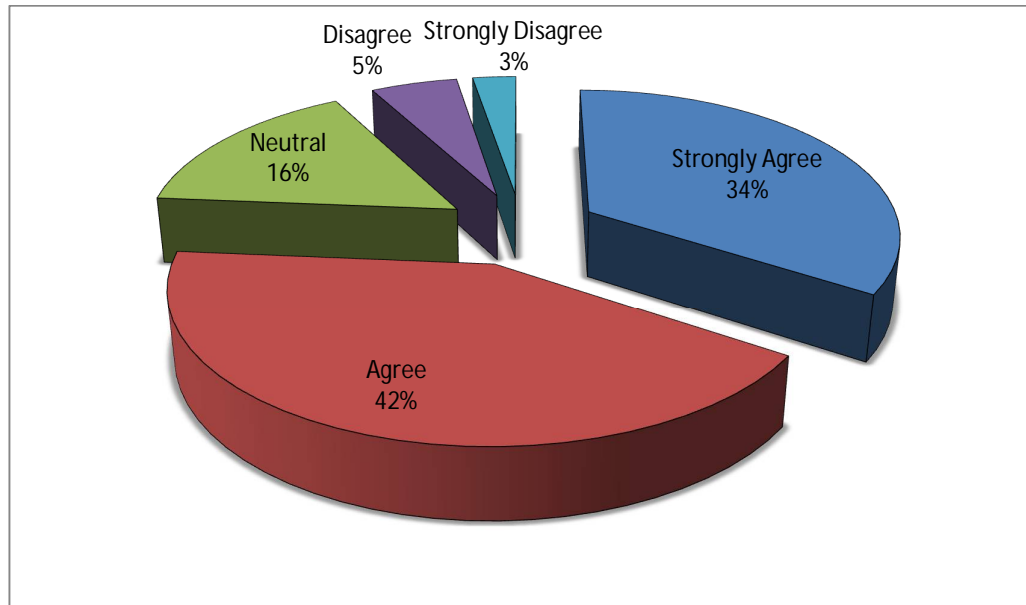


Figure 4. 1: The Benefits from Teachers Point of View

Source: Field Data (2016)

The study found 3% of respondents that strongly disagreed with the fact that computer improve academic works for teachers, again, the study found 5% of respondents that disagreed with the notion. Also, the study found 16% of respondents that were neutral with the statement that computer in primary schools enhance teacher's academic works.

Nevertheless, the study found 34% of the respondents that strongly agreed with the conception that computer enhance academic works. Again, the study found 42% number of respondents that agreed with the idea computer technology in primary schools enhance teacher's academic works within the country, as one of the teacher from Bunge revealed during an interview;

“Computer technology is very essential to primary academic works since it help us in all matters of teaching especially in simplifying our work compare to before where we used hardcopies”.

On the other hand, the study was also interested in determining if since the introduction of the computer technology in primary schools, the lessons plans have improved. Respondent were asked since the introduction, computer has improved lesson plans in primary schools. In their reply, the study found 5.3% of the respondents, strongly disagreed with that idea. Again, the study found 10.5% of the respondents that disagreed with the notion while 7.9% of the entire teacher’s respondents were neutral when asked if computer improves lesson plans in primary school education.

Nonetheless, the study found 31.6% of the respondents strongly agreeing with the fact, computer improves lesson plans, however, the study found 44.7% number of respondents that agreed with the statement that computer improves lesson plans in primary schools education.

Furthermore, the study was also interested in finding out the observation of teachers on ICT integration in education makes possible in lesson understanding. Respondents were asked if ICT integration in primary education makes possible in student understanding, in their reply, the study found 3% of respondents that strongly disagreed with the notion; also the study found 5% number of respondents that disagree with the fact that, ICT makes possible for student understanding. Again, the study found 16% of the respondents that were neutral when asked if computer

integration in primary school's education makes possible for understanding in primary school students.

Moreover, the study found 31% of respondents that strongly agree ICT makes possible for students understanding of primary's school subjects. However, the study found 45% number of respondents that agreed with the notion that ICT integration makes possible for students to understand their subjects effectively, as one of the Teacher respondents from Uhuru Mchanganyiko revealed during an interview;

“The application of computer facilitates students understanding of the subjects much comfortably compares to before where the only was using hardcopy which was not motivating to teachers as well as our students”.

On the other hand, the study was also paying attention if computer assist in protecting the environment. The study found 0% none number of respondents that didn't strongly disagree with the fact that computer protects environment. The study again found 2.6% of the respondents disagree with computer assisting primary schools to protect the environments, also, the study found 10.5% of the respondents were neutral with the fact that, computer assists in protecting environment.

On the other hand, the study found 36.8% of respondents that strongly agreed with the fact that computer assist in protecting environment. Also, the study found 50% number of respondents that agreed with the idea that computer assists primary schools in protecting the environment within the country.

Again, the study was also interested in finding out the perception of primary school teachers on the fact that, ICT promotes independent learning for students. Respondents were asked to identify if ICT promotes independent learning for students within primary schools, in their response, the study found 3% of respondents that disagreed and strongly disagreed with the notion that ICT promotes independent learning. Also, the study found 10% of respondent that were neutral with the idea that ICT promotes independent learning within primary schools.

Furthermore, the study found 34% of the respondents that strongly agreed with the fact that ICT promotes learning within primary students, again, the study found a half number of the respondents (50%) that agreed with the statement if ICT promoting independent learning for primary school students as well as teachers, as one of the teacher from Olympio Primary School lamented during an interview;

“Many of our students now days have an access for computer or Smart phones, therefore having the chance of learning extra apart from what us as teachers provide have been easy, so we expect students to know much from the assistance of technology”.

Nonetheless, the study was interested in finding out the perception of primary school teachers on idea that computer integration in primary motivates teaching. Respondents were asked to identify if computer integration motivates teaching practices, in their response, the study found 2.6% of the respondents that strongly disagree with the fact that computer integration in primary schools motivates teaching practices. Again, the study found 5.3% of respondents that agreed with the

statement, on the other hand, the study found 7.9% of the respondents that were neutral when asked if computer integration in primary schools motivates teaching.

Also, the study found 28.9% of respondents that agreed with the proclamation that computer integration in primary schools motivates teaching. However, the study found a slightly more than 55.3% number of the respondents that strongly agreed with the statement that computer integration motivates teaching practices for teachers in primary schools, as one of the Teacher from Gerezani Primary School lamented during an interview;

“Computer helps us as teachers in primary schools to minimize the time spending in preparing notes and teaching, for instance the kind of job which required one hour will take on ten minutes through the integration”.

Furthermore, the study was also paying attention if the introduction of computer in primary schools leads to moral degradation among students. Respondents were asked to recognize if computer leads to increased moral degradation within primary schools. In their reply, the study study found 3% of the respondents were neutral with computers leading to moral degradation among students. On the other hand, the study found 5% of the respondents disagreed with computer been the leading pact in moral degradation. Also, the study found 13% of respondents that strongly disagree with computer having a contribution in moral degradation among students within primary schools.

Again, the study found 26% of the respondents identifying and agree that computer leads to moral degradation within primary schools. Nevertheless, the study found a more than a half number of respondents (53%) that strongly agree, computer leads to moral degradation among students within primary schools in the country, as one of the Teachers in Uhuru Mchanganyiko revealed during an interview;

“You know, technology has come with many disadvantages, one of them been some students spend a lot of time watching porno movies and pictures rather than finding materials which are relevant to their subjects”.

4.4.2 The Benefits of using Computers in Education from Students Perspectives

The study investigated student’s perspectives on the benefits of using computers in education. Respondents were asked to identify if computers expand academic knowledge; as presented in Table 4.3;

Table 4. 3: The Benefits from Students Perspectives

Option	Frequency	Percentage (%)
Strongly Agree	51	51
Agree	34	34
Neutral	8	8
Disagree	4	4
Strongly Disagree	3	3
Total	100	100

Source: Field Data (2016)

Table 4.3 presents the insight of students on the benefits computer brings which is expanding their academic knowledge. The study found 3% and 4% respectively as number of respondents that strongly disagreed and disagreed with the conception that computers expand academic knowledge.

The study also found 8% of the respondents that were neutral with the idea that computer expands student's academic knowledge of primary schools within the country. The study found 34% as number of respondents that agreed with computer been among the factor that expands the academic knowledge of students. Again, the study found a slightly more than a half number of respondents 51% that strongly agreed with the notion that computer technology expands students academic knowledge within primary schools in the country.

On the other hand, the study was paying attention in finding out the benefits computer have in helping students in searching for academic materials. The study found 1% of the respondents that strongly disagreed with the fact; again, the study found 2% of the respondents that disagreed with the statement computer help students in searching for academic materials within primary schools.

Again, the study found 7% number of respondents that were neutral with the statement that computer helps primary school's students in searching for academic materials for education purposes. The study found 28% of the respondents that agreed with the fact that computer help students in searching for vital academic materials.

Also, the study found a majority number of respondents (62%) that strongly agreed with the conception that computer facilitate primary school's students in searching for significant academic materials from other sources apart from what were taught in classrooms by teachers, as one of the student at Olympio Primary School lamented during an interview;

“Yes, computer has been a great help in our education especially in searching for vital academic materials as now the world in like a one village, we can access materials from other parts of the world which clarify much about the subject”.

The study was also interested in finding out if computer technology in primary schools increases interest level of students in education. Respondents were asked to identify the influence of technology in increasing the interest level of students in education. In their reply, the study found 8% of the respondents that strongly disagreed with the fact that computer increases interest level of students, also, the study found 11% respondents that disagreed with the fact. Again, the study found 23% of respondents that were neutral with computer technology been the instrument that increases interests level of students within primary education.

Again, the study found 16% of respondents that strongly agreed with computer technology have an increase in the level of student's interests within education. Also, the study found 42% number of respondents that agreed with the fact that, computer technology increases the level of interests within primary school students.

Furthermore, the study was interested in identifying if computer integration enhances student's understanding of the learning materials. Respondents were asked to identify the enhancement of computer in student's understanding of learning materials. In their reply, the study found 11% that strongly disagree with the fact that computer enhances students understanding of the learning materials. Again, the study found 14% of the respondents that disagree with the fact. However, the study found 20% that were neutral with the conception that computer enhances student's understanding of the learning materials.

Again, the study found 22% of the respondents that strongly agreed with the fact that computer in primary schools enhance students understanding on the learning materials as among many benefits of the equipment. Also, the study found 33% number of respondents that agreed with the statement computer enhances student's understanding on the learning materials as one of the benefits of using the technology.

Again, the study was also paying attention in finding out if computer technology within primary schools promotes independent learning for students. Respondents were asked to examine if technology promotes independent learning for students, in their response, the study found 1% of respondents that strongly disagree with the fact. Again, the study found 2% of respondents that disagree with the notion that technology promotes independent learning for students. On the other hand, the study found 12% number of respondents that were neutral with the fact that among the benefits of computer technology is promoting independent learning for students.

However, the study found 20% number of respondents that agreed with the idea that computer technology promotes independent learning in primary schools. Again, the study found a large number of respondents (65%) that strongly agree with the fact that, computer technology promotes independent learning for primary school students within the country, as one of the respondents revealed during an interview;

“The introduction of computer technology in primary schools has promoted independent learning for us as students compare to before we used to depend on materials that were provided by teachers, now we can search for more materials from the internet through phones and computers”.

Also, the study was interested in finding out if among the negative effect of computer technology is the fact that it leads children to obscene materials such as pornography. Respondents were asked to identify if computer technology leads children to obscene materials such as pornography. In their response, the study found 10% and 13% number of respondents respectively that disagreed and other strongly disagreed with the fact that computer leads children to obscene materials such as pornography.

Also, the study found 17% of the respondents that were neutral with the notion that computer technology leads to obscene materials such as pornography and affects student’s performance within the primary education.

Again, the study found 28% of the respondents that agreed with the idea that computer lead to children in primary schools to have an access to obscene materials

such as pornography. However, the study found 32% of the respondents that agreed with the idea among the negative benefits of computer in education is the fact that, the technology leads children to obscene materials such as pornography, as one of the student from Boma Primary School argued that,

“Among the effects of technology within primary schools is the negative usage among us as students, some of us instead of taking the advantage on the technology for educational purposes, some spending a lot of time watching negative things like pornography”.

The study was also interested in identifying the benefits of computer introduction in primary school education and if it may cause laziness in studying. Respondents were asked to identify if the introduction of technology in primary schools leads to laziness students in studying, in their reply, the study found 8% of the respondents that strongly agree with the fact that, technology causes laziness to students in their studies. Also, the study found 13% that agree with the fact on technology.

Again, the study found 25% of the respondents that were neutral with the fact that computer technology leads to laziness among students in primary schools within the country. On the other hand, the study found 24% number of respondents that strongly disagree with the notion that computer technology causes laziness among students especially in studying.

Also, the study found 30% of the respondents that disagree with the fact that computer technology in primary schools causes students to be lazy, as one of the student from Bunge Primary school argued during an interview;

“It is not true that computer technology in primary schools causes us to be lazy, it is in fact one of the factor that leads us to perform much better in classes”.

4.5 Teachers and Students Access to Computers

4.5.1 Teacher’s accessibility to computers

The study was interested in finding out the view of respondents on the fact that primary school Teachers has the accessibilities of computers in education. Respondents were asked to determine if primary school Teachers have the accessibilities of computers in education, as presented in Table 4.6;

Table 4.4: Teachers and Accessibilities of Computers

Option	Frequency	Percentage (%)
Strongly Agree	3	7.9
Agree	5	13.2
Neutral	8	21.1
Disagree	13	34.2
Strongly Disagree	9	23.7
Total	38	100

Source: Field Data (2016)

The study found 7.9% respondents that strongly agreed with teachers having the accessibilities to computer in education. Also, the study found 13.2% of respondents that agreed with primary school Teachers having the accessibilities of computers in education. Nonetheless, the study found 21.1% of respondents that were neutral when asked about the statement.

Again, the study found 23.7% of respondents that strongly disagrees with the fact that school teachers have the accessibilities of computers in primary education.

However, the study found 34.2% number of respondents that disagreed with the fact that primary schools Teachers have the accessibilities of computers in education.

The study was also paying attention in finding out the accessibility of computers for teachers who are working in primary schools; Respondents were asked if teachers in primary schools lack enough income to access computers in education. In their response, the study found 8% of respondents that strongly disagree with the fact that, teachers in primary schools lack enough income to access computers in education. The study found 13% of respondents that disagree with the statement. Again, the study found 18% of respondents that were neutral with fact that, teachers in primary schools lack enough income to access computers in education.

Also, the study found 24% of respondents that agree with the fact that teachers in primary schools lack enough income to access computers in education. However, the study found 37% number of respondents that strongly agree with the statement that teachers in primary schools lack enough income to access computers in education, as one Teacher from Boma Primary School argued during an interview;

“Yes, it is quite obvious, that many of us lack sufficient income to have an access of computer technology for integration in primary schools, this has been the fact behind slow adoption of technology in education”.

The study was also interested in determining the accessibility of computers for primary school teachers and if are facilitated by government. Respondents were asked to finding out the access of computers for primary school teachers and if are

facilitated by government. The study found 8% of respondents that were neutral with the fact that accessibility of computers for primary school teachers and if are facilitated by government. The study found 13% that agree with the statement on teacher's accessibility to computer technology in education. Moreover, the study found 21% of respondents that strongly agree with the fact that accessibility of computers for primary school teachers and are facilitated by government.

Moreover, the study found 26% disagreed with the idea that accessibility of computers for primary school teachers and are facilitated by government. However, the study found 32% of respondent that strongly disagreed with the fact that accessibility of computers for primary school teachers are facilitated by government within the country.

On the other hand, the study was paying attention in identifying the view of respondents on the notion that, many students cannot afford computers use in education. Respondents were asked to identify the perception of respondents on idea that many students cannot afford computers use in education. In their reply, the study found 5.3% of respondents that strongly disagreed with the fact that many students cannot afford computers use in education. Also, the study found 10.5% of respondents that disagreed with the idea of a lot of students cannot afford computers. The study found 19.4% that were neutral with the fact that many students cannot afford computers use in education.

Again, the study found 26.3% of respondents strongly agreed with the idea that many students cannot afford computers use in education. The study also found 36.8%

number of respondents that agreed with the idea that many students cannot afford computers use in education.

Nonetheless, the study was interested in determining the view of respondents on the fact that poverty is the reason for students to lack computers. Respondents were asked to determine if poverty is the cause for students to lack computers. In their reply, the study found 7.9% of the respondents that were neutral with the fact that, poverty is the reason for students to lack computers. Also, the study found 13.2% number of respondents that strongly disagreed with poverty been the motive for students to lack computers. The study also found 18.4% of respondents that disagreed with the fact that poverty leads to students to lacking computers devices.

Furthermore, the study found 21.1% number of respondents that strongly agreed with poverty been among the main grounds for students to lack computers. Again, the study found 39.5% number of respondents that poverty is the rationale for students to lack computers within primary schools in Tanzania, as one of the teachers at Gerezani Primary School argued that;

“The economic background of many students in public primary schools determines the accessibility of many students here at our school”.

The study was also paying attention in finding out the perception of respondents on determining the accessibility of teachers on computer technology in Primary schools, the respondents were asked to identify the negative use of computer causes students and teachers to neglect the attention. In their response, the study found 8% of respondents that strongly disagreed with the idea that negative use of computer

causes students and teachers to neglect the attention. The study found 14% of respondents that disagreed with the fact that the negative utilization of computer reasons students and teachers to abandon the attention. Again, the study found 16% number of respondents that were neutral with the statement.

Again, the study found 24% number of respondents that strongly agreed with the contention that the unconstructive utilization of computer leads students and teachers to desert the attention. However, the study found 38% number of respondents that agreed with the fact that the negative use of computer causes students and teachers to neglect the attention.

The study was also paying attention on identifying where the respondent access computers from teachers and students point of view. The study tested the views of both respondents on accessing the computer technology, the study found 23.7% of teachers and 9% of students in primary schools that access computers at internet café, as one of the teacher from Boma Primary School argued during an interview;

“For me most of the times when I need computer to prepare my lessons and other academic materials, the place where I access computer technology are at internet café”.

Also, the study found 31.6% of teachers and 30% of student respondents that argued to have an access of computer at school’s libraries within primary schools, as a student from Olympio Primary School lamented during an interview;

“Mainly we have an access to computer technology from school’s libraries because it is the only place where we can get computer for education purposes”.

Again, the study found 44.7% of teachers and 61% of student respondents that revealed to have an access of computer at home, as one of the student from Bunge Primary School argued during an interview;

“Many of us access computer at our home, competency on utilizing the technology comes from experience we get from our parents”.

CHAPTER FIVE

DISCUSSION OF THE FINDINGS

5.1 Overview

This chapter discusses the attitude of teachers towards computer use; the attitude of students towards computer integration; the benefits of using computers in education from teachers and students perspectives and teachers and students access to computers.

5.2 Discussion

The study investigated the Extent of Computer usage among school Teachers and Students. Findings from chapter four here indicated that teachers in primary schools are attitude to adopt computer integration in education with most of them agreeing computers are essential for teaching and disagreed with the fact that, computer use makes students worse. Again, students also are willing to adopt computer integration in education as it facilitates learning in primary education and enough sources of materials. On the other hand, students disagreed with the idea that, computer integration is a waste of time and use of ICT in education leads to bad behavior. This is similar to the study of Ocak & Akdemir (2008) which explored that teachers and students have positive willingness towards ICT in education and their attitudes were predicted by computer attributes, cultural perceptions, and computer competence. Moreover, the results clearly emphasized the importance of teachers' vision on technology itself, their experience in using it, and the cultural conditions surrounding its introduction into schools, on shaping teachers' general attitude towards

technology and its subsequent diffusion in their educational practices. This implies that, teachers and students within primary schools in the country are willing to integrate computer application in education, as it facilitates both learning and understanding of the subject matters within classes.

Again, the study identified the benefits computer in education have from teachers and students standpoint. Findings indicated that computer has many benefits in education among them being; it enhances academic works, improves lesson plans and student's understandings, again, computer integration supports environmental protection, influences independent learning for students, inspire teaching practices but also it has negative benefits which include moral degradation of students.

Also, the study determined the attitude of students towards computer integration within primary schools. Various issues were identified concerning competencies of teachers and students in primary schools on application of computers. Primary school's teachers are very skilled in using computers, however, if it comes to be unskilled lack of trainings, inappropriate ICT infrastructures are among the major factor that may facilitate to unskilled teachers.

Again, primary school students have enough skills in the application of technology with their competences coming from home background; however, it was agreed inappropriate ICT infrastructures, poverty and unskilled teachers' causes incompetence and results to unskilled students. The finding is supported by the study of Cavas, Cavas, Karaoglan, & Kislak (2010) which revealed, most teachers are familiar with is word-processing. Most word-processing skills can be carried out by the majority of teachers (71%) and above can do all tasks except two. Again, the

majority teachers and students in primary schools can find the way to known websites and do basic searches on relevant materials basically academic. Between 48% and 79% can create favourites or bookmarks, save images and text, organise favourites or bookmarks, use advanced search tools and use different browsers. The implication of the findings although reflects both teachers and students have enough competences on the use of computer but truth been said there is a need for additional ICT trainings which will make teachers and students become more competent in computers.

Moreover, the integration has a lot of benefit to students in primary schools; it expands academic knowledge, assists in searching for academic materials, it also increases the student's interest level which leads to easy understanding of the learning materials and promotes independent learning to students. If it is used negatively it could leads children to obscene materials such as pornography. However, it does not cause laziness in studies.

The results are similar to the observation made by Askar & Umay (2001) revealed that, on average, students who used ICT-based instruction scored higher than students without computers. The students also learned more in less time and liked their classes more when ICT-based instruction was included.

However, Mehdipour, & Zerehkafi, (2013) argued that the benefits of using computer in education from teachers and students perspectives is sometimes negative since computer in education leads to increased moral degradation within the local communities, from computer uses now days students are affected by internet pornography, cyber bullying and other anti-social behaviors is a worrying emerging

problem to the uses of computer for education. Computer integration in education has many positive benefits but in improving the teaching and learning also the negative benefits should be taken into consideration, in that sense the concept of computer integration in education will be sufficient.

Again, the study investigated the accessibility of computer technology for both teachers and students within primary schools. The findings indicated that, teachers and students of primary schools have an access of computers from home, at school's libraries and internet café. The finding is supported by the study of Hobbs & Haines, (2012) which revealed; about 80% of students possess their own computer. Among the students, more than a half possesses laptops, with 84% of all respondents having access to a computer at their home. Computer labs provide access on campus for those students who do not own a computer. Five computer labs with 24 computers in each are open at different times over a week for scheduled classes and for individual drop-ins. Majority of teachers and students access computers within their homes, at school's libraries as well as internet café, for effective performance computers should be accessed even in classroom as well as reducing the tax imposed on the product so that they can be accessed at cheaper price for everyone to afford.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter presents the summary, conclusion and recommendations of the study. The presentation of summary, conclusion and recommendations are in line with the research analysis and findings which goes in hand with the objectives of the study.

6.2 Summary of the Findings

This study was interested on finding out the extent of computer usage among school teachers and students at Ilala Municipality in Dar es Salaam. The objectives of the study were; to identify the attitude of teachers towards computer; to identify the attitude of students towards computer integration, to determine the benefits of using computers in education from teachers and students perspectives and; to determine teachers and students access to computers.

A case study design used a sample of 138 respondents. Data collection methods were an in-depth interview, internet search and documentary analysis whereas data collection instruments were questionnaire, interview guide and documentary analysis schedule. The study involved all essential age groups, which brought a sense of reliability as the study found majority of the students fall within the age range of 40-49 especially for teachers; the results from the study also found there were more females than male respondents.

- (i) According to objectives number one, the study was interested in determining attitude of teachers towards computer use. The study tested the objective from

teachers. Most of the respondents from teacher's perspective strongly agreed, the use of computer is essential for teaching purposes. A large number of respondents agreed with welcoming computer use in primary school's education and strongly disagreed; using computers makes primary students worse, however, teachers strongly disagree with the fact that most of them don't prefer the use of computer integration and disagreed ICT knowledge is the factor that leads to slow willing in adoption of computer use in primary schools.

Students point of thought; strongly agree with the fact that computer integration in education facilitates learning for primary school students and agreed with the use of computer leads to enough sources of materials and improves student's understanding in primary schools, however, disagreed with the fact that ICT integration for students is a waste of time, also strongly disagreed the use of ICT in education leads to bad behavior.

- (ii) Moreover, on objective two, the study was interested in finding out attitude of students towards computer integration at primary schools. It was agreed that teachers in primary schools are very skilled in using computers, however, it was disagreed that primary school's teachers are unskilled in adopting computer integration while on the other hand, strongly agreed with lack of trainings been among the major factor that facilitate to unskilled teachers.

Also, it was agreed that incompetence among teachers is the result of inappropriate ICT infrastructures; it was disagreed that students are skilled enough on the use of computer in education. Though, it was agreed students

have poor computer knowledge. From student's point of view; agreed with students having enough skills to use computer in technology, strongly agreed with their competency coming from home backgrounds, with most of them agreed with the fact that unskilled primary schools teachers in ICT lead to unskilled students and incompetence is a result of inappropriate ICT infrastructures within primary schools also agreed with the fact that poverty reflect lack of student's competency in using computers and disagreed with the fact that student have poor computer knowledge.

- (iii) Objective three; the study was paying attention in determining the benefits of using computers in education from teachers and students perspectives. From teacher's perspective; respondents agreed with the fact that computer enhance academic works in primary schools within the country. Majority agreed with the introduction of computer and has improved the lesson plans in primary schools also agreed with ICT integration in primary education have made possible for understanding, again, agreed with the fact that computer assist in protecting the environment and the fact that ICT promotes independent learning for students and strongly agreed with the idea that computer integration in primary schools inspire teaching practices for teachers as well as computer leads to increased student moral degradation.

From student's perspective; strongly agreed computers expand academic knowledge among students in primary schools also with the fact that, computer technology in education helps students especially in searching for academic materials, a major number of respondents also agreed technology increase

interest level of students in education as well as it enhances student's understanding of the learning materials. Again, the study found a good number strongly agreed with the fact that computer technology promotes independent learning for students but at the same time leads children to obscene materials such as pornography, disagreed with the idea that computer technology causes laziness in studying.

- (iv) The study was also paying attention in finding the place where normally teachers and students access computers. The majority access from home while others access from at school's library and internet café.

6.3 Conclusion

From the study analysis it was concluded that, the attitude of teachers in primary school is positive toward computer integration in primary schools, as the use of computer is essential for teaching purposes and for students the use of computer leads to enough sources of materials and improves student's understanding in primary schools.

Nonetheless, the study also concluded, computer enhance academic works in primary schools as well as improving the lesson plans, promotes independent learning for students and inspire teaching practices for teachers while for students it was concluded that, it expands academic knowledge, assist in searching for academic materials, understanding of the learning materials and promotes independent learning for students but also may lead children to obscene materials such as pornography.

Again, the study concluded that, teachers in primary schools are very skilled in using computers, lack of trainings facilitates unskilled teachers in computer technology,

incompetence of teachers is the result of inappropriate ICT infrastructures with students having poor computer knowledge. However, from student's perspective it was concluded that, students have enough skills to use computer in technology with their competency coming from home backgrounds, unskilled primary schools teachers in ICT lead to unskilled students and poverty reflect lack of student's competency in using computers, majority of teachers and students access computers at home.

6.4 Recommendations

The following recommendations are suggested based on findings of this study;

6.4.1 For Action/Practices

- (i) The government through relevant ministries should inspire teachers to be willing on adopting the application of computer as a significant equipment for delivering academic materials to students easily and get rid of old means of using hard copy and black boards, the integration leads to improved academic performance within primary schools.
- (ii) The ministry of education should prioritize computer subject as amongst the most significant lessons to be taught in primary schools which will improve the attitude of students.
- (iii) For successful implementation and integration of ICT into teaching and learning, teachers and students have to perceive the technology as better than earlier practices; consistent with their existing values, past experiences and

needs; ease to apply, can be experimented with on a limited basis before making a decision to adopt and finally the results of the innovation are visible to others.

- (iv) The decision-makers and implementers should have enough knowledge on whether the investments for the integration of ICT in primary curricula reach its aims. The investments can be directed according to teachers' and student's level of knowledge, their willingness and application of technology in learning-teaching process, as well as their attitudes of teachers and students to apply the technologies in the classroom to integrate them into the curricula, educating teachers will become a more important issue for students also; this is because one of the factor that slows down the integration of computer technology into education is inappropriate ICT infrastructures.
- (v) The benefits of computer integration in education should be communicated to the community at large especially from parents, teachers, students and the whole primary education stakeholders on the vital role the technology plays in improving the education for better performance as well as storage of relevant educational materials by making possible in teaching and understanding.
- (vi) The positive benefits of computer integration in primary schools should be emphasized and encourage technology application in education only and not otherwise as the way of avoiding moral degradation within primary schools due to negative application from both students and teachers.
- (vii) Teacher training on ICT is essential if ICT adoption and integration in primary school, It was clear that training levels of teachers in the use of computers in public primary schools are wanting given that only a few had trained in

computer usage due to the fact that teachers did not rely on computers in the learning process before, if teachers are well trained it quite clear the competence of students also will be realized.

6.4.2 For Policy Development/Review

- (i) The education policies and government policies on technology and tax have not prioritized the accessibility and availability of computer integration in education, the government should distribute enough computers to primary schools within the country and make sure the equipment are sufficient and that is not enough in the world of free trade suppliers of the products in education should be given special attention in the factors like tax as the way of making the efforts positive.
- (ii) The Ministry of Education should develop a policy to guide the use of computer in public primary so as to heighten ICT knowledge and competence in all primary schools in the country. Teacher training institutions should evaluate how teacher trainees could be prepared to be computer literate so as to improve their effectiveness and efficiency.

6.4.3 For Further Studies

Further studies proposed to investigate how students and teachers can be supported on how to integrate ICT in education. Again, other studies should be carried out on finding out the challenges in the adoption of information and communication technology in education especially for teaching and learning from primary to colleges/universities and the way forward. Only then will the education be improved positively through computer integration.

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APPENDICES

Appendix 1: Questionnaire for Teachers

My name is **Christina Wambura**, a Master's Student from Open University of Tanzania. I am conducting a research on; the extent of computer usage among school teachers and students at Ilala Municipality. Your participation on answering this questionnaire could make this research be effective and complete. Therefore I am kindly requesting your attention to read and answer the question below to the best of your knowledge and ability.

Please, do not to write your name in this questionnaire, any information provided will be treated with high confidentiality.

Section A: Respondents Profile

✓ Please tick against the right answer

1. Age

a) 20-29 []

b) 30-39 []

c) 40-49 []

d) 50-59 []

2. Gender

a) Male []

b) Female []

3. Level of Education

a) Certificate []

b) Diploma []

c) First Degree []

d) Masters []

Section B: Questions

RQ No. 1: what is the attitude of teachers towards computer use?

Statements	Responses				
	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
The use of computer is essential for teaching					
At any time I welcome the use of computer in primary education					
Using computers makes primary students worse					

I don't prefer the use of computer integration in primary schools					
ICT knowledge is the factor that leads to slow willing on adopting computer					

RQ No. 2: What is the attitude of students towards computer integration?

Statements	Responses				
	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
Teachers in primary schools are very skilled in using computers					
Primary schools teachers are unskilled in adopting computer integration					
Lack of trainings facilitate to unskilled teachers					
Incompetence is a result of inappropriate ICT infrastructures					
Students are skilled enough on the use of computer in education					
Student have poor computer knowledge					

RQ No. 3: What are the benefits of using computers in education?

Statements	Responses				
	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
Computers enhance academic works					
Computer improves lesson plans					
ICT integration in education make possible in understanding					
Computer assist in protecting the environment					
ICT promotes independent learning for students					
Computer integration in primary motivates teaching					
Computers leads to increased moral degradation within primary schools					

RQ No. 4 (a): Do you have access to computers?

Statements	Responses				
	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
Primary school Teachers have the accessibilities of computers in education					
Teachers in primary schools lack enough income to access computers in education					
Access of computers for primary school teachers are facilitated by government					
Many students cannot afford computers use in education					
Poverty is the reason for students to lack computers					
The negative use of computer causes students and teachers to neglect the attention					

RQ No. 4 (b): Where do you access computers?

Statements	Responses				
	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
At home					
At school library					
At internet cafe					

Appendix 2: Interview Guide for Teachers

1. Why are teachers attitude in using computers?
2. Which academic works can be enhanced using computers?
3. Why do you think use of computers in primary schools leads to moral degradation?
4. Why do most teachers lack competences in using computers?
5. What are the reasons for inaccessibility of computers in primary education?

Appendix 3: Questionnaire for Students

My name is **Christina Wambura**, a Master's Student from Open University of Tanzania. I am conducting a research on; the extent of computer usage among school teachers and students at Ilala Municipality. Your participation on answering this questionnaire could make this research be effective and complete. Therefore I am kindly requesting your attention to read and answer the question below to the best of your knowledge and ability.

Please, do not to write your name in this questionnaire, any information provided will be treated with high confidentiality.

Section A: Respondents Profile

✓ Please tick against the right answer

1. Age

a) 07-09 []

b) 10-12 []

c) 13-14 []

2. Gender

c) Male []

d) Female []

Section B: Questions**RQ No. 1:** What is teacher's attitude towards computer use?

Statements	Responses				
	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
Computer integration in education facilitate learning					
The use of computer leads to enough sources of materials					
Computer integration enhance my understanding					
ICT integration for students is a waste of time					
The use of ICT in education leads to bad behavior					

RQ No. 3: What is the attitude of students towards computer integration?

Statements	Responses				
	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
Students are skilled enough on the use of computer in education					
Home background determines the competency of students in using computers					
Unskilled primary schools teachers in ICT leads unskilled students					
Incompetence is a result of inappropriate ICT infrastructures					
Poverty reflects lack of students competency in using computers					
Student have poor computer knowledge					

RQ No. 3: What are the benefits of using computers in education?

Statements	Responses				
	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
Computers expand academic knowledge					
Computer helps in searching for academic materials					
Increase interests level of students in education					
Enhance student's understanding of the learning materials					
Promotes independent learning					
Leads children to obscene materials such as pornography					
Laziness in studying					

RQ No. 4: Where do you access computers?

Statements	Responses				
	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
At home					
At school library					
At internet cafe					

Appendix 4: Interview Guide For Students

1. Why are student's attitude towards computer integration in education?
2. Which academic works can be enhanced using computers?
3. Why do you think use of computers in primary schools leads to moral degradation?
4. Why do most students lack competences in using computers?
5. What are the reasons for inaccessibility of computers in primary education?