Midlands State University
Established 2000

Our Hands, Our Minds, Our Destiny

FACULTY OF EDUCATION

DEPARTMENT OF APPLIED EDUCATION

THE EXTENT TO WHICH THE INTRODUCTION OF INFORMATION COMMUNICATION TECHNOLOGY IS BEING EMBRACED BY THE ELDERLY TEACHERS AND SCHOOL ADMINISTRATORS IN RURAL SECONDARY SCHOOLS: A CASE STUDY OF GOKWE SOUTH DISTRICT.

A DISSERTATION SUBMITTED TO THE MIDLANDS STATE UNIVERSITY: DEPARTMENT OF APPLIED EDUCATION IN PARTIAL FULFILMENT OF THE REQUIREMENTS OF THE BACHELOR OF EDUCATION HONOURS DEGREE IN HISTORY

MUCHOCHOMI JENNIFER ADDLIGHT
(R132776Q)

NOV, 2016

GWERU
ZIMBABWE

APPROVAL FORM

FACULTY OF EDUCATION

DEPARTMENT OF APPLIED EDUCATION

THE UNDERSIGNED CERTIFY THAT THEY HAVE READ AND RECOMMENDED TO THE MIDLANDS STATE UNIVERSITY FOR ACCEPTANCE A RESEARCH PROJECT TITLED:

THE EXTENT TO WHICH THE INTRODUCTION OF INFORMATION COMMUNICATION TECHNOLOGY IS BEING EMBRACED BY THE ELDERLY TEACHERS AND SCHOOL ADMINISTRATORS IN RURAL SECONDARY SCHOOLS: CASE STUDY OF GOKWE SOUTH DISTRICT.

BY

MUCHOCHOMI JENNIFER ADDLIGHT

R132776Q

IN PARTIAL FULFILLMENT OF THE BACHELOR OF EDUCATION HONOURS DEGREE IN HISTORY

SUPERVISOR …………………………………………..DATE …………………………

CHAIRPERSON …………………………………………..DATE …………………………

EXTERNAL EXAMINER …………………………………..DATE …………………………

DEDICATION

I dedicate this dissertation to my beloved husband Tafadzwa, my daughter Kimberly and my

mother Tsitsi.

ACKNOWLEDGEMENTS

ABSTRACT

The purpose of this study was to establish the extent to which Information Communication Technology (ICT) is being embraced by the elderly teachers and school administrators in rural secondary schools in Gokwe South District. The review of literature indicated that central to the embracing of ICT in rural secondary schools are aspects such as, ICT literacy among teachers and administrators, attitude of the elderly teachers, infrastructural developments and community involvement. Descriptive survey design was used for the study. Research instruments used for data gathering included questionnaires for teachers and heads of departments, interview guide for heads and school pupils as well as observations and document analysis guide. Quantitative data obtained was summarised using descriptive statistics such as mean, standard deviation frequencies and percentages and was presented in form of tables, charts and graphs and also in narrative form. The findings of the study revealed that basic ICT hardware and software are available in most schools but they are not adequate for both administration as well teaching and learning. Even though administrators are provided with computers and seem willing to fully embrace ICT in school administration, inadequacy of hardware and relevant software is their greatest impediment. The findings indicated that teachers are showing positive steps towards embracing ICT but the lack of resources remains a challenge, as well as lack of training on how to use the computers and other ICT facilities. The researcher recommended that schools should engage in in-service teacher training programmes for elderly teachers who were never trained in ICT use. Also school heads should allow teachers and pupils to use the available resources rather than locking them up in store rooms. The government should also subsidize ICT tools for educational purposes so that schools can acquire them affordably.

LIST OF TABLES

LIST OF FIGURES

TABLE OF CONTENTS

CHAPTER ONE

THE RESEARCH PROBLEM

1.1: Introduction

The purpose of the study is to investigate how the introduction of ICT is being embraced by the elderly teachers and school administrators in secondary schools in the Gokwe South district. The research is going to highlight the importance of these stakeholders in embracing the introduction of ICT in the teaching and learning of their subject areas as well as in administration. These education leaders are the ones who can create ICT literate students to fit into a society which is striving to reach a goal of a paperless school and ubiquitous connectivity by the year 2020Nziramasanga (1999). The embracing of ICT will lead to the provision of skills, reliance and beneficial information for the pupils' education as well as in the society at large. This chapter sought to explain the background and significance of the study, statement of the problem, research questions, delimitations, limitations and definition of terms which were done in context.

1.2: Background to the study

During the course of teaching practice, the researcher noted that the school administrators were reluctant to use ICT and if they needed to use it, they would seek assistance from teachers especially the juniors in service, as they perceived that they know better. The elderly teachers did not attempt to use any form of technology in their teaching and learning, theyactuallybelieved that it was a burden which may even disturb their seasoned cultural methods of teaching such as the lecture method which is done in a jug and mug fashion, whereby the teacher just pours

outwhat they know to the pupils hence always teacher centred. Anderson (2008) has it that the education sector plays a key role in information and knowledge production hence the need to ensure that all teachers and students are part and parcel of this trend.

The researcher also noticed that the school administrators perceived the manipulation of ICT by the teachers and subordinates as laziness. To them all records of work must be written in ink if not then the teacher could have failed to do their job properly. Research has also shown that junior teachers are likely to use computers and internet to communicate than those with more than 20 years experience, (Wanjala, 2013). In addition, Victoria (2011) posits that if ICT is being embraced bystudents and junior teachers in service, it is imperative that school administrators as the key educators; also embrace it for effective administration. The administrator's participation in professional development is crucial for any meaningful change to occur in the school as they have a vital role to play. Yee (2000) aptly puts that it is difficult to imagine a leader who does not use technology trying to convince teachers that it is important. Taylor and Hogenbirk (2001) suggested that the transformational rate of change might find professionalsoutdated in their own profession. The effective use of ICT in education has the potential to enhance achievements among teachers as well as students through greater collaboration, improved communication and opening wider opportunities to share information, (Kabanda,2012). Also from a wider perspective the benefit of technology could also mean an acceleration of economic and social development and greater inclusion of isolated particularly rural populations into the mainstreams of society.

Furthermore the use of ICT could help the education system with efficiency that is needed in the school setup which seems to be lacking. According to, Zainally (2008), ICT provides several facilities and possibilities for educational administrators to perform their tasks. Although its use

in secondary school administration in Zimbabwe and Gokwe in particular appears to be a new concept and a complex change,Fullan (1993)advices that there is an urgent need to unpack the complexity of change to provide guidance to those who must deal with it. Since technology has become an everyday aspect of the people's lives it is in the student's best interests to make them technologically experienced. The Millennium Development Goals (MGDs) that were put in place by the United Nations in 2000 highlighted the importance of Information and Communication Technology (ICT) on the global development agenda. Goal number eight, implies the need to ensure that the benefit of ICT be accessible to all for the success of sustainable development. Due to the digital age pupils are faced with E-everything hence they should be exposed to this technology at a tender age.

For these technological advantages to reach the pupils, the teachers and administrators should embrace it first in the school system. In the Zimbabwean school setup the top to down approach is the one being used, hence the School Head, Deputy, senior woman and teacher as well as the Heads of Departments (HODs) should be the ones to embrace the use of ICT so that their subordinates can follow suit.

Researches on the use of ICT have been conducted by a number of scholars worldwide. According to aresearch conducted by Wanjala (2013) on the head teacher's perceptions on the use of ICT in secondary schools administration in Kenya, the findings showed that for the pupils as well teachers to benefit from ICT, the school heads should be the ones to embrace the phenomenon first for the benefit of the pupils and the communities at large. The school administration should also fully utilise the use of computer technology even in the rural areas.Konyana S and Konyana E (2013) conducted a research in Chipingeand findingsindicated that most of the rural schools that received computers from the Government were not prepared to

start offering Computer Studies to Students. While the computers were welcome, the school Heads submitted that the computers were mostly lying idle due to a number of factors. The other findings revealed that the schools had no proper computer laboratories to house the computers. In the majority cases classroom had to be converted into computer laboratory and the school had to spend some money adjusting the rooms to accommodate the computers as well as electrification of the rooms since electricity was not available in most rural schools which benefited.

It became necessary therefore to explore how the school administrators are embracing the introduction of ICT in their schools both for administrative purposes as well as teaching and learning. Particular reference was given to Gokwe south district where the researcher conducted her teaching practice.

1.3: Statement of the problem

The rapid growth in ICT has brought remarkable changes in the twenty first century, as well as affected the demands of modern societies. Therefore, there is a growing demand on educational institutions to use ICT to teach skills and knowledge students need for twenty first century(Ncube T and Tshabalala T 2014). There is evidence that the education sector and Government are investing heavily on ICT. Despite all these investments on ICT infrastructure, equipment and professional development of teachers in Zimbabwe, there is very little evidence of ICT adoption and use by the elderly teachers in teaching and learning as well as administration in the schools especially those in the rural areas.

This research therefore sought to find out the extent to which the introduction of ICT is being embraced in school administration as well as in teaching and learning by the elderly teachers.

1.4: Research questions

1. To what extent are schools equipped with ICT facilities for administrative purposes?
2. Do secondary schools have ICT equipment for teaching and learning?
3. How are ICT facilities used by the administrators in the everyday running of the school?
4. What are the challenges affecting the elderly teachers in integrating ICT in the teaching and learning of their subject areas?
5. Which strategies could be used to improve the use of ICT in the administration as well as the teaching by the elderly teachers in the rural schools in Gokwe South?

1.5: Significance of the study

The findings of the study will create awareness in the seasoned teachers and administrators the benefits and advantages of incorporatingICT in their teaching and learning as well as everyday running of the school. The findings will also be used to recommend possible measures to be taken by the Ministry of Education, School managers, School Administrations, stakeholders, policy makers and investors to make well informed decisions about policies and investment in ICT as regards education for secondary level by understanding the perceptions of the elderly teachers for effective school administration and teaching and learning.The study will be beneficial in building a knowledge base on perceptions of secondary school administrators and elderly teachers on the use of ICT tools as well as teaching and learning of their subject's areas. The knowledge will also serve as a guide for overcoming challenges that elderly teachers face while using IT. Furthermore the study will shed more light on the factors which obstruct the

positive attitude of the seasoned teachers and administrators towards the embracing of ICT. Knowledge gained from the study will also enable parents and communities to consider investment in technology as a priority for timely and efficient delivery of services.

Finally the study will help future researchers to make references on this work with the aim of building more knowledge in the field of ICT and educational administration.

1.6: Delimitations of the study

The research was carried out in the Gokwe South District where the researcher lives. Three secondary schools were randomly selected as a sample of the whole population. School administrators, elderly teachers as well as junior teachers were consulted to contribute ideas and knowledge towards this research and their perceptions on the introduction of ICT. The ICT tools investigated included computer hardware and software used in administration as well as in teaching and learning. Secondary schools were selected since they are the agents of the government for implementation of ICT policies in education. Understanding their perceptions in the use of ICT is vital in determining the pace at which policies are implemented in schools specifically in administration as well teaching and learning.

1.7: Limitations

The researcher was faced with challenges such as financial constrains in terms of transport from one school to the next since the schools are distant from each other. Hence the number of schools used was limited Also money for photocopying and printing data collection instruments. Last but not least time was very limited since the researcher is a full time student the time was shared between research and attending lectures at the university.

1.8: Definition of terms

- Information Communication Technology (ICT) - is a global network in which ideas are exchanged or information and knowledge is shared through using communication technologies such as cell phones and computers to connect people. Also it is an umbrella term that includes all technologies for the communication of information. It encompasses any medium to record information, whether paper, pen, magnetic disk or tape, optical disks-CD, DVD, flash memory etc. This therefore means that ICT are the diverse tools and resources used to communicate, disseminate, store and manage information.

- Introduction – is an act of bringing something to a place, into existence or into operation for the first time.

- Embrace – is to welcome and take advantage of something eagerly or willingly.

- Teaching –is implementing strategies that are designed to lead learners to the attainment of certain goals.

- Learning – is the process by which we acquire attitudes, knowledge, understanding, skills and capabilities in general. It is an act of acquiring new modification and reinforcing, existing knowledge, behaviour, skills, values; it does not happen all at once but builds upon and is shaped by previous knowledge.

- School administration – is the process through which decisions are reached and also the directing and controlling of the school organisation. Also, it is a process of acquiring and allocating resources for the achievement of predetermined educational goals. In this study administrators are those involved in the day to day running of the secondary school duties such as the Head, Deputy, senior teacher and woman as well as HODs.

- Elderly teachers – in this study are those teachers with ten years and above working experience as classroom practitioners.

1.9: Summary

The researcher outlined the background to the study, statement of the problem, research questions and significance of the study, delimitations, and limitations to the study and definition of terms used were done too. The next chapter will review literature by authors on the topic.

CHAPTER TWO

Literature review

2.1:Introduction

This chapter presented a review of related literature on the study. Various documents such as textbooks, dissertations, journals, research reports and electronic media were consulted. The review focused on the views of many authors in Zimbabwe and similar cases in other countries around the globe. The review was systematically done focusing on the ICT tools available within the school for administrative purposes as well as teaching and learning and how they are being utilised in the school. Challenges encountered by the elderly teachers in the integration of ICT and also solutions for the problems.

2.2:ICT equipment for teaching and learning and administrative purposes.

Collins and Halverson (2009) posited that in America, although the cost of computers and internet connections have declined, it is still very difficult for public community schools to purchase enough computers to cater for the whole school. Thus in most cases the pupil to computer ratio is 5:1 and 9:1 in urban districts whereas it should be 1:1. Also the cost of maintenance and software updates is very high. This means that the schools are trying to incorporate computer technology in their schools but the cost of purchase and maintenance has affected the use of ICT in the school system.

In addition to the above, Global investments in ICT to improve teaching and learning in schools so far have been initiated by many countries. For example in United Kingdom, the government spending on educational ICT in 2008-9 was £2.5 billion (Nut.2010). In United States, the expenditure on schools and higher education institutions was $6 billion and $4.7 billion respectively in 2009 (Nut.2010). In New Zealand, the government spends over $410 million every year on schools ICT infrastructure (Johnson, Calvert and Raggert. 2009).Despite all these investments on ICT, infrastructure, equipment and professional development to improve education in many countries, Gulbahar (2007) argued that huge educational investments have produced little evidence of ICT adoption and use in the teaching and learning process. The findings in the study identify challenges similar to those experienced in many countries.

However, it should be taken into cognisance that even in some cases like the one cited above, the infrastructure as well as equipment is available but still there is lack of enthusiasm from the teachers and administrators to fully utilise the resources for their benefit or the pupils'. The main questions then remains, is it the problem of the resources or the negative attitude of those in charge that is making them not toadopt and embrace this phenomenon for the benefit of the pupils and the society at large?

The government of Zimbabwe and donors embarked on implementing computerisation and ICT led developmental programmes to try and reduce the digital divide between urban and rural schools. According to Musiyandakaetal (2013) one such effort is the schools computerisation programmes in Zimbabwe which was initiated by the president of Zimbabwe his excellence R.G.Mugabe. These programmes were implemented in three phases; the first and second phases were aimed at equipping schools with computers and related technology and were launched

in2002 and 2009 respectively. The third phase project was launched in collaboration with the ministry of ICT in 2011 focusing on developing e-learning programmes for secondary schools.

Through the presidential schools computerisation programme launched in 2002 under the phase one project, computers were handed out to more than 100 secondary schools across the country with the aim to enhance learning although internet access remains limited. On average each school received ten computers. However, the computerisation programme has been marred by disturbing reports of neglect and theft of the gadgets, (Daily news5 October 2010). Marufu (2015), in his research found out that in most cases the computers which were donated to schools especially in rural areas are still lying idle either because there is no electricity or there are no specialist teachers to teach the students basic computer appreciation.Marufu further asserted that to those schools which never benefited from the computerisation programmes the major challenge that they are facing in Zimbabwe as a whole are the prohibitive costs of purchase and maintenance of the computers.

In addition, a research conducted by Konyana S and E.G (2013) in Chipinge shows thatlack of proper infrastructural facilities such as computer laboratories and electricity as well lack of trained ICT teachers has led most gadgets (computers in particular) to remain lying idle in the classrooms packed in boxes. This means that they are not being fully utilised and this has then led to the methods of teaching to remain rooted in the traditional methods of delivery, although it has long been outpaced by new and dynamic trends.

Basing on these facts it is quite clear that in Zimbabwe ICT equipment though limited is available in schools both in rural and urban areas. However the equipment is not being used even those schools which have benefitted from donations they still do not fully utilise the computers due to a number of factors and Gokwe is no exception to such a dilemma. The addressing of such

an anomaly can only begin at the grassroots level which is the school and the administrators and elderly teachers are the ones in charge and it is time that action was taken to ensure that every child become computer literate like in developed countries like China.

2.3: ICT facilities (hardware and software) used by the administrators for the everyday running of the school.

According to Chemwa and Mburu (2007), ICT hardware includes electrical infrastructure, desktop computers, laptop computers, CD drive, printer, scanner, telephone and projectors. Examples of ICT software that can be used in the school administration tasks are application software such as word processors, spread sheets, databases, e-mail, internet and presentation software which enhances the diverse quality of work.Software also assists the hardware to do its tasks at a high speed. According to the National Centre for Statistics (2000) administrative records keeping was the second largest use made of ICT by teachers after that of creating instructional media. The other popular use of computers was communicating with workmates which reported twenty three percent, while communication with parents and guardians as well as pupils was only seven percent. Therefore the use of ICT for administration and routine tasks of classroom management and control seem to have developed much faster than in instruction

A number of studies across the world show that ICT plays a critical role in the school administration. In New Zealand, Cowie etal (2008) did an evaluation on laptops for teacher's scheme, the evaluation used a mixed methods approach including 3yearly cycles of annual nationwide questionnaires, regional focus groups and school based case studies. The purpose of the evaluation was to investigate the impact of laptops for teachers in their work for a period of

four years beginning 2003-2006. From the study, it was noted that laptops for teacher's scheme in New Zealand had resulted in progress towards an increase in efficiency in lesson planning and preparation, administration and reporting. Specifically teachers found laptops to provide flexibility in terms of time and place for administrative tasks. Particularly, there had been an increased use for writing reports, checking students list and records, checking departmental schemes and units, checking school timetable as well as school or staff notices, recording student's grades and monitoring student progress as well as recording attendance.

Furthermore, Cowieetal (2008) has it that teachers had found out that using laptops for communication gave them time and date verification that they would have made with their workmates. Teachers felt that laptops were better than desktops because they were portable and could be taken anywhere for examples to meetings for collaborative purposes. Basing on this study it is quite clear that a laptop is one of the ICTequipments that are flexible to use if utilised in the administration of secondary schools. Although the survey was quite informative, it was done in New Zealand a different setting from that of the current study. This current study was carried out in Gokwe South district in Zimbabwe which happens to be a rural set up and different from that of New Zealand, also the research was based on the efficiency of the laptops only but this research is concerned with all ICT tools that can be used for school administration, this then sets out as the limitation of this study by Cowie et al (2008), hence the need to conduct this current research.

Uys (2000) reported that administration functions in schools had become increasingly complex in terms of enrolment, population mobility and social problems. Due to this complexity there is need for powerful administration tools such as computers which will result in better communication, efficient operations and better personal services. The use of ICT for effective

13

secondary school administration especially in areas of budgeting of the funds, collection of student's data, administration of exams and record keeping are very crucial and thus cannot be ignored. According to Yusuf (2005), ICT contributes to radical changes in schools that strengthen teaching and provide opportunities for connections between the school and the world at large. The use of ICT can also reduce costs and improve efficiency and productivity in educational administration. Countries such as Kenya through their ministry of education science and technology noted that Educational Management Information System (EMIS) was very important in the provision of accurate timely and reliable educational data. EMIS can also be used in efficient management, storage of information for admission of new students, in accounts and finance departments, in processing of examination results, storage of official records among other things (Wango, 2009). Therefore ICT is fundamental in facilitating efficient management and administration of a school and its resources.

Wanjala (2013) postulated that, although the impact of ICTs on the educational goals is still inconclusive, reported observations include rapid expansion of knowledge, improved examination outcomes, enhanced communication and technical efficiency as well as greater decentralisation in the delivery of educational services.ICT also has the potential to play a more powerful role in adding resources and improving the environment for learning, and also it can play an important role in preparing students to receive skills and competencies that are fundamental for competing in this global knowledge economy (Ministry of education in Kenya, 2006).

In a study conducted by Maki (2008)on ICT for administration and management of secondary schools in Cyprus, findings revealed that ICT enabled managers and administrators to update and record changes in a school environment, to produce documents regarding operational activities

of the school, to support decision and action making due to the fact that ICT systems present reality at any moment. In the same study it was noted that the ministry of education in Cyprus had implemented a computer programme called 'Avakio' which is used by all secondary schools for administrative and managerial purposes such as student administration, personnel administration and timetabling. However, she noted that the programme presents problems if a school has more than 25classes. Although ICT is seen as a useful tool in the areas of budgeting, collection of student data, recording of results and effective in keeping school records, the findings clearly show that there is need to understand the perceptions of teachers on the use of technology in school administration. Although the findings in the study identify challenges similar to those experienced in many countries, the geographical distance justifies the need to carry out the current study in Gokwe South District which happens to exist in a different context.

In another study, Makhanu and Kamper (2012) carried out a survey to investigate the relationship between ICT access to principals and secondary schools performance in Western province of Kenya. The research findings revealed that a principal's access to ICT infrastructure has a positive influence on secondary school performance in this province in Kenya. It also revealed that a relatively low percentage of principals (42%) had access to ICT facilities in schools. This study is quite useful especially in trying to know how ICT facilities are being used in the administration. However, the study was limited because it only concentrated on the school principals leaving out teachers who happen to be agents of ICT implementation in secondary schools. As such the availability and accessibility of the facilities may not automatically translate into use. The current study therefore sought to find out how both the school administrators and the elderly teachers are embracing the introduction of ICT in secondary schools.

In addition, Boit, Menjo and Kimutai (2012) carried out another study to evaluate implementation of ICT to support teaching, learning, school administration and the use of e-communication between cooperating rural schools under a Rotary project. The study was conducted in two selected counties in Kenya. The findings from the research indicated that teachers, students and the school administrators were now using ICT to carry out a number of administrative tasks. Two schools had installed a programme which was being used to prepare class timetables and daily programmes for each class. The schools were also able to set exams locally, typeset, print, analyse exam results as well as inventories, this being done electronically by the computer teachers together with the academic committee. Furthermore the schools had installed a financial system to manage school accounts and prepare financial reports. The installation of financial update system led to accurate and efficient book-keeping in the schools. The embracing of ICT also led to efficiency in their work and their finances were quite clear and easy to manage. However the research was conducted in Kenya and as such the findings cannot be generalised to all the schools in different countries.

Thus it is imperative to carry out the research in Gokwe to establish how the school administrators are embracing the introduction of ICT and also to find out some of the challenges affecting them in trying to embrace this technology.

2.4: Challenges affecting the elderly teachers in integrating ICT in the teaching of different subject areas.

According to Murray (2004), some technologies are not adopted because they require too many readjustments to the traditional methods of instruction or administration. Frequently teachers avoid attempting a new instructional technology because it requires too much from them in

energy, time, patience and skill to become adept in its use. Altering old teaching habits in order to master new ones entails not only the expenditure of energy but also the risk of a teacher looking foolish by committing embarrassing errors when attempting new technologies in the classroom. In addition teachers who perceived themselves as the classroom's chief performer – lecturing, conducting recitations, leading class discussions can feel demoted to a less prestigious educational role when they are asked to have reading materials, radio, television or computers deliver the content of a lesson.

According to, Maure (1995) many teachers are busy with their daily routines and can find any excuse when asked to add something new. Why change what is working? Is the question that most teachers would ask and hence for many teachers it is better to maintain status quo.Gillman has it that teachers are reluctant to invest in ICT as well as incorporating new technology into their teaching methodology because they have already developed adequate solutions to many of their pedagogical problems within the given organisational structures. Any amount of change required in the existing habits and the fear of failure or decreased prestige can affect people's willingness to accept new technologies.

In another research conducted by Allan and Collins (2009) in America the findings showed that teachers who embrace new technologies in their practice are regarded as mavericks and often left to seek professional and curricular support on their own. Many teachers feel that there is no adequate support and encouragement from their school heads and administrators in the use of ICT in the classroom. Even as schools rush to incorporate technologies into their buildings the traditional school classroom is very uncomfortable with these new subversive technologies. As a result schools have kept new digital technologies on the periphery of their core academic practises. Computers have not penetrated the core of the school even though they have come to

dominate the way people in the outside world read, write, calculate and think. Since these practices are the bread and butter of traditional educational schools they ignore computers at their peril.

According to Bukaliya and Mubika (2011), the majority of teachers in schools lack computer training and few of them have some sound working knowledge of computers. The qualification of the majority of teachers are far from being satisfactory due to lack of exposure to the college curriculum that caters for ICTusage. The findings indicated that the majority of them could not even use the basic software in computers for the delivery of their lessons and indications are that the teachers lack the necessary skills and knowledge of computers and their software usage. Krumsvik (2008) adds that digital competence is one of the core competencies which are mandatory to take in schools.

Tuncay and Uzunboylu (2010), in their research entitled 'Walking in two worlds: from e-learning paradise to technologically locked-in 'made an in depth comparison of the impact of digital technologies on the educational experiences of students within two disparate schools. The results showed that the school from the developed country was systematic, disciplined and well equipped with smart boards, printers, speakers and even extra monitors on walls to make computer usage easier. The teachers took the students assignments as emails. E-learning was integrated to all learning activities. Students were also confident in using e-learning technology. In the schools from a developing country, there were only three smart boards. Computers were limited and sometimes three students had to share the same computer. The teachers had never prepared a video conference before and 90% of the teachers took students assignments as paperwork and did not have online e-quizzes. Generally the school from a developing country lacked e-learning technological devices and this is the situation being referred to as being

technologically locked-in in the study. The research proved that the countries in developing countries like Zimbabwe are still lagging behind and they still have a long way to go.

According to a survey conducted by Gulbahar and Guven (2008) in Turkey on ICT usage and the perceptions of social studies teachers, the results showed that teachers faced problems in relation to accessibility to ICT resources and lack of the basic skills of usage of computers and other technologies. Teachers pointed out that the class time was too limited for ICT usage. The study also showed that the main technologies that had been integrated were printers, overhead projectors, television or video, radio cassette recorder and to a lesser extent multimedia computer and slide projectors.

Furthermore Lau and Sim (2008) carried out a survey on exploring the extent of ICT adoption among secondary school teachers in Malaysia. The results showed that the technological tools mostly used by teachers were word processing, PowerPoint and the World Wide Web. Video conferencing, synchronous communications, use of databases or text reconstruction software had seldom been used. It also appeared that respondents felt least competent in statistical tools, and the current training courses seem to have not addressed these issues. Most respondents also felt that among various stakeholders, teachers as the classroom practitioners should have a greater say in dealing with how ICT is used in the school.

Some of the factors that influence successful integration of ICT into teaching are teachers' attitudes and beliefs towards technology (Keengwe and Onchwari, 2008). If teacher's attitudes are positive towards the use of educational technology then they can easily provide useful insight about the integration and embracing of ICT into teaching and learning processes. Albrini (2004) carried out a study on the teachers attitudes towards Information Communication Technology in

Syria. The findings showed that many teachers did not think that computers fitted well in their curricular goals. They argued that the scheduled class time was too limited for computer use.

In addition to the above, Morton (1997) and Brand (1998) in Bukaliya and Mubika (2011) condemned the administration in that individual teacher initiative account for much of the implementation of computer technology in schools. Lack of support by the administrators is identified as a significant barrier towards implementation of technologies in the classroom. Arzt (1991) in Bukaliya and Mubika (2011) argue that the successful implementation of computers can only occur if administrators offer teachers leadership and support. Togala and Marcilly (2011), Kumur (2007) in Musiyandaka (2013), outlined that the failure of the implementation and integration of ICT is mainly attributed to the limited network infrastructure, design reality gaps and inadequate information resources.

Kiraka and Manning (2002) identified that, the limited network infrastructure and level of internet literacy and accessibility affect the use of such technology. Champman and Slaymaker (2002) argue that although Zimbabwe tried so much it has to contend with lack of infrastructure, low ICT literacy rate, human resources turnover, limited public private partnership and limited data management capabilities.

Buabeng-Andoh (2012) also carried out a research on the factors influencing the teacher's adoption of ICT into teaching. He noted that factors like teachers' attitude, ICT competence, computer self efficacy, gender, teaching experience, institutional characteristics, professional development, accessibility, technical support, leadership support and technological characteristics. Personal characteristics such as educational level, age, gender, educational

experience, experience with the computer for educational purposes and attitudes towards computers can influence the adoption of a technology.

The studies carried out saves to prove that there are many challenges that affect the integration of ICT by the teachers in Zimbabwe as well as in other countries around the world. However there is no research about elderly teachers that was ever conducted, therefore the need for this research to be conducted to cover up this gap. It is imperative for these challenges to be addressed so that the rural secondary school students may benefit and will not be left behind since the world is moving in technology and at a dynamic pace.

2.5: Strategies which could be used to improve the use of ICT in the administration as well as the teaching by elderly teachers in rural secondary schools.

Various strategies have been proposed by a number of scholars to try and improve the use of ICT in the administration as well as teaching by the seasoned teachers. One such strategy is the professional development of teachers. According to, Tinio (2003), ICTs are swiftly evolving technologies, in such a way that even the most ICT fluent teachers need to be continuously upgrade their skills and keep abreast of the latest development and best practices. On the same footing, Way and Webb cited in Neyland (2011), agree that professional development for teachers is a critical factor in the embracing of ICT in schools. Especially those elderly teachers who never had a chance to be trained in IT during the course of training, there is need for in-service training so as to avoid being outdated in their own profession.

Cartwright and Hammond (2007) suggested that a good arranged timetable may provide teachers more time to prepare teaching material that use ICT. Also by reducing teacher's workload, this will avail teachers more time to develop e-learning programmes with colleagues, trying new

methods to teach in ICT environment (Hayes 2007). The schools should also embrace the use of staff development to try and get help from those who are skilled and qualified in IT.

Furthermore, the school may also create a work group of teachers who create and produce learning material. Persky in Brand (1998) stated that in addition to the administrators developing a philosophy to guide the implementation of computer technology, they can also support the technological professional development of teachers by establishing flexible schedules so that teachers can practice what they have learned, encouraging and facilitating team teaching, technological integration and scheduling regular meetings for planning and evaluating instructions.

Educational leaders need to make plans for technology integration into the school curricular. The use of ICT should begin with the senior teachers such as the heads of departments. The school can budget for ICT and find ways to get extra funding for putting in place the infrastructure and equipment required. The leaders may sell the idea to the parents first so that they can get support in fundraising for ICT (Marufu 2015). Also teachers have to be trained in technological skills, teachers from different schools may share ideas on how to successfully use ICT in the classroom. Gulbahar and Guven (2008) stated that the introduction of ICT innovations into the education requires promoting structural, pedagogical and curricular approaches.

Seyal (2012) posits that leadership is regarded as a critical component in the successful integration ofICT in education. Studies have shown that the focus of ICT successful implementation centres on the school head and administrators that is deputy, senior teacher and woman as well as the heads of departments. Other scholars supported the proposition that distributed leadership or delegatory leadership throughout an educational institution enables

successful IT integration to take place. Kearney and McGarr (2009) cited in Seyal (2012) further argue that a leader who is close to the curriculum and teaching are well placed to influence a change through IT. Hayes (2007) in Seyal (2012) supports the idea that school administrators should harness commitment from teachers to improve teaching and learning through ICTintegration . Kirkland and Suctch (2009) cited in Seyal (2012) viewed school leadership as a culture that enables innovation as well as a shared sense of responsibility for a change.

According to Coopers (2010) schools should adopt technologies that are suited for their context. Internet access is a problem for most schools especially in the rural areas; educators and administrators need to consider the possibility of establishing local area network (LAN) in schools. Information could be hosted on school LANs instead of trying to make it available on the internet which is very expensive for most schools.

A study by Boit and Menjo (2005) revealed that due to the lack of electricity and also power cuts it is difficult to use ICT in the administration. Wanjala (2013) suggested that due to the lack of power schools should resort to generators or even solar for backup. Although these ways of sourcing power are highly convenient, they may prove to be expensive to purchase as well as setting up especially the solar power system, but they can sustain a system longer.

2.6: Summary

In summation, each of the studies reviewed above contributes to the knowledge base on how teachers as well as administrators are embracing the introduction of technology in a significant way. The review of literature has indicated that central to the success of ICTproject are the following aspects, ICT literacy, community involvement, community contextual awareness, equitable public access to ICT and adequate infrastructural developments all of which could be

addressed through a coordinated policy implementation approach. However, there is scarcity of studies focusing exclusively on how the elderly teachers are embracing the introduction of ICT in schools. Also up to date evidence is needed to give a clear picture of the current situation with regard to how ICT can be embraced by the administrators. Considering that none of the reviewed literature focused on Gokwe South District, the perceptions of those involved in the current study may be different depending on time and context, hence the need to carry out this research. The next chapter will discuss the research methodology.

CHAPTER THREE

Research design and methodology

3.1: Introduction

This chapter outlined the methodology used to address the research problem. It explained and justified the research design, research instruments, target population, sample and sampling procedures that the researcher employed as well as the data analysis plan for the research.

3.2: Research Design

Best and Kahn (1993) defined a research design as "a systematic and objective analysis and recording of controlled observation that may lead to the development of generalization of principles and theory resulting from prediction of possible ultimate control events". This means it is a step by step process into the problem in finding solutions.

Bogdan (1992) explained research design as the researcher's plan of how to proceed with the research. This means that the research design is the outline of intended steps and procedures to be followed by a researcher in collecting data or in carrying out a research.

Leedy((1979) in Chiromo (2009), saw research as a process through which the researcher attempts to achieve systematically and with support of data the answers to questions, the solution to a problem or a great understanding of a phenomenon.Ogula (2005) stated that research design refers to the procedures used by the researcher to select a sample, administer the instruments and analyse the data.

The above scholars are in consensus that a research design is a master plan for enhancing the research's internal and external validity. In this study the action research design was used.

3.3: Descriptive Survey

The descriptive survey design was the most suitable one for this study because it focuses on describing and interpreting what is actually taking place, the relationships and trends that are developing. It also gives the original data for purposes of describing a population large enough to observe directly (Best, 1970). It can be either quantitative or qualitative. It can involve collections of quantitative information that can be tabulated along a continuum in numerical form, such as scores on a test or the number of times a person chooses to use a-certain feature of a multimedia program, or it can describe categories of information such as gender or patterns of interaction when using technology in a group situation (Borg and Gall 1989).

Descriptive research involves gathering data that describe events and then organizes, tabulates, depicts, and describes the data collection (Glass and Hopkins, 1984). It often uses visual aids such as graphs and charts to aid the reader in understanding the data distribution. Because the human mind cannot extract the full import of a large mass of raw data, descriptive statistics are very important in reducing the data to manageable form. Since in-depth, narrative descriptions of small numbers were involved, the researcher used description as a tool to organize data into patterns that emerged during analysis. These patterns aid the mind in comprehending a qualitative study and its implications.

It was also wise to use the descriptive survey design because; it allowed the researcher to select a small group to deal with as long as the sample was a full representative of the total population.There was assessment and evaluation of information and room to test findings. The

survey allowed the researcher to gather detailed andfirst-hand information which was used as basis for

judginghow elderly teachers and school administrators are embracing the introduction of ICT in rural secondary schools.

3.4: Population

Fisher R. A,(1999) Illustrated that a population is a summation of all the organisms of the same group or species, which live in a particular geographical area, and have the capability of interbreeding. In sociology, population refers to a collection of humans(Gwirayi 2010). Demography is a social science which entails the statistical study of human populations(Gesellschaft 2016).

Fraenkel and Wallen (2003) defined population as the group of interest to the researcher, the group to whom the researcher would like to generalize the results of the study. This explains that population refers to all the individuals, units, objects or events that would be considered in a research project. In this research, the population comprised of fifteen secondary schools,sixty eight teachers and an enrolment of 1200 pupils in Gokwe SouthDistrict.

3.5: Sample and Sampling procedure

Springer (2010) defines a sample as a subset of a population. A sample consists of those individuals who actually participate in the study. Due to factors of expense, time and accessibility, it is not always possible or practical to study the whole population. Therefore researchers collect information from subsets of the population in such a way that the knowledge gained is representative of the population.Both probability and non- probability sampling

techniques were used for the sake of this study. Non-probability sampling is a technique that does not permit the researcher to specify the chance that each member of a population has of being selected for the sample (Gay et al 2009). The researcher adopted the Simple random sampling technique for the sampling of schools, which is described by Springer (2010) as "a procedure in which each member of the population has an equal and independent chance of being selected for participation in the study." Also stratified sampling was used which is a process of strategically selecting a sample in such a way that guarantees desired representation of relevant subgroups within a sample (Gay et al 2009). The purposive sampling was used since it allows a researcher to use the cases that have the required information with respect to the objectives of his or her study (Mugenda and Mugenda, 2003).

3.5.1: Schools

There are fifteen secondary schools in Gokwe south district and ten among them are in the rural areas. Therefore the ten schools were purposively selected since the research is concerned with the schools in the rural area. Of all the ten schools, three were thus chosen for this research through the simple random sampling technique. The names of the ten secondary schools were written on pieces of paper, placed in a hat and thoroughly mixed. The three picked then formed the sample.

3.5.2: Heads

The district has ten secondary schools in the rural area and as such ten school heads. Three heads of the selected schools were purposively selected to participate in this study since they are the ones under investigation and also are responsible for the everyday running of the school and oversee the allocation of resources for ICT in the schools.

3.5.3: Teachers

Stratified sampling was used for the selection of the teachers. The teachers were grouped into two categories, the first group consisting of the heads of departments and the second group consisted of the subject teachers. Using random sampling, teachers from the two groups were selected through the lottery method. All the departments found within the schools were written down and each assigned a number,placed in a container, four were randomly picked which constituted the heads of departments to participate. All the teachers in each school were also assigned numbers excluding the heads of departments and the school heads and deputies. Numbers were assigned to the teachers and small pieces of paper with numbers on them were placed in a hat and the researcher, blindfolded picked any five. Those picked were then used for the research.

3.5.4: Pupils

Out of the three schools selected for the research four pupils were picked per school from form 1-4. They were randomly picked from their class registers, numbers were written on small pieces of paper to match the numbers assigned to the pupils in the register. The researcher used the lottery method to select the pupils by placing the pieces of paper in a hat and picking any number which was then used to identify the pupils selected to participate.

3.6: Research Instruments

Research instruments are tools used to gather data that assists in finding solution to problem (Marufu, 2015). Each instrument is suitable for specific purpose and has its strength and weakness. In this research project, the researcher used various instruments to collect data which include Observations guide, Questionnaires for teachers and interview guide for school heads.

The instruments were used to collect both quantitative and qualitative data. The reason for using three different instruments was to facilitate a strong line of inquiry by which more than one instrument provides more measures of the same phenomenon, also to safe guard against the issue of triangulation.

3.6.1: Observations

An observation guide was used by the researcher to collect information on the level of availability and accessibility of physical ICTequipments and their use in the administration as well as in the teaching and learning. Farrant (1980) defined observation as a situation where by the researcher watches how individual behave in a particular situation at a particular place and time, in an attempt to identify weaknesses. Chiromo (2009:27) asserted that "observation seeks to ascertain what people think and do by watching them in action as they express themselves in various situations and activities". This means it is an active acquisition of information from primary source thisenabled the researcher to draw up conclusions concerning the attitudes of the administrators and elderly teachers in the use of ICT. Hence, gather accurate information.

The observation guide was also used so as to ascertain the adequacy of the facilities for example the number of computers and the number of computer labs if any.The, observational helped to disseminate on-going behaviour as it occurred and the researcher was able to make appropriate notes about its salient features.Since observations are less reactive than other types of data gathering method. The observer being an outsider was able to observe phenomenon about situations which the people involved may have taken for granted.

However observations are marred with problems of subjectivity where by the researcher sees what they want to observe and therefore problems of validity occurs. As a result ignoring other

concept to be observed and discussed about. The observations also lacked accounting from participants, and thus may be subjective, biased and lacking precise quantification measures that are the hallmark of the survey and experiment research. Due to these short falls of observations as a data collection instrument the researcher also used questionnaires for verification.

3.6.2: Questionnaire

Chikoko and Mhloyi (1995) defined a questionnaire as "a document containing questions designed to solicit information appropriate for analysis…the information gathered is converted into quantifiable data given by respondents", hence obtaining accurate statistics for case study. "Therefore a questionnaire is a framed set of questions meant for the population sample to answer shedding some light on the phenomenon under study.

According to Chiromo (2009) a questionnaire is the most commonly used data gathering instrument. It is that form of inquiry which contains a systematically compiled and organized series of questions that are sent to the population sample. The apparent ease of preparing and using a questionnaire tends to make it appealing to the beginners in research. But poorly constructed questionnaires suffer from errors with the result that the reaction to questionnaires is often unfavourable and response is low which affects the basis for generalization. This shows that questionnaires need to be properly drafted in order to provide relevant information.

Dube et al (2010) asserts that questionnaires can be designed to target a certain audience even if they are geographically spread. Cohen et al (2011) indicate that questionnaires gave the respondents' time for individual opinion since they were not answered in pairs or groups. This reduced the rate of bias thereby giving close to truthful answers the researcher could use for verification of data. Questionnaires also enabled collection of qualitative and quantitative data

through the use of open ended and closed ended questions.The researcher designed questionnaires for the heads of departments and subject teachers. The questions were drafted with the intention to collect information from teachers on how they are embracing the introduction of ICT and to show some of the factors affecting their embracing of technology. The questionnaires comprised of both open- ended and closed- ended questionsthis gave the participants room to justify their responses. Open ended questionnaires enabled the researcher to collect data on the feelings and attitude of the respondents.

A questionnaire was also selected because itgave the researcher an opportunity to establish reform and explain meaning of unclear terms to the participants.It was also used because it helped the researcher to collect data from a large number of people over a short period of time. Those meant for the teachers and heads of departments were administered at once and the researcher had to wait for a period of 30-45minutes while the teachers filled in the questionnaire hence it was time saving and the researcher lacked time and hence the questionnaire was quite efficient.

Like the observations, questionnaires had their own disadvantages which included limited space to answer the questions, this did not allow detailed information or detailed explanation, thus may have kept off some valuable information from the respondents.Also, wrong interpretation of the questions which may have led to false information because other people may havemisinterpreted the questionnaire.And because they were not concerned with the concept under study, as such they may have not answered the questions whole-heartedly. To counter some of these shortfalls of a questionnaire the researcher also used interviews.

3.6.3: Interviews

Chiromo (2009) views interviews as particularly useful for getting the story behind a participant's experiences. The interviewer could pursue in –depth information around a topic. Interviews were useful as follow-up to certain responses to questionnaires. An interview is unique in that it involved the collection of data through direct verbal interaction between the interviewee and the interviewer. It required the actual physical proximity of two or more persons and generally requires that all normal channels of communication be open to them. Through the respondent's comments, facial and bodily expressions, tone of voice, gestures, reactions, feelings, attitudes, evasiveness and non-cooperation, the researcher could acquire information that would not be conveyed in any other way. It has an edge over other methods of data collection because of its flexibility. Many on the spot improvements, explanations, adjustments or variations could be introduced in the data gathering process (Chiromo, 2009).This means interviews are face to face interaction between the interviewer and the interviewee where by the interviewer ask questions and the interviewee responds to the questions.In support of views given above by Chiromo (2009), Oatey(1999) concurred that an interview is a purposeful conversation in which one person asks prepared questions and another answers them. This is done to gain information on a particular topic or particular area to be researched.

In this research interviews were used to gather information from the school heads on the effects of using ICT in administration. Challenges faced and the strategies which may be used to address the challenges. The interview was a very useful data collection instrument because unlike the observation and the questionnaire the interview gave room for complicated issues as it allowed the interviewer to make some clarifications on the questions, repeat and rephrase some questions wherever it was necessary. The interviewer was also able to probe for explanation of responses

and uncover a participant's perspective since data was collected in a natural setting. The researcher also got a chance to observe the non verbal cues.

However, the major disadvantage of in an interview is that the interviewee may tell you whatthey think they do or what they think you might want to hear but that may be different from their actual behaviour.

3.6.4: Records keeping and documentation analysis guide

This documentation guide was used to assess the school records, whether storage and processing of school records and student's data is done electronically or not. This involved the assessing of the school admission register, inventory records, newsletters, school timetables, schemes of work and pupils progress records and reports.

3.7: Data collection Procedures

The researcher was offered an introductory letter by Faculty of Education at Midlands State University. Data collection was carried out by the researcher with the permission from the Ministry of Primary and Secondary Education Provincial office for Midlands Province, Gokwe South district, school heads and heads of departments.

The researcher sought permission from the heads of the sampled schools prior to the date of collection. She also booked appointments with the school heads for the interviews and made use of the interview guide, personally interviewing the heads. During the interview the researcher took short notes to capture all the information and immediately after each interview the notes were reviewed to ensure dependability of the data collected. She carried out some observations in the schools while lessons were in progress to establish how ICT is being embraced in the

teaching and learning, administration and also to see facilities available. The researcher administered questionnaires to teachers and Heads of Department; she waited for them to be filled and collected them upon completion.

3.8: Data Analysis Plan

Bogdan and Biklen (2007) defined data analysis as the process of systematically searching and arranging interview transcripts, questionnaires and field notes, working with the data, breaking them into manageable units, sintering them and searching for patterns. In this research, qualitative and quantitative data analysis was used. Strauss and Corbin (1990) described qualitative research as that research that produces findings not arrived at by means of statistical procedures or other means of quantification. Qualitative and quantitative data analysis complemented each other in establishing how the elderly teachers and school administrators are embracing the introduction of ICT in rural secondary schools in Gokwe South District.

3.9: Summary

This chapter focused on the descriptive research design which was adopted for the study because it focused on describing and interpreting what was actually taking place and it also gave original data for the purposes of describing the population which was rather too large to observe directly. The chapter also covered the population, sample and sampling procedures, research instruments, data collection procedures and data analysis plan. The next chapter will look at data presentation.

CHAPTER FOUR

Data presentation, Analysis and Discussion

4.1: Introduction

This chapter presented the findings as well as analysis of the results. It presented demographic characteristics of the respondents in the sampled schools in Gokwe South District. The chapter also discussed the findings in response to the research questions.

4.2.1: Demographic characteristics of participants

The demographic characteristics covered in this section include gender, professional qualification and working experience as shown in table 1 below.

Table 1: Teachers

Gender	F	%
Male	8	53.3
Female	7	47
Working experience		
5years and below	1	7

6-10 years	2	13
11-15 years	7	47
16-20 years	3	20
21 and above	2	13
Professional qualification		
Diploma	10	67
Bed	5	33
Masters	0	0

n= 15

Table 1 shows that 53.3% were male participants and 47% were female, it also shows that in the category for working experience those with 5 years and below had 7%, 6-10 years 13%, 11-15 years 47%, 16-20 years 20% and 21 and above 13%. This shows that the majority of the participants had10 years and above working experience and that worked favourably for the researcher since they qualified in the category of the elderly teachers and they had the correct information on the prevailing ICT conditions in their school.

Concerning the teacher's academic qualifications, table 1 shows that the majority of the respondents had a diploma with 67%, bachelor's degree 33% and none had amaster's degree. This means that most of the teachers had graduated from college before ICT was fully employed and as such may have not been trained on how to use ICT for teaching and learning. Those with bachelor's degrees where noted although they were few, this means that they had passed through a system of education where different teaching and communication channels had been used hence maybe aware of the technological changes in the education sector.

4.2.2: Heads of departments

The demographic characteristics of the heads of departments covered here include gender, working experience and professional qualification. The characteristics are shown in table 2 below:

Table 2: Heads of departments

Gender	F	%
Male	8	67
Female	4	33
Working experience		
5 and below	0	0

6-10 years	3	25
11-15 years	3	25
16-20 years	5	42
21years and above	1	8
Professional qualification		
Diploma	7	58
Bed	5	42
Masters	0	0

n=12

Table 2 shows that 8(67%) were male while 4(33%) were female. The findings may be attributed to the fact that more male teachers are likely to be appointed heads of departments than females.

Teaching experience shows that they were no heads of departments who had 5 years and below working experience. This shows that teachers who hold the position of HOD have more years in practise. Also the age of the HODs is likely to influence their perceptions towards ICT adoption in administration.

Findings about the HODs' qualifications 7(58%) had a diploma while 5(42%) hadbachelors degree and none had masters degree, this imply that most of them were well qualified to give informed views pertaining to the use of ICT in administration.

4.3: Availability of ICT facilities for administrative purposes.

To establish the availability of hardware for administration the heads and HODs were provided with a list of ICT hardware and asked to indicate the number of facilities they have, their adequacy and the working condition (good or bad).

Table 3: Availability and adequacy of ICT hardware for administrative purposes

Item	N° of facilities%	Working condition(good or poor)%	Adequate or not adequate%
Computer labs	1(7)	9(60)	15(100)
Computers	14(93)	12(80)	15(100)
Laptops	12(80)	15(100)	15(100)
Scanners	12(80)	15(100)	15(100)
Printers	10(67)	7(47)	14(93)
Any other facilities	5(33)	6(40)	6(40)

n=15

Findings on table 3 indicated that 93% of the administrators had computers but only 7% indicated that they had a computer laboratory. Although a high number of administrators indicated that they had computers 80% indicated that the computers were in poor working condition. Also 80% indicated that they had laptops for administrative tasks and 100% showed that the laptops were in good working condition. 100% showed that the laptops were not adequate. 80% agreed that they had scanners which were in good working condition and 93% agreed that they were inadequate. Only 33% agreed to have another facility which was a Rizzo and 40% agreed that it was in good working condition although not adequate.

These results show that basic ICT facilities are available in schools for administration. Also on the findings from the interviews on the availability of technological facilities for administration it was gathered that desktops are mainly used but most of them needs repairs since their working condition is poor. Also the heads felt that there is need for technical support in the schools to help with repairs and uploading of software. At one school through observing the researcher noted that there was only one desktop computer in use while 10 others were locked up in store rooms because they needed repairing.

Furthermore, most head teachers when asked to comment on the availability of ICT facilities pointed out that they did not have the facilities due lack of funds to purchase the tools. For a few with some of the facilities they still maintained that they were not being fully utilised due to lack of skills. Therefore, this may go a long way in explaining why many schools inrural areas have not fully embraced the use of ICT in administration.

4.4: ICT facilities used by the administrators in the everyday running of the school

The schools heads and administrators were provided with a number of items and records and were asked to indicate if they had the item at their school and to show if they used ICT or not. The findings are presented in table 4 below

Table 4:Facilities used by the administrators in the everyday running of the school

Record or items	Availability%	ICT use %	No ICT use %
School admission register	15(100)	12(80)	3(20)
Inventory records	15(100)	5(33)	10(67)
Library records	10(67)	5(33)	10(67)
Newsletters	15(100)	5(33)	10(67)
Email address	5(33)	5(33)	10(67)
Students progress records	15(100)	4 (27)	11(73)
School master timetable	15(100)	5(33)	10(67)
Schemes of work	15(100)	4 (27)	11(73)
Books of records	15(100)	7(47)	8(53)

All the administrators agreed with 100% that they had school admission registers 80% indicated that they used ICT. Also on inventory of records all the participants agreed that their school had such a record but only 33% agreed that they used ICT. Only 67% agreed that they hada library

books record but only 5agreed that they used ICT for the capturing and storing of information regarding the library books. All participants agreed that they used newsletters when communicating with parents but only 5 participants agreed that they used technology. Furthermore only one school had an email address and also all schools recorded with 100% agreed that they had student's progress records but only 27% indicated that they used technology while 73% did not use ICT. All participants agreed that they had a school master timetable but only 33% agreed that they were using ICT. All the participants agreed that the schemes of work are being drawn in schools; only 27% agreed that they were using typed and printed schemes while 73% agreed that they were still using pen and paper. Lastly, all the teachers agreed that they had books of records, 47% were using ICT and 53% were not.

From these results the researcher noted with concern that the high response regarding the school admission register may be due to the newly introduced ZIMSEC policy of registering students, whereby all students are supposed to be e-registered hence the schools have no choice but to use technology. It can therefore be concluded from this analysis that strict reinforcement of policies is likely to contribute to increased use of ICT in administration. The findings further indicate that student progress records and schemes of work are the tasks that are least performed using ICT this implies that teachers are still reluctant in embracing the use of technology.

Also taking into consideration that all the other items except school admission register fall below 50% in terms of ICT use, this clearly demonstrates that the use of technology in carrying out administrative tasks in Gokwe South District is quite low. These findings are in agreement with Nchunge (2012) whose study revealed that secondary schools are lagging behind in the use of technology. This confirms that the use of technology has not yet been fully embraced and utilised to improve data flow in schools especially those in rural areas in Gokwe South District.

4.5: ICT equipment for teaching and learning

To ascertain the availability of technological equipment in the school for teaching and learning, the teachers were given a list of options and asked to show some of the facilities that they had. The findings are presented in the histogram below:

Fig 1: Histogramshowing the availability of ICT tools for teaching and learning
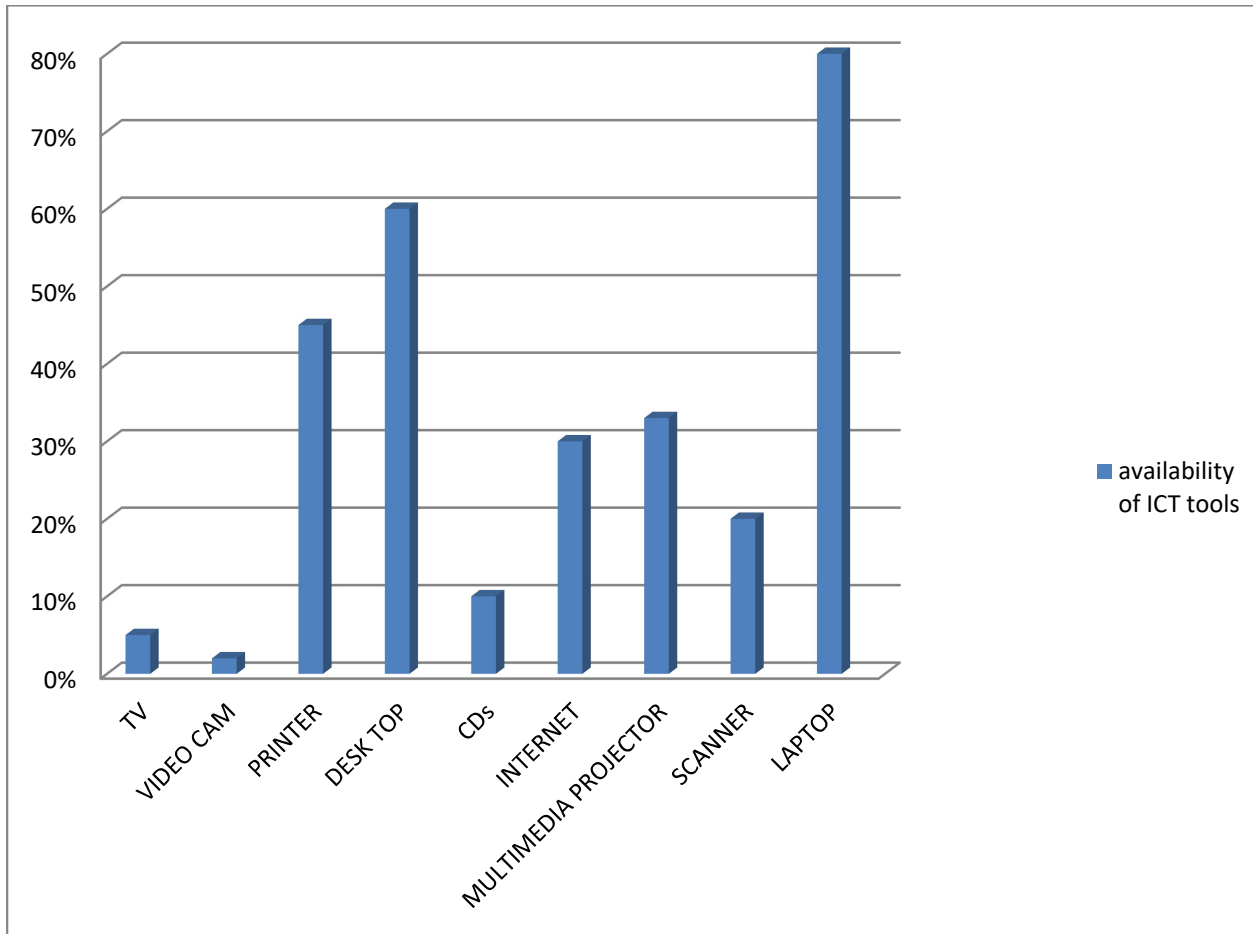
80% of the teachers agreed that they had laptops but most of them were for personal use and not for the school. 60% of the teachers agreed that there had desktop computers at their school. 45% agreed that they had printers at their disposal. However only 3% agreed that they had internet

connection and very low percentage was recorded on the availability of TV, CD and Video cameras.

These findings outline that the most used ICT tool for teaching and learning are laptop computers and desktop while the rest of the items are very scarce in schools save for printers and projectors. The reason for the increase in number of desktop computers is due to the donations made by the president in trying to breech the gap between rural and urban schools but it clearly shows that these computers alone are not adequate for the full embracing of ICT to take place.

The teachers were further asked how often they used the computers and any other electronic media in teaching and learning. Below is a pie chart showing their responses:

Fig 2:Teachers responses to how often they use e-media for teaching

TECHNOLOGY USAGE IN TEACHING AND LEARNING

- FREQUENTLY
- OCCASIONALY
- RARELY
- NOT AT ALL
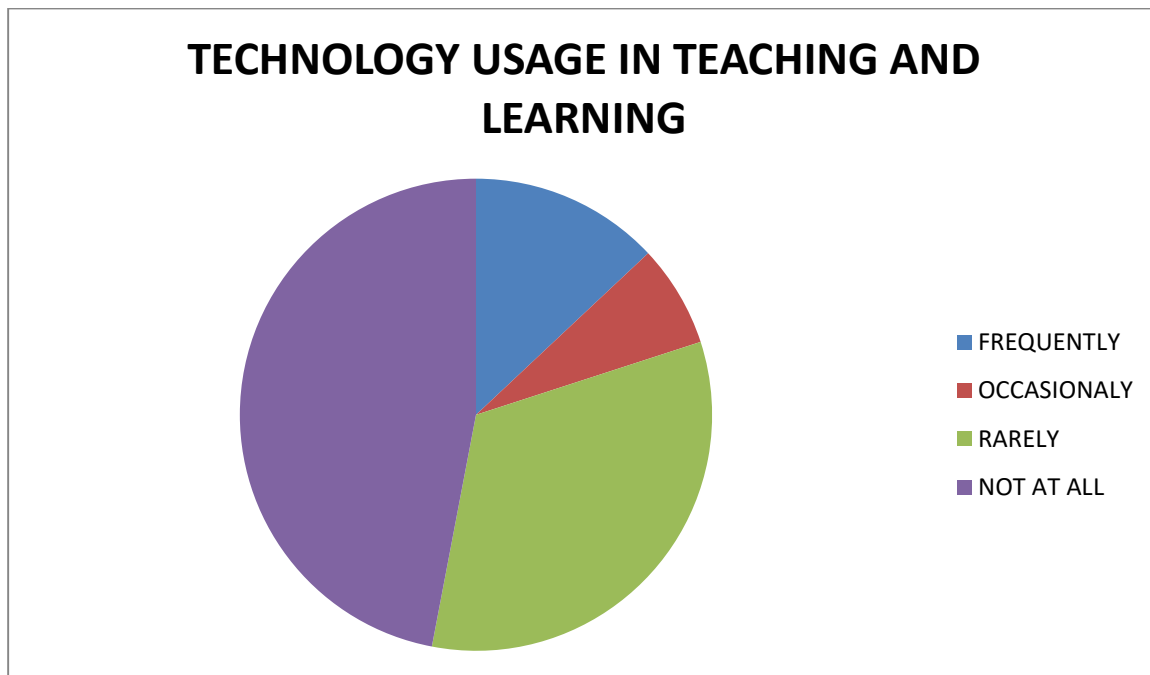
The findings indicated that most of the teachers never used e-technology for teaching especially the elderly teachers and those who used it frequently and occasionally were junior teachers, those with five years and below years in service, but their number was very low.

4.6: Challenges affecting elderly teachers in the teaching and learning using technology.

Teachers were asked to identify some of the challenges that are affecting their use of technology in teaching and learning. They were given a list of possible challenges and their responses are shown in the table below:

Table 5:Challenges faced by the elderly teachers in the integration of ICT.

Challenge	Number	Percentage
Limited/ poor infrastructure	9	60
Lack of ICT tools in schools	10	67
Frequent electricity interruption	9	60
Inadequate or no ICT technicians in the schools	8	53
Lack of computer education during College session	14	93
Lack of interest in integrating ICT	7	47
Lack of ICT skills among teachers	12	80
Poor perception of ICTs among elderly teachers and administrators	12	80

Inadequate educational software packages	5	33
Lack of maintenance culture	10	67
Lack of professional development opportunities for gaining knowledge and skill	12	80

N=15

From the findings it is clear that elderly teachers concur with 93% meaning majority of the participants that lack of ICT training in college is their greatest challenge in trying to embrace technology and also poor perceptions about ICT among them. Also 47% agreed that they had no interest in using technology because their traditional ways of teaching where working very well for them and as such saw no reason for changing what is producing good results.

Basing on the above findings it is clear that elderly teachers are yet ready to embrace the introduction of technology because they lack the expertise required and also from the questionnaires teachers argued that they preferred to use their cultural methods of teaching because they were confident and they could produce good results. Some actually believed that incorporating ICT in teaching and learning would affect pupil's pass rate and as such they would rather maintain the status quo. Furthermore, some of the teachers outlined that they feared embarrassment in front of the pupils if they failed to operate the machines in front of the pupils and that was affecting their embracing of this phenomenon.

4.7: Strategies to improve the use of ICT in the administration and teaching and learning by elderly teachers.

In trying to come up with strategies to improve the use of ICT in schools, the researcher asked teachers, pupils and heads for the solutions and these are summarised below.

School Heads,teachers and pupils of the schools under study indicated that a lot need to be changed and improved for smoothICT integration. Meaning technology use in schools can be improved if necessary changes are done to the existing system which includes computer education being made a compulsory subject, teacher in-service courses, increasing the number of computers at schools, increasing teacher access to computers, purchasing software packages, school and community support, adoption to modern teaching approaches, internet connectivity, infrastructure in the form of computer laboratories among others.

In the study administrators seemed eager to help teachers in their technological endeavours. However elderly teachers need to changetheir negative attitude towards the use of technology and the Ministry of Primary and Secondary education may have to come up with policies to improve the use of ICT in teaching and learning. They could also use policy enactments where ICT competence is made mandatory for all school teachers especially the elderly. This can be an effective measure in improving teachers' ICT knowledge and skills.

In addition to the above, Gulbahar and Guven, (2008) stated that the introduction of ICT innovations into education requires promoting structural, pedagogical and curricular approaches. As such the use of technology needs the teachers to work together as a team with the full support of the administrators for it to be fully embraced for the benefit of the pupils, the community and the nation at large.

4.8: Summary

The chapter presented the findings which indicated that most elderly teachers and school administrators were not fully using ICT due to a number of factors such as lack of skills on how to use technology, negative attitude of the elderly teachers towards the use of ICT and also lack of relevant hardware and software to use, to mention but a few. The findings were presented in form of graphs, tables and charts. The next chapter will draw conclusions from the findings and then make recommendations on how elderly teachers and school administrators can embrace ICT in rural secondary schools. Henceforth chapter 5 focuses on summary, conclusions and recommendations of the research.

CHAPTER FIVE

Summary, Conclusions and Recommendations

5.1: Introduction

This chapter presents a summary of the findings and conclusions drawn from the study. Recommendations and suggestions for further research have also been given.

5.2: Summary of the study

The main purpose of this study was to ascertain the extent to which the introduction of ICT is being embraced by the elderly teachers and school administrators in rural secondary schools in GokweSouth District.The review of literature indicated that central to the embracing of ICT in rural secondary schools are aspects such as attitude of the elderly teachers, community involvement in infrastructural development and ICT literacy among teachers and administrators. Descriptive survey design was used for the study. Stratified, purposive and random sampling procedures were used to determine the sample of the schools, heads, teachers and pupils. The sample consisted of 3schools, 3 heads, 12HODs, 15 teachers and 12 pupils. The research employed observation guide to check for the facilities available and to assess the adequacy as well as the working condition. Heads and pupils were interviewed while the heads of departments and subject teachers filled in questionnaires. Quantitative data was analysed and summarised using descriptive statistics and was presented in tables, graphs and charts. Qualitative data was presented in narratives.

In chapter 4 the findings of the study revealed that the key ICTequipments available in schools were desktop computers. However they are not adequate and most of them are not in good

working condition and as such teachers rarely use them for teaching and learning. Also most elderly teachers indicated that if they were well equipped with the relevant ICT skills they will be willing to use it in the teaching and learning since it would make work faster and easier and it would enhance their job performance.

Another finding was that the use of ICT in administration was limited to a very few tasks. It was mainly used in the registration of students since it is now mandatory that all students be electronically-registered for ZIMSEC examinations. Also most school administrators indicated that the use of ICT could influence their performance of administrative tasks,reduce time spent on routine tasks and would improve communicationif only they had the knowledge and the expertise on how to use it.

 The study established that a number of strategies can be employed to help elderly teachers and school administrators to embrace ICT as they are the major pillars in the school setup and since ICT is here to stay they have to embrace it for their benefit and pupils' as well as the nation at large. These strategies include that the government should facilitate funding for the in-service training of elderly teachers in ICT. District education inspectors should also hold workshops on the benefits of ICT usage in schools and help elderly teachers to change their attitude. Also the administrators should support teacher initiatives in ICT usage. Parents should also be conscientised on the benefits of e-technology. The schools should include the purchase of ICT hardware and software facilities in their annual budgets to avoid relying on obsolete equipment and software.

5.3: Conclusions

The research was mainly guided by the research questions and the following conclusions were made based on the findings.

On the level of availability of ICT facilities the researcher concluded that desktop computers were the most used hardware in schools for both administrative purposes and teaching and learning. However, the computers were not adequate and also most of them need repair since they are in poor working conditions. Also most schools were not fully utilising the computers due to lack of expertise on how to use them which remains as a great challenge as they are just locked in rooms.

Although some schools are trying to integrate ICT in the administration in the everyday running of the school for example online registration of pupils, admission register and school master timetable but the average use is quite low.

The elderly teachers perceived the use of ICT as a threat to their job security since they are not fully aware of how ICT is used and how it enhances their work. However the elderly teachers outlined that with the aid of training in ICT they are ready to embrace it, the teachers actually think that the use of ICT may be very convenient in terms of storage, retrieval and dissemination of information. They also think that quality work is produced. Despite the challenge of lack of expertise and inadequate facilities, the elderly teachers are enthusiastic and eager to learn how to use ICT in the teaching of different subject areas.

It was also concluded that the embracing of ICT by the elderly teachers and school administrators can be improved by in-service training as well as on time handling of challenges related to availability, adequacy and full utilisation of ICT facilities in the respective schools.

5.4: Recommendations

Since the researcher only focused on three secondary schools in Gokwe South district for more conclusive, comparative and comprehensive study, the research can be carried out on a large scale with a wide population base and greater sample. The researcher also suggests that the following interventions can be employed by the stakeholders namely, parents, teachers school administrators, and the ministry of primary and secondary education and the government to overcome challenges faced in the integratingand embracing ofICT by elderly teachers and school administrators in rural secondary schools.

The research recommends that schools should engagein-service teacher training programs for elderly teachers who never had training in ICT use,to equip them with knowledge and skills of usingICT in teaching and learning processes so that they develop interest, as well as refresher courses for the other junior teachers who got training in colleges for them to remain relevant in their profession.

Another recommendation is that the government should subsidize all ICT tools for educational purposes so that schools will acquire these tools affordably.

The Ministry of Primary and Secondary Education should find and develop affordable relevant educational software available at district offices in order to make them accessible to schools for ICT integration in the teaching and learning processes.

Gokwe South teachers should attend ICT staff development workshopsso as to equip themselves with ICT skills in order to use ICT in teaching and learning processes across all disciplines.

Schools to upgrade their infrastructure and develop ICT laboratories, purchase more computers especially laptops and connect to internet facilities to acquire reliable and relevant information in the teaching and learning process.

Gokwe South School Heads should allow Teachers and pupils to use the available ICT equipment in the teaching and learning processes rather to lock them up in store rooms until there are dysfunctional.

Finally, Gokwe South District Inspectors should encourage schools to integrate the use of computers in teaching and learning processes and at least one computer technician to help with technical problems at the school.

REFERENCES

Aduwa-Ogiegbaen, S. E. and Lyamu, E. O. S (2005) Using Information Communication Technology in secondary schools in Nigeria: Problems and Prospects, Educational Technology and society. Retrieved 24/10/16

Albirini A,(2004) "Teachers Attitudes toward Information and Communication Technologies: the case of Syrian EFL teachers; Journal of Computers and Education.

Anderson. R.E. (2008)Implication of Information and knowledge Society for Education: International handbook of information in primary and secondary schools.

Atkins, L and Wallace, S. (2012); Qualitative Research in Education. London: Sage Publications, LTD.

Barry, W.J., (2012). How can I improve my life-affirming, need-fulfilling, and performance enhancing capacity to understand and model the meaning of educational quality? PhD. Nottingham Trent University (published thesis)

Best.J. W. B. and Khan J. V, (1993). Research in Education (7th ed.); Boston: Alyn and Bacon Ltd

Boit, J., Menjo, D. and Kimutai, J. (2012).ICT and education :Enabling two rural western Kenyan schools to exploit information technology. Journal of emerging trend in educational research and policy studies, 3(1).

Borg and Gall (1989)Educational Research. London: Longman Publishers.

Bogdan,R. C. (1992) Qualitative Research for Education An Introduction to theory and Methods. (2nd edition) Singapore:Allyn And Bacon.

Bukaliya, R. and Mubika, A. K, "Teacher Competence in ICT: Implications for Computer Education in ICT: Implication for computer Education in Zimbabwe Secondary Schools, International Journal of Social Sciences and Education Volume:1 issue:

Cartwright, V. andHammond, M. (2007).Fitting it in: A study exploring ICT use in a UK primary school.Australian journal of educational technology, 23(3).

Champman, R and Slaymaker, T(2002).ICTs and Rural development: View of the literature, current interventions and opportunities for action: Overseas development institute.

Chemwa, G.W. andMburu, S.N.(2007).longhorn secondary computer studies for form 2. Nairobi: Longhorn publishers.

Chiromo, A. (2009) Research Methods and Statistics in Education a Student's Guide.2nd edition, Gweru, Midlands State University.

Curson, L. D (1980) Teaching Further Education outline of principles and practice: 4th Edition. London: Cassel Education ltd.

Cohen, L. Manion,L and Morrison, K. (2011). Research Methods in Education.7thedition,London: Routledge.

Cowie, B., Jones, A., Harlow, A and McGee, C.(2008). Digital horizons: laptops for teachers' evaluation, Hamilton: University of Waikato.

Denscombe M.(2010). Good Research Guide: For small-scale social research projects (4th Edition). Open University Press: Berkshire, GBR. ISBN 978-0-3352-4138-5

Dube, A., Nkunda, D. and Guju, C. (2010) Conducting research.blogspot.com archive.html. Research Methods: Surveys and Questionnaires. (Date accessed 31/06/16 at 18:00pm)

Duncombe, R. and Heeks, R (2002a). Enterprise across the digital divide: Information system and rural micro-enterprise in Botswana: Journal of International Development.

Farrant, J. S. (1980) Principles and Practice of Education London: Longman.

Fisher, R. A. (1999). The Genetical Theory of Natural Selection: Oxford University Press: ISBN 0-19-850440-3.

Fraenkel, J. R. and Wallen, N. E. (2003) How to Design and Evaluate Research in Education, 5th edition. New York: McGraw- Hill.

Gay,L. R.(2009). Educational research: Competencies for analysis and applications. New Jersey: Pearson education international.

Glass, G. V. and Hopkins, K. D. (1984).Statistical Methods in Education and Psychology (2nd ed.). Englewood Cliffs: Prentice-Hall

Gulbahar.Y.andGuven.I. (2008) "A survey on ICT usage and the perception of social studies Teachers in Turkey," Educational Technology and Society.

Hayes, D.N.A.(2007). ICT and learning lessons from Australian classrooms.Computers and education.

Hopkins, C. D. (1976) Education: A Structure for inquiry. NewYork: Meryl Publishing Company.

Howard, I. D. (2008). Unbounded possibilities: observations on sustaining rural information and communication technology (ICT). retrieved June 22, 2016 fromhttp://www.opc.org/en/system/files/sustainingRuralICT-0.pdf.

International Journal of Science and Research (IJSR), India Online ISSN: 2319-7064 D. Hollow, D. "eLA Debate: Does the OER Movement Really hold the Key to Improving Learning," http://www.elearning-africa.com [Accessed: Aug 16 2016]

Isaacs,T. (2007) "Survey ofICT and Education in Africa: Zimbabwe Country Report", Infodev Organisation, Harare.

Johnson, R.B, Calvert, E.andRaggert, N.(2009).ICT in schools: Final report. Retrieved Sept 14 2016 from http://www.2020.org.

Kachembere, J.(2011).ICT boom: Zimbabwe's opportunity to catch up: The Standard Zimbabwe.

Kasambira , K. P. (1993) Teaching Methods. Harare: College Press.

Kiraka, R. N and Manning, K. (2002) Getting online: Australia international development agencies and ICT use. Journal of international developments, 141, 75-87.

Krysa, R. (1998). Factors Affecting the Adoption and Use of Computer Technology in Schools.University of Saskatchewan.
http://www.usak.ca/educational/coursework/502papers/krysa/krysa.pdf

Kumur, R. N.(2007). Why institutional partnerships matter, a regional innovation systems approach to making the ICT for development project more successful and sustainable. Indian institute of technology, Mandras.

Konyana, E. and Konyana, S. (2008). African Journal of Education vol 3(2).

Langmia, K.(2005). The role of ICT in economic development of Africa: The case of South Africa International Journal of Education and Development using Information and Communication Technology (IJEDICT) 2(4)144-156

Lau, B .T and Sim, C .H. (2008) "Exploring the extent of ICT adoption among secondary school teachers in Malaysia", International Journal of Computing and ICT Research.

Leedy, P.D. (1999), Practical Research Planning Design,(5th ed) New York: MacMillan publishers.

Madon, S. (2000). The Internet and Socio – economic Development Exploring the interaction: Information Technology and People, 13(2), 85-101

Middleton, A. J., Flores, A. and Knaupp, J.(1997): Shopping for technology. Educational leadership, 53(3)

Mudzebele, N. (2013) International Journal of Humanities and social sciences Inventions ISSN online:2319-7722, www.ijussi.org volume 9 Sept 2013.

Mugenda,O. and Mugenda, A. (2003). Research methods: Qualitative and Quantitative approaches. Nairobi: Acts press.

Marufu, T. (2015) challenges faced in the computerisation of rural schools in Zimbabwe .Gokwe north district.

Musiyandaka, D.,Ranga, G. and Kiwa, J. T. (2013). The Journal of Community Informatics vol 9(4)An analysis of factors influencing success ICT4D projects. A case study of the schools computerisation programs in Mashonaland West province, Zimbabwe.

Nchunge, D. (2012). Users' perceptions on ICT adoption for support in schools: A survey of secondary school teachers in Thika district , Kenya.

Ncube, A. and Tshabalala, T. (2014) Journal of humanities and social sciences vol 3(4), accessed July 2016.

Ndawi V. E. (2013) Zimbabwean Secondary Schools," International Journal of Social Sciences and Education, Volume 1 (4),2011.

Noorman, M. (2012, July); Computing and Moral Responsibility. Stanford Encyclopaedia of philosophy. http://plato. Stanford.edu/entries/computing-responsibility.

Nut,J. (2010). Professional educators and the evolving role of ICT in schools: perspective report. Retrieved June 12 2016 from http://www.ictliteracy.info

Nziramasanga, C. T. (1999). Report of the presidential commission of inquiry into education and training; Harare: Government publications.

Oatey, A. (1999). The Strengths and Limitations of Interviews: A Research Technique for Studying Television Viewers.Accessed on 20 July.

Ogula, P.A. (2005). Research methods: self-study materials. Nairobi:CUEA publications.

Ruhonde, E. Owei,V. and Maumbe, B.M. (2008) ICT4D Arguing for enhancement of Public Service efficiency and effectiveness through e-government; the case Zimbabwe. IST. Africa 2008 conference proceedings 1.13

Seyal, A. H. (2012). International Journal of education and Development Using information and Communication Technology (IJEDICT), Vol. 8,(1).retrieved 10june 2016

Togola. S, and Marcilly, B (2012,), ICT a genuine tool to reduce isolation and raise health awareness. Mali,pdf.

Torbert,W. and Associates (2004); Action Inquiry: The Secret of Timely and Transforming Leadership.

Victoria, T. L. (2011). ICTin education; 7 july2016,http://www.en.wikibooks.org/wiki?

Wanjala, S. A., (2013). Teachers' perceptions on the use of ICT in administration of public secondary schools in KimililiDistrict.Bungomacounty: Kenya.

APPENDICES

Appendix 1

All communications should be addressed to

"The District Schools Inspector, Gokwe South"

Telephone:059-2352

Fax: 059-2352

ZIMBABWE

Ministry of Primary and Secondary Education
P.O. Box 63
GOKWE

26 September 2016

The Head

RE: PERMISSION TO CARRYOUT A RESEARCH AT YOUR SCHOOL: MUCHOCHOMI JENNIFER

Find attached an application by the above mentioned member to carry out a research at your school.
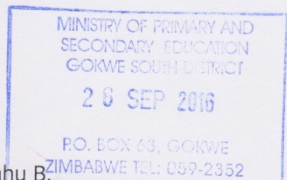
Permission is hereby granted. Please ensure though that the research will not disturb the normal running of the school.

MINISTRY OF PRIMARY AND
SECONDARY EDUCATION
GOKWE SOUTH DISTRICT

2 6 SEP 2016

P.O. BOX 63, GOKWE
ZIMBABWE TEL: 059-2352

Mushayavanhu B.
Acting District Schools Inspector — Gokwe South

Appendix 2

MIDLANDS STATE UNIVERSITY

P. BAG 9055
Gweru
Zimbabwe

Telephone: (263) 54 60404/60337/60667/60450
Fax: (263) 54 60233/60311

FACULTY OF EDUCATION
DEPARTMENT OF APPLIED EDUCATION

TO WHOM IT MAY CONCERN

The bearer.....MUCHOCHOMI   JENNIFER A...................is a B.Ed/
MED/PGDE student at this University. She / he has to undertake research on the title:
THE EXTENT to WHICH THE INTRODUCTION OF ICT IS
BEING EMBRACED BY THE ELDERLY TEACHERS AND
SCHOOL ADMINISTRATORS: A CASE STUDY OF GOKWE SOUTH DISTRICT
He/she is required to present a Research Project in partial fulfilment of the degree
programme.

In this regard, the university kindly requests both your institution and personnel's
assistance in this student's research endeavours.

Your co-operation and assistance is greatly appreciated.

Thank you

MIDLANDS STATE UNIVERSITY
FACULTY OF EDUCATION
DEPARTMENT OF APPLIED EDUCATION

2 2 SEP 2016

PRIVATE BAG 9055 GWERU
ZIMBABWE TELEFAX 054- 2604167

Dr. M. Chauraya
(Chairperson – Applied Education)

THE DEPUTY HEAD
NYARADZA SEC SCHOOL
2 3 SEP 2016
P. O. BOX 450
GOKWE

The Headmaster
Hovano Secondary School
2016 -09- 2 6
P.O. Box. 220
GOKWE

THE HEAD
GANYE SSCONDARY SCHOOL
2 6 SEP 2016
P/BAG 6245, GOKWE
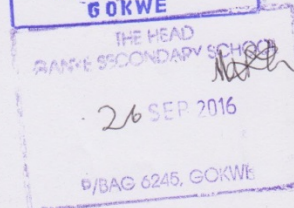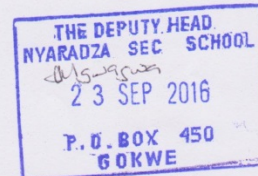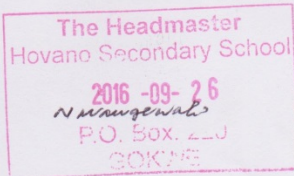
Appendix 3

QUESTIONNAIRE GUIDE FOR TEACHERS

My name is Jennifer AddlightMuchochomi, an undergraduate student at Midlands State University. I am conducting a research on how elderly teachers and school administrators are embracing the introduction of ICT in secondary schools in Gokwe South District. This is part of the academic requirements for the Bachelor of education honours degree in history. I kindly ask you to participate in the research by filling in this questionnaire. All your responses shall be treated confidentially and will be used only for educational purposes and not more than that. Please do not write your name on the questionnaire.

Thank you in advance.

Instruction:

Tick in the box provided or use the provided spaces for explanation where necessary.

1. Sex: male ☐ female ☐
2. Age bracket: 20-25years ☐ 25-30years ☐ 35-45years ☐ above 45 ☐
3. What is your highest professional qualification?

Certificate in Education	
Diploma in Education	
BED in Education	
Master's in Education	

Any Other, please specify...

4. When did you graduate from college? ....

5.

	Yes	No
(i) Did you get computer education at college?		
(ii)Have you ever use computer in the teaching and learning?		

If no to item (ii), why?..
....

61

6. Do you have computer laboratories with equipment's for ICT integration?

………

………

………………………………………………………………………………………………………

7. Please indicate items for teaching you have in teaching.

Overhead projector	
TV	
DVD	
Laptop computer	
Desktop computer	
Video Camera	
CD	
Printer	
Scanner	
Internet connections	
Multimedia projector	

8. How often do you use computers in teaching and learning processes?

Frequently	occasionally	rarely	not at all

9. Do you have any computer software packages at School?

Yes	No

10. Indicate the level of agreement with the following statement s on the use of ICT . strongly agree (SA); Agree (A); not sure (NS); disagree (D); Strongly disagree (SD).

STATEMENT	SA	A	NS	D	SD
I feel l can perfom my duties efficiently without the using computers or the internet					
The use of computers and internet has enhanced my job perfomance					
Using computers reduces time wastage in preparation of routine reports					
Using ICT requires re-training which wastes a lot of class time					
The funds being invested in ICT can best be applied in other more beneficial activities					
Using computers threatens my job security					

11. Does the school administration support you in accessing and using computers in the teaching and learning?

………………………………………………………………………………………………

………………………………………………………………………………………

12. List challenges you face in integrating the use of computers and internet at your schools

………………………………………………………………………………………………

………………………………………………………………………………………………

………………………………………………………………………………………

13. Which of the following challenges is being faced in the integration of ICT in the teaching and learning process besides you listed above?

	Tick
Limited/ poor infrastructure	
Lack of ICT tools in schools	
Frequent electricity interruption	
Inadequate or no ICT technicians in the schools	
High cost of ICT facilities	
High cost of internet connections	
Lack of computer education during College session	
Lack of interest in integrating ICT	
Lack of ICT skills among teachers	
Poor perception of ICTs among teachers and administrators	
Inadequate educational software packages	
Lack of maintenance culture	
Lack of professional development opportunities for gaining knowledge and skill	

14. What do you think could be done to improve the use of computers and internet at your school?

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

……………………………………………………………...........................

Appendix 4:

QUESTIONNAIRE FOR HEADS OF DEPARTMENTS

My name is Jennifer AddlightMuchochomi, an undergraduate student at Midlands State University. I am conducting a research on how elderly teachers and school administrators are embracing the introduction of ICT in secondary schools in Gokwe South District. This is part of the academic requirements for the Bachelor of education honours degree in history. I kindly ask you to participate in the research by filling in this questionnaire. All your responses shall be treated confidentially and will be used only for educational purposes and not more than that. Please do not write your name on the questionnaire.

Thank you in advance.

Instruction:

Tick in the box provided or use the provided spaces for explanation where necessary.

1. Sex: male ☐ female ☐
2. Age bracket: 20-25years ☐ 25-30years ☐ 35-45years ☐ above 45 ☐
3. What is your highest professional qualification?

Certificate in Education	
Diploma in Education	
BED in Education	
Master's in Education	

Any Other, please specify

4. When did you graduate from college? -----------

5.

	Yes	No
(i) Did you get computer education at college?		
(ii)Have you ever use computer in the teaching and learning?		

If no to item (ii),
why?..
....

6. Do you have a computer lab at your school?

Yes	No

7. Do you have computer laboratories with ICT equipment's for teaching and learning in your subject areas?

Yes	No

8. Indicate ICT items for teaching at your school?

Overhead projector	
TV	
DVD	
Laptop computer	
Desktop computer	
Video Camera	
CD	
Printer	
Scanner	
Internet connections	
Multimedia projector	

9. How often are computers used in teaching and learning processes at your school?

	Tick
Daily	
Weekly	

Monthly	
Yearly	

Other

10. Do you have internet at your school?

………

……………………………………………………………………………………………………

11. Does the school have power back-up facilities?

Yes	No

12. In what ways does the department support teachers in their use of computers as teaching and learning tools?

………

………

………

………

………

…………………………………………………………………..

13. Please indicate using a tick to what extent you personally agree with the following aspects of teacher's perceptions towards effect of ICT on performance of administrative tasks.

Statement	To a greater extent	To a lesser extent	Not at all
The use of personal computers has improved the efficiency with which administrative tasks are performed			
Computers have reduced time spent on routine tasks cutting down the administrative costs			
Use of internet for research has enhanced institutional knowledge and efficiency			

Use of Microsoft office suites on personal computers has improved quality of reports and other administrative communications			
ICT facilitates key activities in my school thereby enhancing its image and competitiveness			

14. What do you think should be done to reduce challenges affecting the use of ICT in your department?

………
………
………
………
………
………
…………………………………………………………………………………………………….

Appendix 5:

INTERVIEW GUIDE FOR SCHOOL PUPILS

1) How do you view the use of computers in the learning process?

2) Does the school have computers?

3) Are you ready for the use of computers in the learning process?

4) Do teachers use computers in teaching and learning processes?

5) Does the school have internet?

6) Does the school have power back-up facilities?

8) Do you see any challenges in the use of computer?

9) What do you think should be done to reduce these challenges?

10) Which learning opportunities do you think can be realized by use of computers and internet as teaching and learning tools?

Appendix 6:

DOCUMENT ANALYSIS GUIDE :

Observation 1:

With permission and assistance from the school authorities the researcher will examine the following records to access the extent of ICT use.

Record or items	Available (tick)	ICT use (tick)	No ICT use (tick)
School admission register			
Inventory records			
Library records			
Newsletters			
Email address			
Students progress records			
School master timetable			
Schemes of work			
Books of records			

Observation 2:

Item	Availability	N° of facilities	Working condition(good or poor)	Adequate or not adequate	N ° of users
Computer labs					
Computers					
Laptops					
Scanners					
Printers					
Source of power					

Radio					
Television					
Dvd or vcd					
Video deck					
Computer technician					
Any other facilities					

Appendix 7:

<u>Interview guide for the school heads</u>

The purpose of this interview is to gather information regarding the perceptions of school heads on how they are embracing the introduction of technology for school administrative tasks in rural secondary school in Gokwe South District. The information you provide will be kept confidential and will be solely used for research.

1. Comment on the availability of ICT facilities for your school...

2. How does ICT facilitate the performance of administrative tasks in your school?..

3. Comment on the perceptions of elderly teachers on the use of ICT in your school...

4. What is the effect of the use of ICT in administration of your school?...

5. What challenges does your school face in using ICT for school administration?...

6. What do you think could be done to improve the use of computers, internet and other ICT tools in your school?..

Thank you for your cooperation.