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FACTORS MILITATING AGAINST THE USE OF INFORMATION AND COMMUNICATION TECHNOLOGY IN THE TEACHING AND LEARNING OF ECONOMICS AT ADVANCED LEVEL IN GWERU DISTRICT.

BY

BEVEAN NYAUDE (R144166C)

A DISSERTATION SUBMITTED TO THE MIDLANDS STATE UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS OF THE BACHELOR OF EDUCATION HONOURS DEGREE IN ECONOMICS.

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APPROVAL FORM

The undersigned certify that they have read and recommended to Midlands State

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Factors militating against the use of information and communication technology in the

teaching and learning of Economics at Advanced Level in Gweru District

A research project submitted to the Department of Applied Education

By

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In partial fulfillment of the requirements of the Bachelor of Education HonoursDegree in

Economics.

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DEDICATION

I dedicate this study to my mother, EnnieNyaude and fatherFanuelNyaude, who both supported me financially and non-financially during this study. I also dedicate this study to my brothers Bezeal, Kudakwashe and my sister Tariro who gave me unwavering support when l was conducting this study.

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ABSTRACT

The research study sought to investigate the factors that are militating against the use of ICT in the teaching and learning of Economics at Advanced Level. The study was conducted in Gweru district.

The researcher employed the descriptive survey research design and he selected a sample of five schools from the population which comprised of fifteen schools. The researcher used the simple random sampling and the stratified random sampling to select schools and students from the population. The data in the field was collected by means of the questionnaires, observations and interviews. Four Heads of Departments were interviewed and five Advanced level Economics teachers responded to the questionnaires and sixty Economics students also responded to questionnaires. The collected data was qualitatively and quantitatively presented, analyzed and discussed.

The findings documented that there are several factors that are militating against the use of ICT in the teaching and learning of Economics students at Advanced level in Gweru district. The factors include shortages of ICT tools in schools, poor internet speed, lack of ICT skills in teachers, lack of support from the school administration and lack of funds to repair and purchase more ICT tools. The study strongly recommends the Ministry of Primary and Secondary Education to conduct ICT training workshops so as to ensure that all teachers are equipped with ICT skills and it should integrate ICT training courses in the teacher training programs. In addition, the government should also subsidies the cost of ICT tools so as to make them affordable to the schools and the government should also assist schools by donating computers.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

THE RESEARCH PROBLEM

1.0 Introduction

The Nziramasanga Education Commission report (1999) suggested that Zimbabwe should take into consideration the use of information and communication technology in the teaching and learning of students in schools. The Zimbabwean education system adopted an information and communication technology(ICT) national policy in 2005 which was supported by the Harvard University ICT Readiness Survey which suggested that Zimbabwe was not yet e-ready. The major aim of the policy was to have a paperless and e-ready educational system by the year 2020 (Vision, 2020).However, schools are still struggling to implement ICT in the classrooms. Therefore, the main goal of this study is to investigate the challenges that secondary schools are facing in the integration of information and communication technology (ICT) in the teaching and learning of Advanced Level Economics. In addition, the research is going to point out some of the benefits that are reaped from the use of ICT in the teaching and learning of Economics. This chapter focuses on the back ground to the study, the statement of the problem, significance of the study, purpose of the study, limitations and delimitations of the study.

1.1 Background to the study

The way we live nowadays is now being greatly affected by Information and communication technology (Serah, 2014). The impact of ICT has significantly changed the operation of other sectors such as Medicine, Mining, Banking, Engineering, Business and Architecture but when we are to compare these fields with the education sector, one will observe that the education sector is far behind the other sectors and there is not much change. According to Giles(2017)ICT

is a combination of devices that capture, transmit and display information and data electronically.

A recent study by Rabah (2015) which was carried out in Kenya shows that adopting information and communication technology can lead to an improvement on the quality of education.Therefore, theMinistry of Secondary and Primary education in Zimbabwe has now taken into account the importance of ICT in education and it is aimed at producing students who are globally competitiveand the curriculum is now tailor-made to ensure that students are equipped with critical thinking and problem-solving skills (Ncube, 2016).Mandoga, Matswetu and Mhishi (2013) suggested that students and teachers should have a meaningful interaction which is necessitated by the use of information and communication technology into teaching and learning.However, Zimbabwe like most developing countries is facing challenges in integrating information and communication technology (ICT) in the education system (Tshabalala, 2014). There is less doubt that the education sector is still missing out on the benefits of ICT especially in the rural areas (Ncube, 2016). Kambere(2011) cited in Mandoga et al (2013) asserted that many students in Zimbabwe are losing out on quality education and better paying jobs because the country is still lagging behind on the application of ICT in schools.

Udoh (2014)suggested that the education sector of Nigeria should fully integrate the ICT tools into teaching and learning for it to be efficient since ICT tools are valuable in enhancing student's understanding in the classroom. According to Madzima and Mashwama (2015), information and communication technology is important in education as it helps to improve the quality and relevance of education. In addition, ICT has become a powerful instrument for ultimately aiding in teaching and learning and for the development of education Unwin (2013).

According to Unwin (2013) ICT tools are catalysts that assist in improving the teaching methods and increase pupils' motivation and interest in the classroom due to access to electronic resources that makes learning concepts more vivid.Udoh (2014) propounded that the use of ICT enables students to get a much deeper understanding of more complex concepts because when imparting knowledge to students, the teacher can use various ICT instruments ranging from laptops, power point, internet, videos, compact digital move-making and projectors. A research by Emperica (2006) cited in Mandoga et al (2013) asserted that the use of ICT during teaching and learning increases students' motivation and they will also actively participate. However, despites all the benefits of ICT in education, there are still challenges that are being faced by schools in its implementation.

Serah (2014) asserted that there is a huge technological gap between the Western and African countries. In Western and Asian countries technology is advancing at a rapid rate whilst African countries are still facing challenges in its implementation (Serah, 2014).Kiptalam (2010) cited in Serah (2014) observed that in developing countries 1 computer is shared among 150 students whilst in developed countries 1 computer is shared among 15 pupils.

According to Kabweza (2011) and Reddi (2004) cited inMandoga et al (2013), Zimbabwe remains at the bottom ten of the ICT Network ReddinessIndex. Manyschools in Zimbabwe are struggling to exploit the benefits of information and communication technology for the purpose of learning and teaching(Mandoga et al, 2013).In addition,Mungai (2011) cited in Serah (2014) asserted thatmost schools in Kenya suffer from a high cost in the installation and maintenance of wireless internet and coaxial cable internet.

Furthermore, the Minister of Primary and Secondary Education, Dr Lazarus Dokora said in his speech at the commemorations of World teachers Day dated 6 October 2014 that some schools are still technophobic and they are failing to exploit the benefits of ICT into classroom practice (Ncube, 2016). Hesaid that integrating ICT in teaching and learning is a prerequisite because the world has gone digital and the country should not miss out on the benefits of ICT.In addition, DrDokorastated that, Ministry of Primary and Secondary Education is working hand in hand with the teachers' organizations, training teachers ICT skills and the government is currently sending ICT teachers to China so that they can advance their knowledge and skills (Ncube, 2016).Mandoga et al (2013) asserted that the demand for ICT learning is tremendous and the numbers of teachers who are skilled to teach ICT are limited and cannot meet the demand. This study sought to investigate the factors militating against the use of ICT in the teaching and learning of Economics at Advanced Level.

1.2 Statement of the problem

According to Ncube and Tshabalala(2014) the rapid developments in ICT has brought about tremendous changes in the 21Stcentury and it has become a must that students of today's era should be equipped with the essential skills for them to competently perform in the new information age. In addition, the use of ICT on the teaching and learning is a cause of concern and of national interest in Zimbabwe. According to Hapanyengwi (2017) all industries should take into account the importance of ICT and integrate it so that they remain relevant and competitive. Information and communication technology has penetrated all other sectors such as Banking,Medical services, Communications andTransport whilst the education sector is lagging behind (Serah, 2014).

TheMinistry of Primary and Secondary Education is heavily investing in ICT, donating computers and ensuring that teachers are equipped with the skills that are necessary for them to integrate ICT in the classroom (Ncube et al., 2014). However, despite these massive donations and investments in ICT facilities and professional developmentof educators in Zimbabwe, there is little evidence that ICT is being integrated in teaching and learning (Ncube et al., 2014).Therefore, this research is aimed at exploring the challenges that schools are facing in integrating ICT in the teaching and learning of Economics.

1.3 Research questions

➢ What are the perceptions of Head of Departments, teachers and the students towards the use of information and communication technology?

➢ What are the benefits of using information and communication technology in the teaching and learning of Economics at Advanced Level?

➢ What challenges are faced by schools when integrating information and communication technology in the teaching and learning of Economics at Advanced Level?

➢ What strategies can be put in place in-order to overcome the challenges that schools are facing when applying ICT in the teaching and learning of Economics?

1.4 Purpose of the study

➢ To determine the perceptions of Head of Departments, teachers and students towards the use of ICT in the processes of teaching and learning.

➢ To identify the benefits of using ICT in the teaching and learning of Economics at Advanced Level.

➢ To investigate the challenges that schools face when integratingICT in the teaching and learning of Economics.

➢ To identify the strategies that can be used to ensure successful integrating of ICT in the teaching and learning of Economics.

1.5 Significance of the study

This study aims to benefit various education stakeholders such as teachers, students, the Ministry of Primary and Secondary Education and the researcher.

1.5.1 Teachers

This study will investigate the challenges that are faced by schools when teachers integrate ICT in the teaching and learning of Economics at Advanced Level. Teachers in Gweru District will benefit from this study as the researcher will suggest possible solutions to overcome the barriers that are faced by many schools. Incorporating ICT in teaching and learning will also stimulate learner-involvement and motivation and this will lead to quality education and better examination results in Economics.

1.5.2 The Ministry of Primary and Secondary Education

The researcher will submit a final copy of his findings to the Department of Policy, Planning, Research and Development in the Ministry of Primary and Secondary Education. The Ministry of Primary and Secondary Education will benefit from the document as the information enclosed in the document will be used for further research, curriculum planning and policy formulation.

1.5.3 Learners

If the ICT is adequately used and incorporated in the teaching and learning of Economics at Advanced Level, the learners will be equipped with skills of problem-solving and critical thinking. Moreso, the students will be more involved in their learning because the teaching methods will be learner centered. ICT has a positive effect on the learning of students because the use of various ICT tools such as the internet exposes students to a widened base of knowledge which will have a positive effect on their performance in examinations.

1.5.4 The Researcher

This study will also benefit the researcher since the researcher will be one of the teachers who will be playing a vital role on the integration of ICT in the teaching and learning of Economics. The researcher will also accrue benefits from the knowledge and exposition to various ICT tools that can be employed to enhance the teaching and learning of Economics at Advanced Level.In addition, the researcher will acquire research skills that he can also use in other studies.

1.6Assumptions

➢ Teachers and pupils are computer illiterate and they do not want to use ICT during teaching and learning.

➢ Teachers are comfortable in using the traditional teaching methods and they do not want to accept change.

➢ The researcher also assumes that computer studies is being taught in the schools but both the teachers and students are reluctant to integrate ICT tools in the teaching and learning of Economics at Advanced level.

1.7 Limitations of the study

The researcherwill only carry out the survey in one district due to limited time. The researcher also carried out the survey with asmall sample of 4 schools because of their proximity to the researcher and the findings cannot be used to draw generalizations to the whole province. The study was also restricted to Economics only and on the challenges that are faced by teachers when integrating ICT in the teaching and learning of Economics.

1.8 Delimitations

The study was limited to only 4 highschools in Gweru District and the reason why these four schools were selected is because of their accessibility to the researcher. The researcher only used questionnaires, observations and interviews as data collection methods for this study. The study covered the period from September 2017 to June 2018 and it involved the Economics teachers, Advanced Level Economics students and Heads of the Commercial Studies Departments. In addition, the study unveiled the challenges that schools face when integrating ICT in the teaching and learning of Advanced Level Economics.

1.9Definition of terms

Technophobia

Technophobia is the dislike or fear of using advanced information and communication technology (Longman Dictionary of Contemporary English).

Computer

A computer is a device that uses an operating system and software to accept data, store information and generate information (Rackham, 2014).

Information and communication technology (ICT)

ICT is the use of computers, telecommunication office systems and technologies for the collection, processing, storing, packaging and dissemination of information. The term ICT is used as an umbrella term which includes various technologies such as laptops, scanners, WIFI, projectors, Microsoft word and keyboards(Crawford, 2015).

Challenges

These are barriers that hinder the achievement of a certain objective(Burns, 2013).

Integration

This is a process where two or more things are combined together so that they function together effectively (Burns, 2013). In context, integration of ICT to education is the use of ICT tools in the teaching and learning so as to achieve better examination results.

Digital learning environments

These are platforms that facilitate teaching and learning through the use of computers, the internet and other ICT tools (Crawford, 2015).

Teaching

This is a process by which various strategies (teaching methods) are used to disseminate information, discipline and skills to someone in-order to achieve specific goals (Caplainee, 2015).

Learning

Learning is a transformative process where one acquires information and skills through studying or experience and this results in a permanent change in a person's behavior and knowledge (Mayer, 2017).

1.10 Summary

The chapter has outlined the background to the study, purpose of the study and also pointing out the benefits of using information and communication technology. The researcher also pointed out the problem statement, significance of the study, research questions, possible limitations and the delimitations of the study. The next chapter will review the literature related to the research problem.

CHAPTER 2

REVIEW OF RELATED LITERATURE

2.0 Introduction

The purpose of this chapter is to give a detailed examination of existing literature, and to set out the definition and the general conceptual framework of information and communication technology (ICT) for organizational development. In this chapter, the researcher will also point out the role of ICT in education, the ICT tools available for teaching and learning, the challenges that schools are facing when integrating ICT and the summary.

2.1 Theoretical framework

The complete utilization of ICT skills in the teaching and learning of students will lead to an improvement in the digital learning environment which would be beneficial to students as this would increase the quality of education and the research of students. Many students and teachers are now aware of the benefits that are derived from the use of ICT tools in the classroom. Therefore, the researcher used the Modernisation theoryand the Computer Supported Collaborative learning theory as a guide and justification of this study.

2.2 The Modernisation theory

Horneberry (2013) propounded that, countries that are still developing should adapt to technological changes that are happening globally so as to improve their economies and schools must utilize ICT in the teaching and learning of students so as to enhance the quality of education. The modernisation theory states that schools need to invest in modern technology

such as projectors and computers so as to function effectively and increase the academic performance of students(More, 2014).

2.2.1 The Computer Supported Collaborative Learning Theory (CSCL)

The CSCL theory is mainly concerned on how technology can be used to make life easier for mankind (Bran, 2015). In addition, the theory is also based on the analysis of how students and teachers can work hand in hand with technology so as to achieve better outcomes. According to Bran (2015) integrating information and communication technology in the teaching and learning of students will lead to a tremendous change in the quality of education. Bran (2015) propounded that the theory stresses on the idea of students working in small groups (collaborative learning) but with the use of technology.

Computer collaborative learning theory states that the use of technology in teaching and learning can enhance both face to face and distance learning for example students around the world can share meaningful information through the use of video conferencing. Cook (2014) cited in Ngandu (2015) asserted that computer collaborative learning supports even face to face interaction and is not always based on online or distance learning for example students can also use the internet to research for information and discuss in small groups. The theory stresses on the collaboration among learners so as to prevent a situation where students are just working alone in isolation without any interaction with peers or feedback from teachers (Cook, 2014).

2.3 Role of ICT in Education

According to Daniels (2002) cited in Serah (2014) information and communication technology has become one of the basic and crucial building blocks of today's era.Unwin (2013) states that, the use of ICT tools such as projectors, computers, internet and Microsoft-word in the classroom enhances the quality of education. In addition, the use of ICT tools in the classroom encourages

critical thinking, equips students with problem solving skills and also increases students' interest and motivation towards the lesson(Unwin, 2013). According to Udoh (2014),ICT tools such as e-learning have played a vital role in education since it has facilitated ease communication between the teacher and students. Moreso, ICT use in the classroom has increased the speed at which information was being passed from the teacher to the pupils and it can also facilitate online discussions or distancelearning(Unwin, 2013).Udoh (2014) asserted that developed and under developed countries have now realized the importance of information and communication technology as a crucial element of the education sector.

In Kenya, the government encouraged schools to use information and communication technology as this causes a change in the teachers' role in the classroom as the teaching methods shifts from traditional method (teacher centered) were the teacher was the only source of information to the modern teaching methods (students centered) were the student is involved in his/her teaching (Serah, 2014).Tinio (2013) propounded that the transition from traditional to modern teaching methods has enhanced teaching and learning since pupils are now at the central stage of learning and the teacher is now directing students on their learning and no longer a bank of information. Seyal (2013) propounded thatstudents are now learning by doing and this stipulates motivation and interest on their learning.

In a recent study about the impact of ICT in schools which was carried out in Europe by Balanskat (2015), asserted that the use of ICT enables teachers to increase their efficiency in activities such as lesson planning, scheming, record keeping and also lesson delivery since the teachers can use power point during his/her lesson instead of writing information on the whiteboard. The use of information and communication technology has opened doors to the

biggest library in the world (internet) to students and this has increased the quality of pupils' and teachers' research (Tinio, 2013).

2.4 Impact of ICT in education

According to Newman(2002) and Wheeler (2000) cited in Mathevula (2014) the integration of ICT in teaching and learning allows students to share learning resources, learning spaces and it promotes collaborative learning. Newman (2002)and Wheeler (2000) cited in Mathevhula (2014)suggests that learners and teachers can use computers to share information with the other students and teachers within the schools, in the district or even in other countries through video conferencing. In addition, using ICT to share learning resources increases the quality of education and also reduces the cost of travelling to schools in other countries or districts just to share information (Unwin, 2013).Mdleste (2013) propounded that sharing of learning spaces can help to trim down the problems of over-clouding and the shortage of teachers in the developing countries such as Zimbabwe and South Africa especially in the rural areas.

Moreso, the integration of ICT in teaching and learning increases students' motivation and leads to active learning as students will be learning as they do. According toOhiwerei, Ohiole and Okoli (2013), learning through ICT promotes students' involvement in learning and also equips students with problem solving skills whilst teacher centered methods of learning promotes rote learning (memorization based learning).

Aduwa-Ogiegbaen and Iyamn (2005) cited in Bukaliya (2012) suggested that there are many benefits that can be harvested from the use of information and communication technology.Ogiegbaen and Lyamn (2005) cited in Tshabalala (2014) propounded that several ICT toolscan be used in teaching and learning and outlined the benefits that can be obtained

when ICT is used in the classroom. According to Ogiegbaen et al (2005) cited in Tshabalala (2014) information and communication technology increases efficiency in the classroom for example when a teacher is teaching a large class he or she can use the projector to display information so that all the students can see. Moreso, students can develop problem solving skills because they will be more involved in their learning, information can be easily and quickly passed on to the students through the use of e-learning or e-mails (Serah, 2014). ICT also enables students to work at their own pace receiving feedback from the teacher even when they are off-campus (Mdleste, 2013).Furthermore, Bukaliya (2012) propounded that students and teachers would also increase the quality of their education because they would have access to the internet where they can do their research (improvement in the quality of research).

Sithole (2010) asserted that the use of information and communication technology in the classroom setup can enhance pupils' motivation and engage pupils in learning. The developments in ICT tools can improve the teaching and learning in schools and this will also lead to a tremendous improvement on students' academic performance (Bukaliya, 2012).According to Bukaliya (2012) many benefits can be derived from the use of information and communication technology in teaching and learning of students in schools.Tshabalala (2014) asserted that there are several information and communication technology tools that teachers can use to effectively teach their students for example a teacher can use Power Point to facilitate ease dissemination of information to a big class. In addition,quiz and other education gameswhich concentrate on the critical thinking skills of pupils can be carried out through the computer and this would be beneficial to students since they will beequippedwith problem solving skills (Ngandu, 2015).

Furthermore, using computers in schools can bring efficiency in various activities such as lesson planning, keeping a record of student's performance, designing report books and budget planning (Okoli, 2013). Computers also facilitate individual learning through drill and practice exercises (Ngandu, 2015).Serah (2014) states that learners have different learning styles (visual or auditory) and also have different learning paces hence using a computer will allow the pupil to learn at his or her pace and time.Visual or auditory learners can be catered for through the use of videos on the computer (Serah, 2014).

According to Patil (2012) ICT has several benefits such as the increased research base for both teachers and learners. Computers give access to students to do research on the internet for example a student doing Economics at A level can surf internet on topics like national income, costs curves and the theory of distribution at their spare time. Lau et al (2013) asserted that ICT also enables students to communicate with their teachers even when they are at home through online discussions on the e-learning, to revisit previously worked task and to use educational software to test and check their academic performance since a computer can also mark and give quick feedback to the student.

2.5 The use of ICT in developed countries

Capuk (2015) asserted that many countries around the globe have implemented information and communication technology in their education sectors. Serah (2014) asserted that the United Nations categorized countries in two groups (advanced and less advanced) in terms of ICT implementation. Countries that are technologically advanced included the United states of America, Canada, Japan, China and West European nations and the less advanced included Zimbabwe, Nigeria, Kenya, Swaziland and Mexico (Serah, 2014). Capuk (2015) propounded that in developed countries ICT is being taught as a subject and is also integrated in the teaching

of subjects like Mathematics, Economics, English and other various subjects that are taught at school. Developed countries have successfully integrated ICT in their education as compared to developing countries which are still struggling with challenges on the integration of ICT in the Education sector (Serah, 2014).

In a study carried out in Canada, Aube and Meyer (2014) collected data from an experiment which was done at Saint-Ande school where the integration of information and communication technology was sponsored by the government. Findings from the two researchers showed that ICT was very essential in the teaching and learning of students.Aude et al (2014) suggested that teachers with adequate ICT skills yielded fruitful results from the use of ICT in their classrooms and they asserted that information and communication technologytools enhanced their ways of teaching.

In 1997, the UK government outlined its vision for ICT integration in the education sector. The main objective of the UK government was to integrate ICT in the libraries, schools and all the communities (Mushonga, 2016). In addition, Mcmullan(2002) cited in Mushonga (2016) encouraged the UK education sector to conduct test to determine whether the schools where able to access ICT infrastructure, schools were connected to the internet and whether the teachers were equipped with ICT skills. At that time findings showed that the country needed to invest more on ICT infrastructure and on the training of ICT skills to teachers, however recent studies shows that UK has digitalized its education sector and is more advanced as compared to developing countries such as Zimbabwe, Nigeria and Kenya (Mushonga, 2016). According to Capuk (2015) the education system of UK is now more advanced than that of under developed countries everything has been digitalized and teachers are fully utilizing ICT during the teaching and learning of students.

2.6 ICT use in developing countries

Kozma and Anderson (2012) asserted that many developing countries are not yet e-ready and just a few countries are able to harvest the fruits of technology. Developing countries such as Kenya, Swaziland, Zimbabwe and Ghana face a lot of barriers that prevent them from using ICT in their education systems (Kozma et al, 2012).Furthermore, both developed and developing countries have recognized the importance of ICT use in education and they have started to utilize ICT in teaching and learning.

Wagner (2005) cited in Serah (2014) suggested that developing nations are now currently integrating ICT in their schools and the demand for ICT tools is increasing. Yusuf (2009) cited in Selehi (2012) asserted that in Kenya parents are now trying by all means necessary to ensure that computers are available for use in both private and public schools. The use of information and communication technology in teaching and learning has the ability to change the ways in which students were being taught bringing efficiency to the education sector (Crook, 2014).

However, Wagner (2005) cited in Serah (2014) propounded that the availability of computers in schools is not enough for the successful implementation of ICT in the education sector. Serah(2014) suggested that developing countries need to put in place strategic plans for successful integration of information and communication technology in the education sector.Mhishu (2013) suggested that schools in the rural areas of Kenya have built strong computer laboratories but the computers are not used for the teaching and learning of students due to lack of teacher ICT skills to incorporate ICT in teaching and learning.

In addition, the Zimbabwean Ministry of Information and Communication technology drafted a strategic plan in 2010 for the integration of ICT in education. Its main objective was to have one computer in every classroom by the end of the year 2014 Mandoga et al(2013). However,

researchers observed that Zimbabwean schools have at least 50 pupils per class and the concluded that the ratio of one computer for every 50 students was not workable (Mandoga et al, 2013).

2.7 ICT tools available for teaching and learning

According to Rackham (2000) cited in Ngandu (2015) information and communication technology instruments include both software and hardware that is used for teaching and learning. A study by Robllyer and Doering (2013) suggest that three basic and important ICT tools are used by many educators in this modern society to enhance the quality of education.The three ICT tools include generic programs such as Microsoft word, computers and hardware items which include keyboard, mouse, projector and printers(Robllyer et al, 2013).Educators and other professionals have agreed on the fact that ICT instruments bring efficiency at the workplace and should be integrated in their day to day activities (Robllyer et al, 2013).Furthermore, Sermtom (2012) suggested that teachers should integrate ICT tools to classroom practice since these tools bring efficiency and competitiveness to the 21st century student.

Moreover, the compact disc (CD) can be of great use in the education sector since students can use it to store information (Shermtom, 2012). In addition CD's allows students to learn at their own pace since they can watch and listen to tutorials stored on the CD and make their own notes and they can also replay the disc if they want to get a better understanding (Shermtom, 2012). In developed countries many teachers are making use of videos during their teaching and learning Nugent (2005) cited in Smaldino (2013). According to Smaldino (2013) videos have proved to be a very vital instructional media as they catch the learner's interest and also motivate students.

Rackham (2000) cited in Ngandu (2015) propounded that a multimedia is a set of tools that results in the production of sound, graphics and text. These tools include projector, speakers, laptops, cell phones and television sets. Hoole (2005) cited in Ngandu (2015) supported the notion that a multimedia is very vital in the teaching and learning of students since it supports both visual and auditory learners.

According to Mellor (2013) teachers and students can even generate online flashcards and construct online task and test for students using an ICT tool called study blue. In addition, this tool also allows students to even do online studies with other peers from the same class. Mellor (2013) propounded that students can also track their performance and prepare for their exams using this software.

Kamba (2017) asserted that the internet can also act as a tool for teaching and learning since it allows students to research, learn collaboratively with their peers or with other students around the world, exchange information with peers online and also to communicate with their teachers through e-learning or emails. Mellor (2013) suggested that complementary ICT tools such as Opera and Google Chrome also assist students and educators to access information quickly.

Newby (2011) cited in Mellor (2013) asserted that a computer is a vital tool in the education sector since it assist the administration members, teachers and learners to carry out their day to day activities efficiently. Ndhluvu (2016) asserted that a computer can be used as a data bank since it has the capability of storing information. Power point slides, schemes of work, textbooks, handouts, records of marks can be stored on the computer and this allows ease access of information Yursuf (2005) cited in Ndhluvu (2016). Newby (2011) propounded that pupils' performance records can be stored on the computer and this enables the teacher to track students'

performance. Patil (2012) suggested that the computer and its various applications such as Microsoft excel, Microsoft PowerPoint and Microsoft word can be used as an instructional media to assist teachers and students during teaching and learning. Teachers have found the Microsoft PowerPoint as a very vital tool when preparing for lessons since it enables them to create slides that they can use for many years (Cain, 2013). According to Serah (2014) the use of ICT in education assists teachers to enhance the ways of teaching and hence it is playing a significant role in the education sector.

Israel and Edesiri (2013) propounded that teachers and pupils' can use a software called Telnet which allows them to remotely access data from any computer at school using any computer or phone at home. Educators have found Telnet a vital tool since it allows them to log in to their office computers and access information even when they are at home (Edesiri et al, 2013).

2.8 ICT skills essential for use in education

According to Israel and Edisiri (2014) defined ICT skills as the ability to operate computers and other ICT tools. Teachers' and students' of this modern society should posses ICT skills that are necessary to teaching and learning. Lau and Sim (2013) asserted that educators and learners should have knowledge and skill on word processors, spread sheets, projectors, computers, power point and internet surfing skills. Lau et al (2013) propounded that these skills are necessary for successful integration of ICT in the education sector and every teacher should be well versed with knowledge of operating various ICT tools.

A study conducted by five European countries suggested that ICT skills in teachers are positively correlated with the ability to integrate ICT to classroom practice Costa (2008) cited in Lau et al (2013). In addition, Edisiri et al (2014) asserted that educators with more advanced information

and communication technology skills are comfortable to use ICT tools in the classroom as compared to teachers with little or no ICT skills.

Haywood (2003) cited in Ediseri et al (2014) propounded that the following key requisite ICT skills should be acquired by both students and teachers. Students and teachers should possess computer typing skills, application skills, data presentation skills and internet research skills.Engeldinger (2011) cited in Ediseri et al (2014) stated that the major objective of the schools is to prepare students for the future. Ediseri et al (2014) suggested that if students are to prosper in the future they must possess various ICT skills since the modern society has been digitalized.

In Portuguese, teachers suggested that the government should play a vital role in making sure that all teachers are equipped with ICT skills so as to enhance the quality of education in the country (Lau and Sim, 2013).The Portuguese educators suggested that their government should conduct workshops or short ICT training courses to in-service teachers so as to equip them with the necessary skills of using ICT In the classroom and also ICT skills should also be part of the teacher training course (Lau et al, 2013).

According to Costa (2008) cited in Lau et al (2013) if a teacher is well versed with information and communication technology skills he/she will be effective during teaching and learning. Tyler (2005) cited in Edisiri et al (2014) asserted that the use of ICT in teaching and learning instills students' interest towards that specific subject.

Iwona (2008) cited in Edisiri (2014) asserted that the internet has become the biggest library in the world hence students must be capable of harvesting information from the internet. In

addition, Israel (2014) noted that e-resources are now growing in numbers and are now available for student's use but in-order to access them, students should possess online browsing skills.

A study which was carried out by Ogumbangi (2014) in Nigeria stated that if teachers possess ICT skills they are more likely to be efficient during teaching and learning of students for example an economics teacher can effectively use the projector to illustrate the link between long-run and short-run cost curves rather than wasting time drawing the diagrams on the whiteboard. However, Ogumbangi (2014) postulated that many teachers are not yet equipped with ICT skills hence this is a challenge to the education sector.

According to Ogumbangi (2014) the use of ICT has broken the barrier of distance between countries since students can now conduct online discussions with other students in other countries or even with their peers. To fully harness this benefit students have to possess web browsing skills so as to be able to conduct online seminars, discussions and to share information with others via email or e-learning (Israel and Ediseri,2014). He further suggested that teachers with web browsing skills can also share information with other teachers outside or inside the country.

Adeoye, Antonia and Oluwole (2013) postulated that ICT skills are important to students especially students at Advanced level since they will be using those skills to access electronic resources.Adeoye et al (2013) stated that it is now important for every student of the 21st century to acquire ICT skills. Kumar and Kaur (2006) cited in Israel et al (2014) asserted that students and teachers can acquire these skills through training from colleges, colleagues and through the trial and error.

2.9Studies on the use of ICT

According to Cain (2015) research that is being conducted by various researchers have shown that ICT has a positive impact on the teaching and learning of students. Cain (2015) also carried out a study on the effectiveness of using ICT in the teaching and learning of students and his findings seconded the findings of other researchers. He asserted that the use of ICT in education yields positive outcomes.

Studies carried out in Europe by Balanskat (2006) as cited in Ngandu (2015) showed that 86% of teachers suggested that students are more interested, attentive and motivated when ICT teaching methods are used during teaching and learning.Ngandu (2015) asserted that ICT instills lifelong learning skills in students since the use of ICT enables students to be more responsible towards their own learning and to effectively and independently work on their studies.

In Nigeria, Omeluzor (2013) noted that the use of ICT in the education sector increases students' performance and academic achievements hence the quality of education is increased if ICT based teaching methods are used in the classroom. Omeluzor (2013) further asserted that ICT shifts and improves the teaching methods from the traditional to modern teaching methods where the student will be at the center of his/her learning.Teachers in Nigeria stated that learner centered approaches to education instills permanent knowledge in learners since they will be learning by doing and they will be more interested in what they will doingBalanskat (2006) as cited in Ngandu(2015).

Parkstan (2013) suggested that ICT supports collaborative learning and distance learning through e-learning. Pupils can work in small groups through g-mail, e-learning and even on video conferencing sharing information and knowledge.Parkstan (2013) pointed out that collaborative learning can also create competition among learners for example students can all attempt to answer online test on the topic of national income in economics and the computer can mark and

give feedback to the students allowing them to compare outcomes or marks on the test among themselves.

In 2014 UNICEF conducted a study in Zimbabwe which was based on the integration of information and communication technology in Secondary schools (Ngandu, 2015). Findings from the study concluded that approximately 89,4% of Secondary school teachers declared that ICT plays a vital role in stimulating motivation and interest in learners if it is used effectively in the classroom (Ngandu, 2015). The teachers further asserted that internet had increased their information research base and students' academic achievements have increased due to the use of information and communication technology in the schools.

Cain (2015) propounded that the computer applications such as Microsoft word and Microsoft PowerPoint have assisted students to efficiently carry out their presentation using the projector and to write their assignments neatly using the Microsoft word computer software.

Ajayi (2013) asserted that teaching and learning of students have shifted from the traditional methods (teacher centered method) where the teacher used to be the only source of information dictating notes to the pupils with little or no participation to the modern learning method (learner centered method).

Moreso, a study conducted by Hall and Hord (2001) cited in Edesiri et al (2014) concluded that 88% of educatorsin New Zealand testified that the use of information and communication tools in education has enhanced the quality of education. Furthermore, Serah (2014) suggested that ICT has brought efficiency in the planning of lessons, keeping of students records and on lesson delivery.

2.10Challenges that are encountered when integrating ICT in teaching and learning

Information and communication technology is perceived as an important element for development (Cain, 2015). However, there is a huge gap in the implementation of ICT between the developed countries and developing counties.This gap is known as the "Digital Divide" and it can be viewed when two or more countries are compared or within a country (Cain, 2015). In addition, the education environment of developed countries such as Canada and Japan is technologically abundant as compared to that one of developing countries where challenges in the implementation of ICT are being faced (Edesiri et al, 2014).

Mndezebele (2013) observed that schools in developing countries are still not yet e-ready due to a number of challenges that are being faced by the schools and the education system. Schools in developed countries such as Nigeria, Kenya and Zimbabwe lack the necessary ICT infrastructure thatis required to implement ICT in the education system (Ediseri et al, 2014). Moreso, schools are facing financial constraints and this act as a barrier for schools to buy ICT tools that are necessary for use in the education sector (Unwin, 2013). Such tools include computers, projectors, keyboards, Microsoft office packages, Wi-Fi routers and flash drives.

In Nigeria, Aduwa-Ogibaen and Iyamu (2005) as cited inOgumbangi (2014) noted that the barriers that are in place to prevent successful integration of ICT in the education system of Nigeria are as follows, schools are suffering from the high cost of ICT tools, shortage of skilled teachers to teach ICT in schools and lack of access to internet in schools. In Zimbabwe, Mushonga (2015) suggested that schools are also facing the same challenges that other countries are facing. Iyamu et al (2005) cited in Mushonga (2015) also pointed out that service providers in developing countries are over charging the cost of wireless internet and this is also a major challenge that schools are facing.

In addition, Ogumbangi(2014) suggested that schools suffer from the high cost of installing and maintaining coaxial cable and Wi-Fi (wireless internet). Moreso, elderly teachers that have been in the education sector for a long time possess little or no information and communication technology skills.Seyal (2013) stated that the barriers that prevent schools from utilizing ICT tools are preventing schools to harvest the benefits of information and communication technology.

Furthermore, the construction of strong burglar proof computer labs is very expensive for schools in developing countries. A research study conducted by Iyamu et al (2005) as cited in Ogumbangi (2014) asserted that many schools in developing countries have confirmed that the building of computer labs and maintenance of information and communication technology tools is very expensive. A research study by Serah (2014) in Kenya concluded that only a few schools have managed to construct burglar proof computer labs and to buy adequate ICT infrastructure such as computers and projectors.

Moreso, Israel et al(2014) suggested that many teachers in Nigeria are qualified to teach their specific subjects but if one is to factor-out those who do not posses ICT skills, only a handful of teachers will the left in schools since the majority of teachers are lagging behind on the acquisition of information and communication technology skills. A research carried out by Ogumbangi (2014) also seconded the assertion that there is shortage of teachers who have necessary ICT skills in schools of many developing countries.

Furthermore,internet services are costly in developing countries since they are a few service providers who also over-charge their internet services. In addition, the service providers exploits many companies and schools by providing poor and unreliable internet services which is also

very expensive for schools (Seyal, 2013).In a research paper by Mungai (2011) as cited in Mathevhula (2014) suggested that many schools in Kenya do not have access to internet since service providers over price their internet services. He further asserted that it cost about 120 dollars per-month to connect 15 computers to a very low speed internetMungai (2011) sited in Mathevhula (2014).

Furthermore, electricity is still a major challenge to developing countries such as Zimbabwe, Mozambique and South Africa hence this causes a negative effect on the integration of ICT in education since all ICT tools such as computers, projectors and Wi-Fi routers depend on electricity to functionMungai (2011) cited in Mathevhula (2014). A research study which was conducted by Uwizemana (2014) in South Africa asserted that all parts of the nation are not yet connected to the national electricity grid especially the rural areas are still not yet connected to electricity. Many schools in the rural areas cannot integrate ICT because of lack of electricityUwizemana (2014). This leaves the educational sector handicapped from the benefits of information and communication technology.In India, Rebecca & Marshall (2012) observed that schools that are located in the remote areas used solar energy as a source of power for their various ICT tools. However, teachers at those schools suggested that the power source was not efficient enough on the integration of ICT (Mingaraine, 2013).

Mingaine (2013) claims that another challenge in the implementation of ICT tools to teaching and learning of students is lack of support by the administration or school heads. To ensure successful implementation of information and communication technology, the school leaders should also offer support to the teachers but however, in developing countries many school leaders view the integration of ICT as a burden to both the school and the teachers (Israel et al, 2013).Laaria (2012) asserted that most school heads in developing countries view ICT tools as

an unnecessary expense which can be avoided.In addition,Oladosu (2012) cited in Mathevula and Uwizeyimana (2014) propounded that the attitude of the teachers and school leaders towards the integration of ICT in teaching and learning is important because if teachers have a negative attitude towards ICT, challenges might arise on the integration of ICT in schools.

According to Nagel (2013) many teachers do not want to change because they have been conditioned to their traditional teaching methods and they view the introduction of ICT in teaching and learning as an experiment which is outside the scope of the description of their job. Mungai (2011) as cited in Serah (2014) propounded that the introduction of ICT in the education system of Nigeria has instilled fear in teachers who lack ICT skills as they are afraid to be rendered irrelevant.

According to Ncube et al (2014) older teachers may fear that they cannot undergo again through training of the utilization of ICT or they may be dismissed from service and management might hire fresh blood with high ICT skills so this makes the introduction of ICT into the teaching and learning their enemy. Daley (2012) asserts that the integration of ICT changes how information was being passed on to the pupils and the role of the teacher also has to change inevitably. As ICT demands the change in the teaching methods switching from teacher centered methods to student centered methods some teachers may feel as if their power has been taken away and they still want to remain in control and to be the only source of information (Edesiri et al, 2014).

2.11 Suggested Solutions to Challenges encountered in use of ICT in teaching and learning

Various researchers who carried out surveys on the challenges that are encountered in using ICT during the teaching and learning suggested many possible solutions on that issue. Bhasin (2013) suggested that teachers need to be professionally developed so as to successfully integrate

information and communication technology in the education system.Carlson (2010) cited in Bhasin (2013) asserted that the administrators and school leaders should also give support to the teachers in the form of ICT training workshops and in providing them with necessary ICT tools for teaching and learning.

Andoh (2014) asserted that successful integration of ICT to the education system of Zimbabwe is dependent on the accessibility of information and communication technology infrastructure. If educators have limited or no access to ICT tools this will be a major barrier that prevents successful ICT implementation in schools. Therefore, Serah (2014) suggested that adequate and necessary ICT tools should be available for use by the teachers and students in schools.Bhasin (2012) claimed that teachers play a vital role in the integration of ICT in schools since they give direction and ICT skills to the pupils.

Jones (2011) cited in Andoh (2014) asserted that computer breakdowns have a negative effect on the integration of ICT in teaching and learning. Bhasin (2012) posits that schools should make sure that broken down computers are repaired as soon as possible so as to reduce the interruptions in teaching and learning of ICT to students. Muchochoni (2016) suggested that schools should hire a technical support team that specializes on the maintenance of computers and other information and communication technology tools.

According to Coopers (2010) cited inMuchochomi (2016) asserted that many schools especially those in rural areas suffer from internet access problems. Serah (2014) propounded that this problem can be solved through proper budgeting of funds so as to afford wireless internet. In addition, school leaders and administrators can also organize fund raising events so as to raise enough money for internet services. A study by Mungai (2011) as cited in Laaria (2013)

suggested that schools have no reliable power sources to use on their ICT tools due to power cuts. According to Wanjala (2013) schools should use generators and the solar system as a backup of the electricity power source.

2.12 Summary

The chapter outlined the use of ICT in the teaching and learning. It also analysed the two theories which were used by the researcher to ground his study,the role of ICT in education, impact of ICT on teaching and learning, the challenges encountered in using ICT in the teaching and learning process and the ICT infrastructure that is used in the education sector. The chapter also focused on the perspectives on the use of ICT in teaching and learning, the use of ICT in both developed and developing countries and the strategies that have been recommended by other researchers to address the challenges that are faced by schools when integrating ICT in teaching and learning. The next chapter will focus on the research methodology adopted in this study.

CHAPTER 3

RESEARCH METHODOLOGY

3.0 Introduction

The chapter will focus on the procedures which were used by the researcher in the collection of data. The chapter also focuses on the essential components of research notably the research design, research instruments, population, the sample, sampling methods, data collection procedure; anddata presentation and analysis.

3.1 Research design

The researcher used the descriptive survey research design in the process of gathering data on the factors militating against the use of information and communication technology in teaching and learning of Advanced Level Economics in Gweru District schools. Serah (2014) propounded that a research design provides a framework for data collection and analysis and it also indicates the appropriate research methods.

Bogdan (1992) cited in Mathevhula (2014) asserted that a research design is a comprehensive plan that is used to infuse various elements of a study in an orderly and logical manner. The research design addressed the research problem and its background. In addition, a research design provided the researcher with a map that outlines the steps on how research will be conducted (Cohen, 2011).

The researcher used the descriptive survey design since it provides the researcher with time to elucidate the research problem. Schoenberg (2013) propounded that the descriptive survey design gives room to clarify the research problem. Furthermore, Ndhluvu (2016) asserted that the descriptive survey design reduces the probability of getting bias results from the respondents. Cummerson (1991) cited in Ndhluvu (2016) propounded that the descriptive survey assist the researcher to identify the areas that needs further research. Furthermore, descriptive survey also enabled the researcher to collect primary data (first hand data) from the sample population and it also allowed the collection of data from a small sample population and this benefited the researcher since he had little time to do his research. However, the descriptive survey design is very costly to the researcher since he was a full time student and had limited financial resources.

3.2 Research Instruments

Research instruments are apparatus that are used to congregate information that will be used by the researcher to find a solution for the research problem (Marufu, 2015). A research instrument is a set of tools that are designed to quantify the variables of the study (Rubin, 2015). Neumen (2017) propounded that research instruments are tools that are used to gather data from the sample population and such tools or instruments comprise of interviews, questionnaires and observations. The tools were used to find detailed information on the research problem (Marufu, 2015). The researcher used the questionnaires, observations and questionnaires to collect information from Advanced level Economics students, teachers and the Head of Departments.

3.2.1 Interviews

Popper (2014) views an interview as a premeditated method which involves asking questions and recording answers from respondents. He further asserted that interviews can take various forms, they can be structured or unstructured (Popper, 2014). Leedy (2000) cited in Ndhluvu (2016)

stated that structured interviews enables the interviewer to ask questions that are only on the interview guide. An unstructured interview is a process where the researcher asks questions in relation to the topic under study and expects the respondents to give a response on the question asked (Shank, 2012). In addition, an unstructured interview also allows the investigator to ask questions that are not on the interview guide (Shank, 2012).The interviewer ask questions ranging from simple to complex.

Chiromo (2009) cited in Muchochomi (2016) asserted that interviews allows the respondent to express himself or herself unlike when using questionnaire to collect data. Edesiri et al (2014) suggested that when conducting interviews, the researcher has control over the pacing and proceedings of the interview. In addition, Muchochomi (2016) alluded that conducting interviews is less costly to the researcher since less printing is required rather than when questionnaires are being used to collect data. Interviews also enable in-depth analysis of the topic under study. Edesiri (2014) asserted that well designed interviews facilitate the congregation of ample information from respondents and this results in a thorough investigation of the problem.

Schneider (2013) suggested that interviews allow face to face communication and this enables the respondents to effectively express themselves on the questions asked. This method enables the investigator to effectively clarify the topic under study to the respondents. Springer (2010) cited in Ngandu (2015) suggested that interviews allows effective selection of appropriate respondents and it also saves time.

Schneider (2013) suggested that interviews are very effective when collecting data since there will be effective communication between the investigator and the respondent. Interviews enable

the researcher to collect adequate information since he or she can ask additional questions which are not at the interview guide so as to gather sufficient information (Schneider, 2013).

However, there are also limitations of using interviews to collect data. Ary (2010) suggested that the interviewer might gather biased results from respondents since the respondents might want to please the investigator. Respondents might respond according to what they think the investigator wants to hear Chiromo (2009) cited in Muchochomi (2016). Ary (2010) cited in Ngandu (2015) suggested that the interview method is not suitable when investigating topics that require personal information. Respondents might not be comfortable to disclose their personal information to a stranger (Chiromo, 2009).

3.2.2 Questionnaires

A questionnaire is a research instrument that comprises of questions that are drafted by the researcher for the purpose of extracting information from respondents Williman (2006) cited in Crone (2013). It is a method of collecting data which involves asking respondents to answer a list of questions on the questionnaire (Crone, 2013). Maddon (2012) suggested that a questionnaire is a list of questions that is drafted on a paper by the investigator so as to gather information.

A questionnaire is drafted to target specific sample population Dube et al (2010) cited in Ngandu (2015). Popham (2015) asserted that a questionnaire is a document that contains a variety of questions that enables a researcher to gather data on a specific topic. Serah (2014) suggested that a questionnaire is a premeditated technique that is used to target different audience in the same sample population.

Popper (2014) suggested that a questionnaire enables a researcher to collect information from many students in a short time period and it is less costly.Marufu (2015) stated that questionnaire is a fast method of collecting data since they can be distributed to many students at the same time and get feedback within minutes rather than conducting interviews to every student. However, Chiromo (2009) cited in Muchochomi (2016) argued that questionnaires do not capture facial expressions of the respondents and hence it is impossible to know whether the respondent was truthful or not. Moreso, Popham (2015) suggested that respondents might misinterpret the questions on the questionnaire and the research findings would be biased. Ndhluvu (2016) suggested that the researcher must directly administer the questionnaire to the respondents and further clarify misinterpreted questions. Moreso, a questionnaire must be short and precise so as to reduce its limitations (Chiromo, 2009). The researcher used questionnaires that were very short and precise in the study and he also administered the questionnaires directly to the respondents, clarifying misinterpreted questions so as to prevent the collection of biased results.

3.2.3 Observations

Chiromo (2009) suggested that an observation is a process where an individual watches people performing a certain task.Dube and Nkunda (2015) propounded that an observation allows an individual to study peoples' behaviors as they will be carrying out their day to day activities.Observations are perceived as the shortest and fastest method that is used to study the behavior of people (Dube and Nkunda, 2015). Collection of information or data using observations reduces bias and allows the researcher to collect correct (Maddon, 2012). Dube and Nkunda (2015) say observations allow the researcher to gauge real actions rather than when people give information on their own. In this study, the researcher prevented bias by using observations to collect data from the sample population. The use of observations reduces the

complexity of relying on responses of respondents (Popper, 2014). However, observations are unprincipled especially if they are inconspicuous and if they are also time-consuming (Dube et al, 2015). The disadvantages of using observations will be alleviated by combining them with questionnaires and interviews.

3.3 Population

The population that will be utilized as a part of this study are schools situated in Gweru District under Midlands Province. Walliman (2006) cited in Ngandu (2015) defined a population as the total number of subjects employed for the purposes of carrying out a research. According to Mushonga (2016) a population is defined as a group of people or subjects to which information is requested. The target population refers to an aggregation of study subjects to which the outcomes of the research can be inferred and generalized (Edeseri et al, 2014). This implies that the population denotes all the people, elements, items that can be considered in a research project. The population shall comprise of fifteen high schools in Gweru district that offers Economics at Advanced Level. In this study, the population will also comprise of 300 students who study Economics at Advanced level, 30 teachers and 15 Heads of Departments.

3.4 Sampling

Sampling is the process of selecting units from the population and the sample population will represents the whole population Saunders (2008) cited in Morgan (2013). Morgan (2013) defined a sample as the computation of data sources that is selected from whole population. Harper (2008) as cited in Morgan (2013) views a sample as a cluster of research subjects drawn from the research population for investigation. Hofferman (2012) suggested that a sample consists of items or people who are intentionally selected to characterize its characteristics to the total

population. The sample selected possessed the main features to represent the entire population and its results guarantee an implication of the study results to the entire population.

The sample will incorporate 5 Economics teachers, four Heads of Departments and 60 Advanced Level Economics students in Gweru District. The schools were appropriate for the investigation since they attended by pupils from different social backgrounds especially those from low financial backgrounds to high financial backgrounds.

3.4.1 Sampling techniques

In this study the researcher used the stratified random sampling. Morgan (2013) asserted that stratified random sampling is a process that involves grouping of the population in separate groups which possess similar characteristics. The researcher selected student respondents on the basis of their gender and subject area and in this case particularly Advanced Level Economics students.According to Springer (2010) cited in Ndluvhu (2016) simple random sampling is a technique in which every component of the population has an equal chance of being elected to participate in the study. Springer(2010) propounded that random sampling is free from bias since every member has an equal chance of being selected and the sample population can be used to represent the whole population. The researcher selected the students using the hat system where he grouped the students into two groups (males and females) and allowed every student in the sample population to pick a card in the hat if the student picked a card written "YES" he/ she was going to be selected and if a student picked a card written "NO" he/she was not going to partake in the study.

The researcher also used the random stratified sampling technique to select schools. In addition,the researcher grouped schools into two groups basing on their responsible authorities i.e. Council and Government schools and he randomly selected two schools from each group.

3.6Reliability

Popham (2015) asserted that reliability is the extent to which data collection techniques are likely to produce similar findings if they are repeated in conducting a research. Reliability would be ensured by collecting data from students and teachers in schools so as to prevent participants' faults. According to Edesiri (2014) participant errors usually occur due to the examination of the research subjects that are incoherent with their regular behavior patterns.

Yan (2014) suggested that researchers must make use of proper researchethics and techniques so as to obtain reliable data. The researcher used proper research ethics and techniques so as to obtain reliable information.Hofferman (2012) suggested that the investigator can avoid participant bias by clarifying the purpose of the study to the respondents.The researcherexplained the purpose of the study to the respondents so as to reduce participants' bias and he also made sure that the questionnaires had clear questions so as to secure reliability. Hofferman (2012) suggested that if anonymity is preserved the researcher is likely to get correct information from the respondents. He also ensured reliability by maintaining respondent's anonymity.

3.6.2 Validity

Popham (2015) asserted that validity is the extent to which data collection techniques measure what they were supposed to measure. Yan (2014) suggested that validity is chiefly based on investigating whether the research instruments that were used in the study are appropriate for that specific study. Popham (2015) also suggested that various data collection methods should be

utilized so as to acquire sufficient data on the factors militating against the use of ICT in the teaching and learning of students. Chiromo (2009) propounded that the use of several data collection techniques enables the research to collect accurate information. The researcher ensured validity by making sure that respondents participated voluntarily and he also used various data collection methods such as interviews and questionnaire. Chiromo (2009) cited in Ngandu (2015) suggested that participants must participate voluntarily so as to ensure validity.

3.7 Ethical issues in research

Cohen et al (2011) suggested that ethical issues deal with the respect and the protection of participants during data collection. Marufu (2015) asserted that ethics refers to what is socially and morally prescribed as right and wrong by the society. The investigator made use of various ethical issues during his study and these are elaborated below.

3.7.1 Confidentiality

Chiromo (2009) suggested that information that is collected from respondents should be used for the purpose of research only and should not be publicized. The investigator ensured confidentiality by making sure that the information that was collected from respondents was used in the study only. The researcher also did not ask for respondent's names during data collection so as to maintain confidentiality.

3.7.2 Informed consent

Chiromo (2009) suggested that the researcher must also inform the participants the purpose of the study before involving them in the investigation. Popham (2015) asserted that the respondents and the researcher must sign an informed consent form. During the study the

researcher informed the participants that their participation was voluntary and they can withdraw anytime if they no-longer want to be involved in the study.

3.7.3 Anonymity

Borg and Gall (1990) cited in Cohen et al (2011) suggested that during the data collection process respondents must not use their names. Ndluvhu (2016) suggested that if the researcher insists on names, the respondents must use pseudo names. Chiromo (2009) suggested that it must be impossible to link responses to participants and respondents' identities must be protected. The researcher did not ask for the respondents' names so as to ensure anonymity.

3.8 Data collection procedures

The researcher drafted questionnaires and interview guides which were approved by his supervisor. TheFaculty of Education at Midlands State University offered the researcher a letter. The researcher used the research letter that he collected from the Faculty of Applied Education to seek permission from the Ministry of Primary and Secondary Education Provincial office for Midlands Province. The researcher started data collection when he was given permission by the Ministry of Primary and Secondary Education District office of Gweru. The researcher asked permission from the Heads of Departments and the school heads to collect data in their schools. The researcher observed lessons that were in progress to see if the teachers were using any ICT tools during the teaching and learning of Economics.He also conducted interviews with the Head of Departmentsasking them questions on the challenges they were facing when integrating ICT in the teaching and learning of students. The researcher also explained the purpose of the research to the respondents and administered questionnaires to students and teachers and waited

whilst they answered the questionnaires. The researcher collected all the questionnaires and then filed the documents for analysis.

3.9 Data presentation and analysis plan

The researcher presented the data on pie charts, tables and graphs. The investigator also made use of qualitative and quantitative techniques to present the data that was collected from the respondents. Quantitative technique was utilized when presenting data statistically into percentages and numbers. Statistical data was presented in bar graphs and pie charts. Moreso, the researcher used the qualitative method to present information that was obtained from interviews. In addition, qualitative data was presented in tables. Popper (2014) suggested that tables and graphs are beneficial to use when presenting data because they ensure clearness of the presented data. Popper (2014) also suggested that information presented on tables and graphs is easier to understand.

3.10 Summary

This chapter focused on the population, research design, reliability, ethical issues and data collection procedures. The chapter explained the merits and demerits of the three data collection methods that were utilized by the researcher during data collection. In this chapter the researcher clearly defined the population and thesample. The next chapter will focus on the data presentation, data analysis and data presentation.

CHAPTER 4

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.0 Introduction

This chapter focuses on presenting and discussing the data collected from four schools through observations, interviews and questionnaires. This chapter will also present data on the research findings of the benefits of using ICT, perceptions on the use of ICT, challenges faced by teachers when implementing ICT and the strategies to overcome the challenges faced by schools when implementing ICT on tables, pie charts and bar graphs. In this chapter, the researcher also concentrated on analysing the research findings. Moreso, data collected will be presented in the form of tables, pie charts and bar graphs.

The study was chiefly focused on investigating the factors militating against the use of information and communication technology. The findings collected by the researcher were guided by the following research questions which were outlined in chapter 1.

➢ What are the perceptions of Head of Departments, teachers and the students towards information and communication technology?

➢ What are the benefits of using information and communication technology in the teaching and learning Economics at Advanced Level?

➢ What challenges are faced by schools when integrating information and communication technology in the teaching and learning of Economics at Advanced Level?

➢ What strategies can be put in place in-order to overcome the challenges that schools are facing when applying ICT in the teaching and learning of Economics?

4.1 Demographic data

The following table represents the gender of teachers and students.

Questionnaire response rate

Table 4.1Showing the response rate of questionnaire distributed to students and teachers.

Questionnaire	Quantity	Percentage
Distributed	**65**	**100%**
Responded	**65**	**100%**

The above diagram shows that all the questionnaires that were distributed to the students and teachers were all responded. This was beneficial because the researcher was able to collect information from all the students in the sample population. Aker (2000) cited in Harani (2015) suggested that a response rate of more than 50% allows a researcher to draw conclusions on the topic under study.

4.1.1 Teacher experience

The diagram below shows the experience of teachers who teach Economics at Advanced Level. Only 1 teacher had less than 5 years of teaching experience, 3 teachers had at least 6-10 years of teaching experience and 1 teacher possessed teaching experience of 11 years and above. This showed that all the teachers that are teaching Economics in the sample population have the knowhow on the teaching of the subject. In addition, this helped the study since the researcher collected data from experienced teachers.
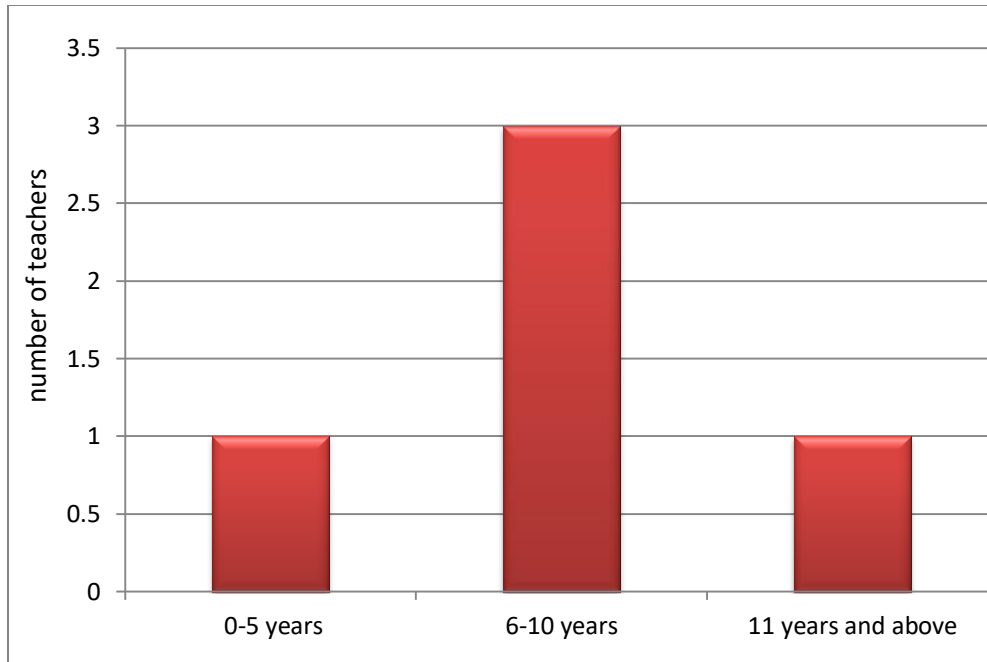
Fig 4.1 Experience of teachers

4.1.2 Teacher qualifications

The below diagram represents the teaching qualifications of teachers, 20% of the teachers possessed a Diploma in Education, 60% had a Bachelor of Education Degree and 20% possessed a Masters in Education. These statistics indicated that the teachers in the sample population are literate and educated to teach Economics at Advanced Level. More-so, this showed that the teachers have the capability to acquire ICT skills and to shift to more effective teaching methods.

Teacher qualifications

- Diploma in education
- Bachelor of education
- Masters of education

20%
20%
60%
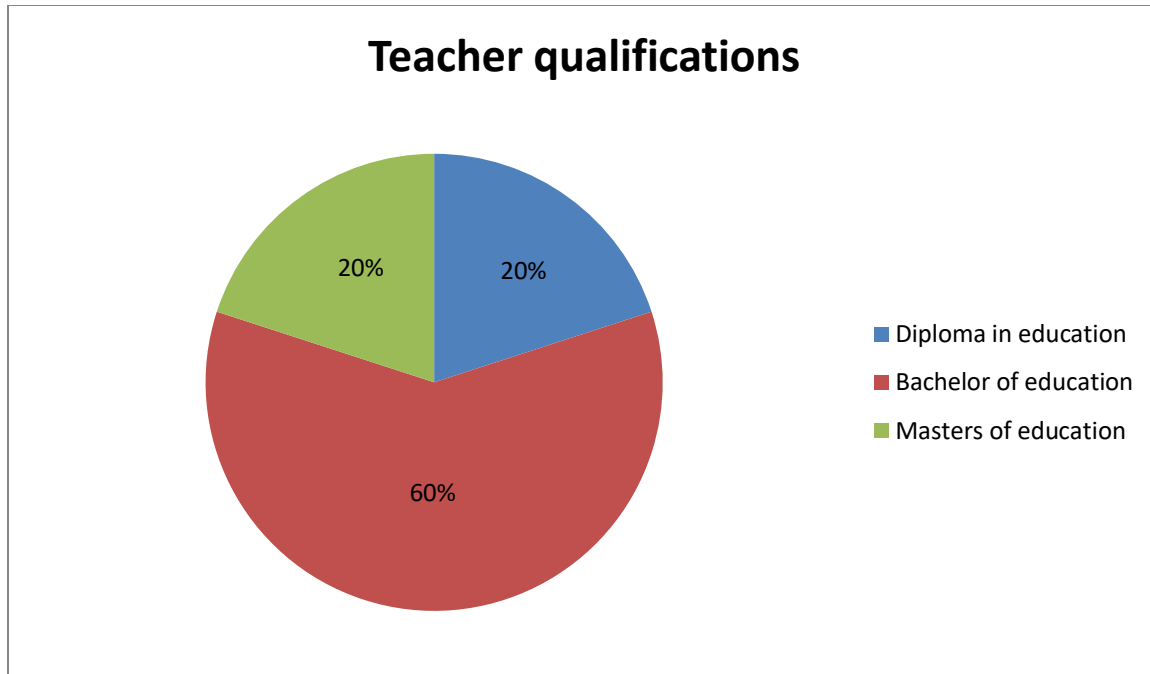
Fig 4.2 Qualifications of teachers

4.1.3Gender of students and teachers

Gender	Teachers	Students
Male	3	27
Female	2	33

The above table shows that male teachers constituted 60% of the sample population whilst female teachers only constituted 40% of the sample population. Male teachers dominated the study and there was gender imbalance. There were 33 female students and 27 male students who were studying Economics at Advanced Level. This was helpful to the study since there was little gender bias since females constituted 55% of the sample population whilst 45% were male students.

4.1.4 Interviews conducted

The researcher conducted only 4 interviews with the Head of Departments from the four selected schools in Gweru district and they were all successful. The table below shows that there was a 100% response rate and this allowed the researcher to come up with conclusions on factors militating against the use of ICT in teaching and learning Economics at Advanced Level. The results were presented in the table below

Table 4.3 Showing interview response rate.

Interviews administered	Conducted	Unsuccessful
4	4	Nil

4.2 What are the perceptions of Head of Departments, teachers and the students towardsinformation and communication technology?
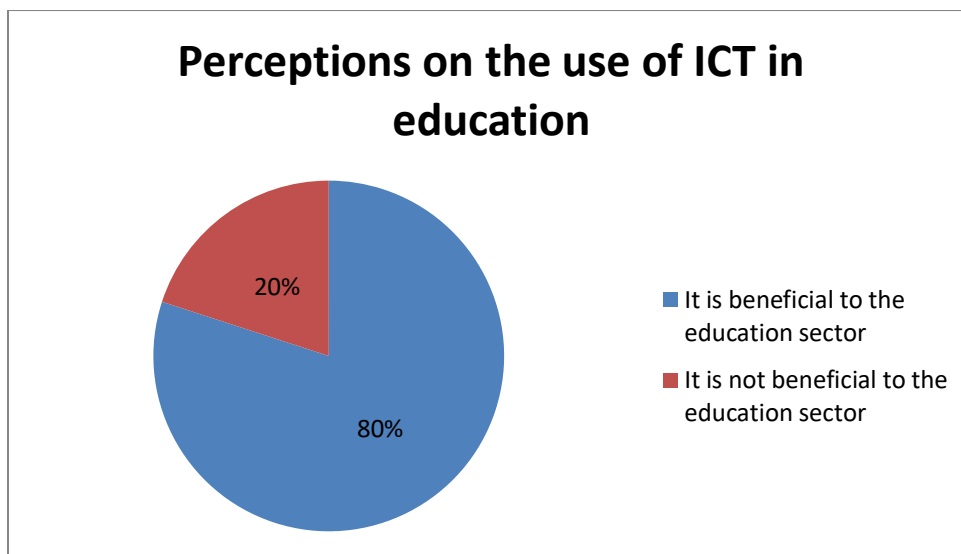
Fig 4.3 Respondent's views on the use of ICT in education.

The respondents were asked to briefly give their views on the use of ICT in the teaching and learning of Economics. The results were presented in the diagram above and the majority of the respondents indicated that ICT is an essential instrument which can enhance the quality of education except a few respondents who suggested that ICT is not beneficial to the education sector. Fig 4.3 shows that 80% of the respondents support the use of ICT in classrooms and only 20% was not in favor of the use of ICT in the teaching and learning of students. This helped the researcher to view if the sample population was aware of the benefits of ICT in education.

4.3 What are the benefits of using information and communication technology in the teaching and learning Economics at Advanced Level?

Table 4.4 Benefits of ICT that were outlined by students, teachers and H.O.D's

Benefit	Number of respondents
Enhancing student's motivation	33
Internet researching	23
Online discussions	39
Tracking students' performance	17
Data base for important documents	25
Increasing students' performance	29
Time saving during teaching and learning	20

Table 4.4 above shows the benefits of using ICT that were pointed out by 5 teachers, 60 students and 4 Head of Departments. From the above results it was noted that 47.8% of the respondents seconded the idea of ICT being a tool that enhances students' performance, 33.3% outlined that

ICT facilitates internet researching, 56.5% of the respondents outlined that ICT can be used for online discussions, 24.6% supported the idea of ICT being used for tracking students' performance, 36.2% pointed out that ICT tools can be used to store important documents, 42% of the respondents pointed out that ICT is beneficial since it can increase students' performance and 29% of the respondents outlined that the use of ICT during teaching and learning brings efficiency in the classroom and also saves time since projectors can be used during lesson delivery instead of writing on the whiteboard.

4.4 What challenges are faced by schools when integrating information and communication technology in teaching and learning of Economics at Advanced level?

The Head of Departments, teachers and students also pointed out some challenges that schools are facing when integrating ICT in teaching and learning Economics.

Table 4.5 Challenges faced by schools when integrating ICT in classrooms.

Challenges	Teachers	Students	Head of Departments
Lack of support	**3**	**23**	**1**
High cost of ICT tools	**5**	**40**	**4**
Poor internet speed	**3**	**38**	**4**
Power disruptions	**2**	**27**	**3**
Inadequate educational software	**2**	**10**	**2**

Three teachers, twenty three students and one head of department indicated that there is lack of administrative support on the use of ICT in classrooms and that is why schools are still facing challenges. Five teachers, forty students and four Head of Departments stated that the high cost

of computers is another challenge that schools are facing. Moreso, three teachers, thirty eight students and four Head of Departments indicated that the internet speed in schools is very poor. In addition, two teachers, twenty seven students and three Head of Departments stated that power disruptions during the use ICT in teaching and learning is a major barrier towards the implementation of ICT in schools. Furthermore, two teachers, ten students and two Head of Departments indicated that many schools have inadequate educational softwareand this is a major challenge in the application of ICT in the classrooms.

4.4.1 ICT tools available for teaching Economics

ICT tools available for teaching Economics
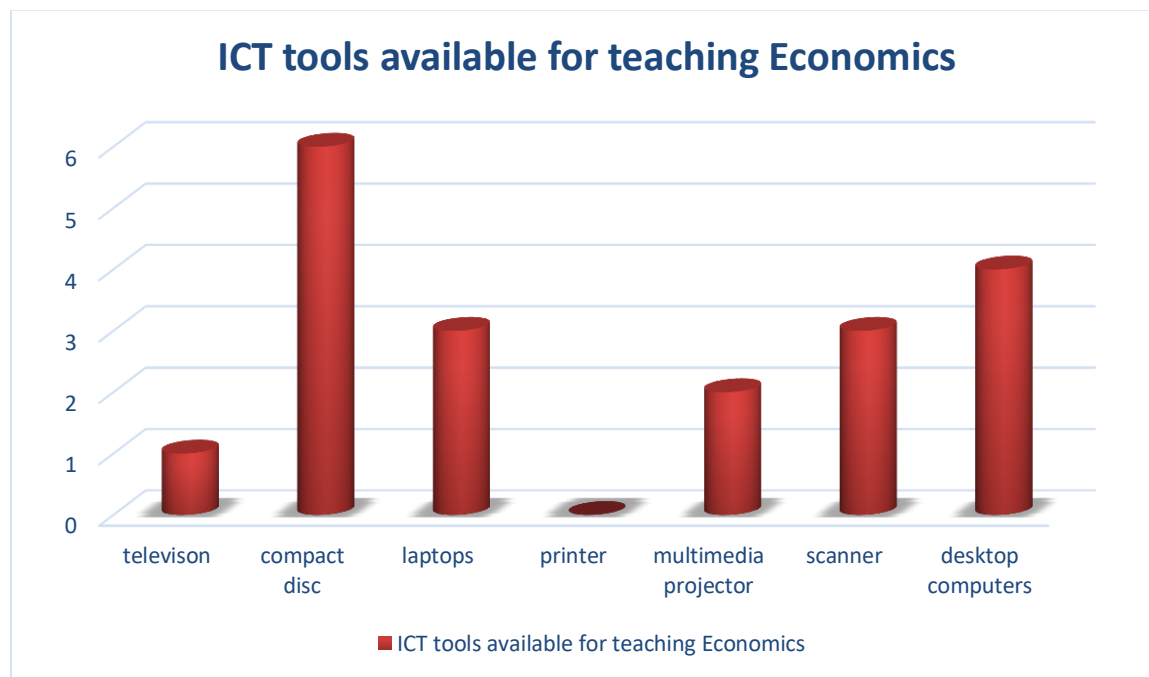
Fig 4.4 ICT tools available for teaching Economics.

The diagram above presents the tools that are available for use in the teaching and learning of Economics. Fig 4.3 clearly shows that among the four schools there are shortages of ICT tools, it was noted that only 1 school possessed a television and there were 4 computers in the sample population and each school had 1 computer for teaching Economics but the ratio of 1 computer

to at least 20 students is clearly not workable. In the sample population there are only 3 scanners, 3 laptops and 6 compact disc which are to be used by at least 60 students who are learning Economics at Advanced Level. Moreso, only two schools had projectors set aside for teaching the subject this is a major challenge when implementing ICT to the teaching and learning of students since a projector is a vital ICT tool.The ICT tools that are available for teaching Economics in the sample population are not enough for successful integration of ICT in the schools.

4.4.1 Students' responses on whether they use ICT during teaching and learning or not.

A majority of students responded with the answer "No" when they were asked whether they use ICT during teaching and learning and only a few pointed out that they use ICT occasionally. This clearly shows that teachers are reluctant to use ICT during teaching and learning and this is also a major challenge when implementing ICT. The fig 4.4 below shows the students responses on whether they use ICT during and learning or not. The figure below shows that 70% of the students stated that they did not use ICT tools during and learning and only 10% responded with a "Yes". In addition, 20% of the students asserted that they used information and communication technology occasionally.

The use of ICT in teaching and learning

10%

20%

70%

- YES
- NO
- Occasionally
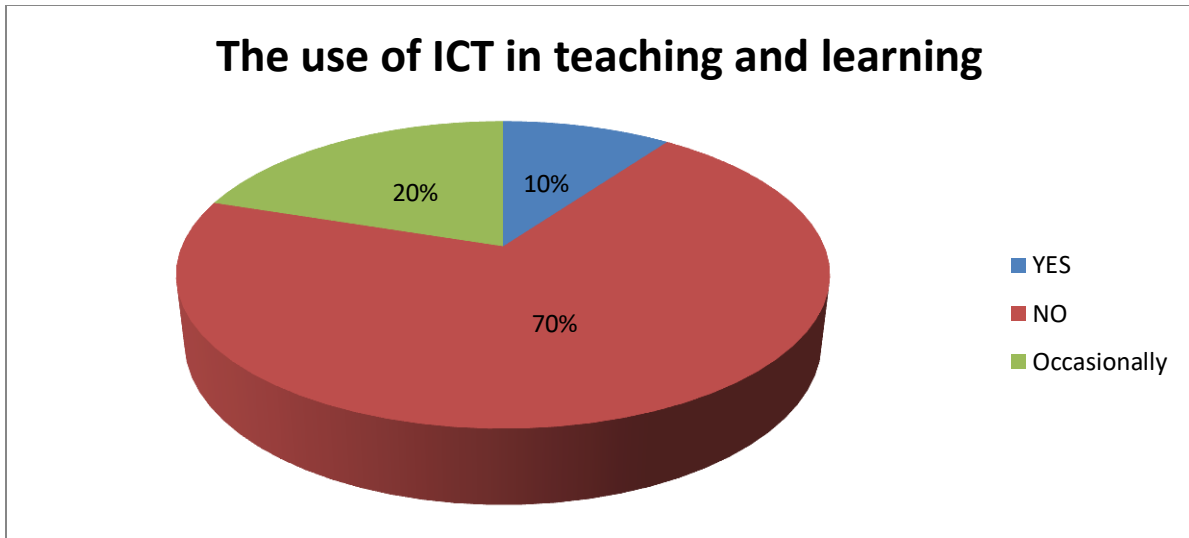
Fig 4.5Students responses on the use of ICT during teaching and learning

4.4.2 ICT skills neccesary for teaching Economics

internet browsing

spread sheets

power point

word proccessing

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

- excellent
- average
- poor
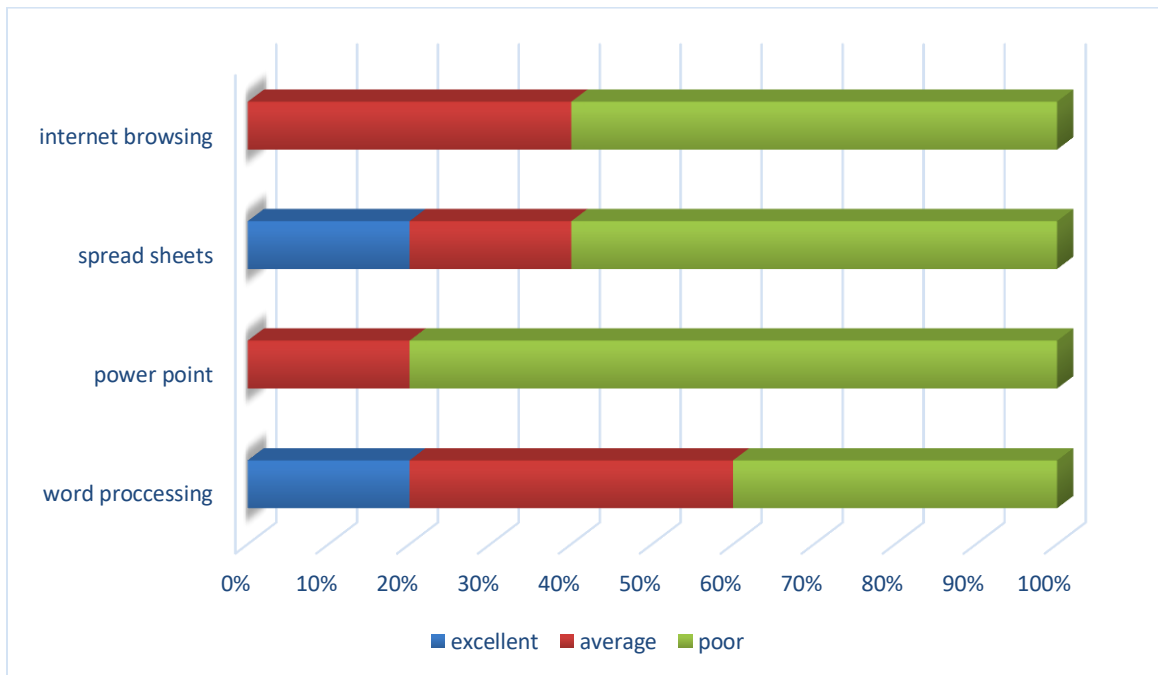
Fig 4.6Teachers' levels of ICT skills

The diagram above presents the rates at which teachers are equipped with different ICT skills that can be used to teach Economics at Advanced Level. Fig 4.5 clearly shows that only 40% of

the teachers have average internet browsing skills and 60% of the teachers have poor internet browsing skills. Only 20% of the teachers had excellent spread sheets skills, 20% with average skills and the remaining 60% of the teachers possessing poor spreadsheets skills. In addition, 20% of the sample population had average power point skills and 80% had poor power point skills. Furthermore, 20% of the teachers had excellent word processing skills, 40 % had average skills and the remaining 40% of the teachers possessing poor word processing skills.

The results above clearly shows that the majority of the teachers who teach Economics at Advanced Level have insufficient skills to integrate ICT in the teaching and learning of Economics at Advanced Level.

4.5 What strategies can be put in place in-order to overcome the challenges that schools are facing when applying ICT in the teaching and learning of Economics?
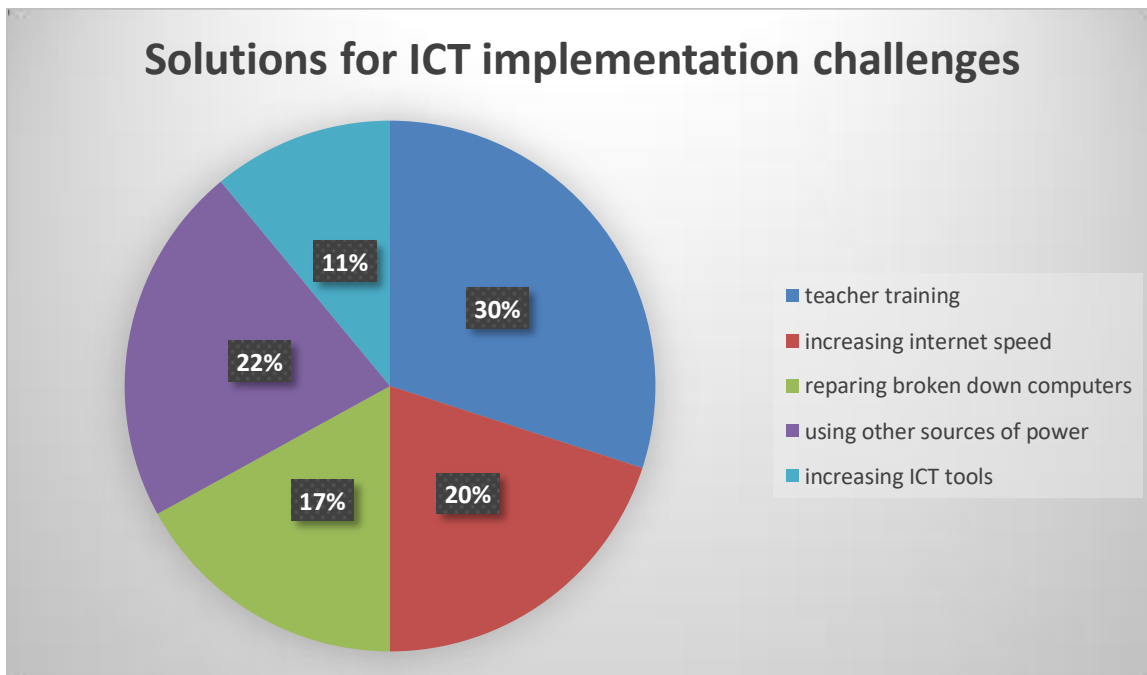
Fig4.7Suggested solutions for ICT implementation challenges.

The respondents comprised of the Head of Departments, teachers and students and they all suggested possible solutions to overcome the problems that schools are facing in the application of ICT in schools. 30% of respondents proposed that teachers must be trained so as to equip them with ICT skills and this would help to ensure successful integration of ICT in schools. They also suggested that ICT training courses should be part of the teacher training programs. 17% of the sample population also suggested that broken down computers and other ICT tools are repaired this would also help to increase the number of working computers at the school. 20% of the respondents also proposed that schools must also increase the speed of internet and 22% of the sample population asserted that schools should use other sources of energy such as generators and solar system so as to prevent power disruptions during the use of ICT in teaching and learning. Moreso, 11% of the respondents suggested that schools must increase the quantity of ICT tools that are available for the teaching and learning of students.

4.6 Discussion

4.6.1 Perspectives on the use of ICT in the teaching and learning of students

The research findings indicated that the majority of the respondents from the sample population were aware of the benefits of integrating ICT in the education sector. The researcher discovered that many students and teachers viewed ICT as an essential instrument that can help them to increase efficiency in the teaching and learning processes and also to enhance the quality of education.Moreso, a study conducted by Hall and Hord (2001) cited in Edesiri et al (2014) concluded that 88% of teachers and students in New Zealand testified that the use of information and communication tools in education has enhanced the quality of education. Furthermore, Serah (2014) suggested that ICT has brought efficiency in the planning of lessons, keeping of students records and on lesson delivery.

In 2014 UNICEF conducted a study in Zimbabwe which was based on the integration of information and communication technology in Secondary schools (Ngandu, 2015). Findings from the study concluded that approximately 89,4% of Secondary school teachers declared that ICT plays a vital role in stimulating motivation and interest in learners if it is used effectively in the classroom (Ngandu, 2015). From the research findings, educators also suggested that internet had increased their information research base and students' academic achievements have increased due to the use of information and communication technology in the schools.

However, only a few respondents asserted that ICT was not an essential tool in education as it can lead to moral degradation since students can end up using the internet to view pornography and other restricted websites. From the research findings 20% of the respondents also asserted that ICT can be a chief source of distraction since students can use laptops to check their messages on facebook accounts rather than using that valuable time to read or research.

4.6.2 Benefits of using ICT in schools

From the research findings, the teachers testified that the use of ICT in education would increase the student's performance and also increase their research base since students can use internet to surf many topics on the internet. The respondents also alluded that ICT brings efficiency during the teaching and learning of students since projectors can be used to teach many students (large class).These results are unswerving from the assertion of Tshabalala (2014) who said that a projector can be used to teach large students. The research also indicated that the use of ICT during teaching and learning brings efficiency in the classroom and also saves time since projectors can be used during lesson delivery instead of writing on the whiteboard.

The researcher also discovered that teachers can use ICT to store valuable documents and to track student's performance. According to Cain (2015) research that is being conducted by

various researchers have shown that ICT has a positive impact on the teaching and learning of students. Cain (2015) also carried out a study on the effectiveness of using ICT in the teaching and learning of students and his findings seconded the findings of other researchers. He asserted that the use of ICT in education yields positive outcomes.

The researcher also discovered that information and communication technology can impart critical thinking skills and problem solving skills to students. These results do not swerve from the findings of Ohiwerei, Ohiole and Okoli (2013) who asserted that learning through ICT promotes students' involvement in learning and also equips students with problem solving skills. Teachers also testified that ICT can instill motivation to students and it also enables students to work on their own time communicating with the teacher through emails or e learning. These findings are consistent with the findings of Mdleste (2013) who propounded that ICT also enables students to work at their own pace receiving feedback from the teacher even when they are off-campus.

The researcher also discovered that using ICT in the education sector also enables students to conduct online discussions with other students and it also helps to eliminate the barrier to distance between the students and teachers. In addition, the study exposed that ICT also promotes collaborative learning since students can share information with other students in other countries. The findings above are consistent with the findings ofMathevula (2014) who said that the integration of ICT in teaching and learning allows students to share learning resources, learning spaces and it promotes collaborative learning. From the findings, learners can use computers to share information with other students within the schools, in the district or even in other countries through video conferencing.

4.6.3 Challenges faced by teachers when integrating ICT in classrooms

The researcher observed that teachers do not use ICT when studying Economics at Advanced level. The results from the study revealed that they are few computers that are available for the teaching of commercial subjects and students do not have access to the computers available. The study also indicated that students have to share computers and the sharing ratio is not workable and this makes the integration of ICT in the classroom almost impossible. The results from the study do not deviate from the findings of Ohiwerei et al (2013) who suggested that schools have insufficient ICT tools and this hinders the applications of information and communication technology in schools.

The results from the study also indicated that schools lack financial resources to purchase new computers and to repair the broken down ICT tools and this also acts as a barrier for the implementation of ICT in education. Moreso, schools in the sample population also do not have adequate projectors and this also is a challenge since a projector is a vital ICT tool which brings efficiency in the teaching and learning of students. These results are consistent with the findings of Mndezebele (2013) who asserted that schools are facing financial constraints to buy ICT tools that are necessary for use in the education sector.

The study also revealed that teachers are not equipped with the necessary ICT skills for them to successfully integrate ICT in the education sector and this is a major challenge that schools are facing. Results from the study indicated that the majority of the teachers that are employed in schools have ICT skills that are below average and this makes the integration of ICT in schools difficult. Israel et al (2014) suggested that many teachers in Nigeria are qualified to teach their specific subjects but if one is to factor-out those who do not posses ICT skills, only a handful of teachers will the left in schools since the majority of teachers are lagging behind on the

57

acquisition of information and communication technology skills. A research carried out by Ogumbangi (2014) also seconded the assertion that there is shortage of teachers who have necessary ICT skills in schools of many developing countries.

From the research findings, there is also lack of support from the administration or school leaders. The school administration do not offer support or encourage the teachers to use ICT during the teaching and learning of students. In addition, the researcher found out that the school administration is also reluctant to purchase more ICT tools for the teachers and they do not want to accept the change. Seyal (2012) suggested that the school administration is reluctant to purchase ICT tools and the view it as an unnecessary expense.

The researcher also discovered that in schools the internet speed is poor and unreliable. The respondents echoed that the internet speed is poor and it is difficult for them to even research on the internet. The teachers also suggested that they are facing power disruptions and there are no reliable sources of power at the schools. These results are consistent with the research findings of Mingaraine (2013) who asserted that power disruptions in developing countries hinder the application of ICT in schools.

4.6.4 Suggested solutions to overcome the factors militating against the use of ICT in the classrooms

The respondents suggested possible solutions to overcome the problems that schools are facing in the application of ICT in schools. From the research findings, it was noted that the majority of teacher do not possess the necessary ICT skills. Therefore, the respondents suggested that teachers must attend ICT training workshops and they also suggested that ICT should be part of the teacher training program. The findings above were supported by Bhasin (2012) who asserted

that teachers need to increase their information and communication skills so as to successfully intergrate ICT in the classroom.

The respondents also suggested that schools must make sure that all broken down ICT tools at the school are repaired quickly so as to increase the number of working computers. They also suggested that schools should use other sources of power such as generators and the solar system so as to prevent the issue of power disruptions. The respondents also suggested that schools should also get internet services from a reliable service provider that offers high speed internet at a lower cost.

The respondents also suggested that the government should help schools to increase their ICT tools though subsidising the cost of ICT tools or donations so as to reduce the cost of purchasing new computers and other information and cummunication technology tools.From the research findings the school management should also also offer support to the teachers through buying more computers for the students so as to reduce the computer sharing ratio and ecouraging them to use ICT during the teaching and learning of students.

4.7 Summary

The chapter concentrated of data presentation and analysis. The researcher presented his findings on the benefits of using ICT, perceptions on the use of ICT, challenges faced by teachers when implementing ICT and the strategies to overcome the challenges faced by schools when implementing ICT on tables, pie charts and bar graphs. The next chapter will provide a summary of the study, conclusions and the recommendations that might help the schools to resolve the challenges that they face when integrating information and communication technology in the teaching and learning of Economics students at Advanced level in Gweru district.

CHAPTER 5

SUMMARY CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

In the previous chapter the researcher concentrated on presenting data, analyzing data and discussing the data that he collected from the sample population through interviews, observation and questionnaires. In this chapter, the researcher will focus on the summary, conclusions and will also give recommendations that might help the schools to resolve the challenges that they face when integrating information and communication technology in the teaching and learning of Economics students at Advanced level in Gweru district.

5.1 Summary

The major aim of this study was to investigate the factors that are militating against the use of ICT in teaching and learning of Economics at Advanced level in Gweru district.The researcher used the descriptive research survey to collect data from the population sample and he made use of the simple random sampling to select schools and students from the population. The researcher collected data from four schools in Gweru district and the sample population consisted of five Economics teachers, sixty students and four Head of Departments.

The researcher was given permission by the Ministry of Secondary and Primary education to collect information from the four selected schools. Observation, questionnaires and interviews were used to collect data from the sample population. The researcher conducted interviews with the H.O.D's and also administered questionnaires to Economics teachers and students.

The research findings indicated that teachers are not equipped with the necessary ICT skills for them to successfully integrate ICT in the education sector. In addition, there is a shortage of ICT

tools in the schools,lack of administration support and the internet in schools is slow and unreliable. There is also lack of financial resources to purchase ICT tools such as computers, projectors, scanners and printers. The researcher presented the findings on the benefits of using ICT, perceptions on the use of ICT, challenges faced by teachers when implementing ICT and the strategies to overcome the challenges faced by schools when implementing ICT on tables, pie charts and bar graphs.

The study also revealed possible strategies that can be used to overcome the problems that schools are facing in the application of ICT in schools. The respondents suggested that teachers should attend ICT training workshops and they also suggested that ICT should be part of the teacher training program. In addition, schools must repair broken down ICT tools, increase the number of ICT tools, increase the internet speed and use other sources of power so as to prevent power disruptions.

5.2 Conclusions

Based on the research findings, the researcher concluded that the schools in Gweru district were still facing challenges in the integration of ICT in the teaching and learning of Economics at Advanced level. The researcher discovered that several factors such as lack of ICT skills, shortages of ICT tools, lack of administration support, slow internet speed and lack of funds to repair and purchase more ICT tools impeded the application of ICT in the teaching and learning of Economics students at Advanced level.

From the research findings, teachers in the sample population do not possess adequate ICT skills and this is a major challenge in the education sector since ICT skills are vital in the implementation of ICT in the teaching and learning of students. The researcher also concluded

that the internet speed in the schools is very poor and unreliable and there is also a shortage of ICT tools such as computers hence students have to share computers. Moreso, some of the computers are not connected to the internet and schools are also reluctant to repair broken down computers. The researcher also concluded that teachers in the sample population were aware of the benefits that ICT brings to the education sector but they are reluctant to use ICT when teaching students. In addition, it was noted that schools are still suffering from the high cost of computers and other ICT tools and this results in the shortages of ICT tools in schools.

5.3 Recommendations

The researcher suggested the following recommendations to overcome the factors that are militating against the use of information and communication technology in the teaching and learning of Economics at Advanced level in Gweru district.

- ➢ The Ministry of Primary and Secondary education should conduct ICT training workshops so as to ensure that all teachers are equipped with ICT skills. Moreso, ICT training courses should be part of the teacher training programs.

- ➢ School leaders should also encourage teachers to use ICT during their lessons and they should also increase the number of ICT tools in schools. Moreso, schools should hire a specialized worker to repair all broken down ICT tools.

- ➢ School administrators should also get internet services from a reliable service provider who offers high speed internet at a low cost and schools should also ensure that all computers are connected to the internet.

- ➢ The government should also subsidies the cost of ICT tools so as to make ICT tools affordable to the schools and the government should also assist schools by donating computers to schools.

➢ The school administration should also use other sources of power such as solar energy and generators so as to prevent power disruptions during the teaching and learning of students using ICT.

➢ Teachers should improve their ICT skills in-order to use ICT in the teaching and learning of Economics at Advanced Level.

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APPENDIX 1: QUESTIONNAIRE FOR TEACHERS

My name is NyaudeBevean and I am a final year student at Midlands State University. I am carrying out a research on the **Factors militating against the use of information and communication technology in teaching and learning of Economics at Advanced Level in Gweru District.**I am carrying this research in partial fulfilment of the Bachelor of Education Honours Degree in Economics. All the information you provide will be kept private and confidential.

<u>SECTION A</u> (Tick where applicable)

1. Gender: Male ☐   Female ☐

2. Academic Qualification

   O' Level ☐
   A' Level ☐

3. Professional Qualification

   Diploma in Education ☐

   Bachelor of Education ☐

   Master of Education ☐

4. Teaching Experience

   0 – 5 Years ☐

   6 – 10 Years ☐

   10 Years and above ☐

SECTION B

1) Is the integration of Information and Communication Technology (ICT) in teaching and

   learning Economics at A' Level successful?

   YES: [ ]   NO: [ ]

2) Please indicate items you have for teaching Economics by putting a tick.

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

3) Please indicate your level of skills in the use of the following computer applications.

APPLICATION	Excellent	Very Good	Good	Fair	No capacity
Word processing					
Power point					
Spread sheets					
Internet Browser					

4) For what purpose do you use ICT in your teaching?

   Learning enrichment   [ ]

   Researching through internet   [ ]

   As teaching learning tool   [ ]

   For playing games and fun   [ ]

   Tracking of students performance levels   [ ]

5) List the benefits of using ICT in the teaching and learning of Economics at Advanced level.

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6)   What are the challenges experienced by teachers in integrating ICT in the teaching and learning of Economics?

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7) Are you sufficiently equipped with ICT Skills so that you can fully integrate them into teaching and learning?

Most sufficiently [   ]   Somehow Sufficiently [   ]   Not Sufficiently [   ]

8) What is done at your school to make teachers improve in ICT skills?

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9) Do you think pupils are aware of the benefits of integrating ICT in teaching and learning of Economics?

Yes: ☐   No: ☐

Explain your answer

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10) What strategies should be put in place for the successful implementation of ICT in teaching and learning processes?

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APPENDIX 2: STUDENT'S QUESTIONNAIRE

My name is NyaudeBevean and I am a final year student at Midlands State University. I am carrying out a research on the **Factors militating against the use of information and communication technology in teaching and learning of Economics at Advanced Level in Gweru District.**I am carrying this research in partial fulfilment of the Bachelor of Education Honours Degree in Economics. All the information you provide will be kept private and confidential.

Insert a tick in the appropriate box

Gender: Male ☐   Female ☐

1) Do you have a personal computer?   Yes ☐   No ☐

2) If your answer above is YES how many hours do you spend on your computer per day?

   1 hr ☐   2hrs ☐   3hrs ☐   more than 4hrs ☐

3) Most of your time you use your computer for academic purpose?
   Strongly agree ☐   Agree ☐   Disagree ☐   Strongly disagree ☐

4) Do you have a computer lab at your school?

   Yes ☐   No ☐

5) Are the computers connected to the internet?
   Yes ☐   No ☐

6) Do you use any technology when studying/learning Economics?
   Yes ☐   No ☐

7) If your answer above is YES. List the information and communication technology (ICT) tools that you use during teaching and learning?
   …………………………………………………………………………………………
   …………………………………………………………………………………………
   …………………………………………………………………………………………
   …………………………………………………………………………

8) How often do you use ICT tools during teaching and learning?
   …………………………………………………………………………………………
   …………………………………………………………………………………………

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9) How many computers do you have at your school and do you think the computers are enough to successfully integrate ICT in teaching and learning Economics at Advanced Level?
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10) Do you think using computers in teaching and learning Economics is beneficial?
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11) What are the challenges that students face when they want to use ICT during studying or learning Economics?
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12) What are you recommendations on the challenges that schools are facing when implementing ICT to teaching and learning?
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APPENDIX 3: INTERVIEW GUIDE FOR HEADS OF DEPARTMENTS

My name is NyaudeBevean and I am a final year student at Midlands State University. I am carrying out a research on the **Factors militating against the use of information and communication technology in teaching and learning of Economics at Advanced Level in Gweru District.**I am carrying this research in partial fulfilment of the Bachelor of Education Honours Degree in Economics. All the information you provide will be kept private and confidential.

1. Can you list the ICT tools that are available in the commercial department?

2. How often do teachers you use ICT tools in teaching and learning of Economics

3. How many computers are available for use at your school and how many computers are connected to the internet?

4. Do you think the ICT tools that are available for use in the department are enough to ensure successful implementation of ICT in teaching and learning Economics

5. What is done at your school to make students improve in ICT skills and use?

6. Are there reliable sources of energy at the school to ensure that no interruptions will made during the use of ICT in teaching and learning Economics?

7. In your opinion, what is the impact of using ICT, and especially the Internet, in teaching and learning of Economics?

8. What are the challenges that you face when integrating ICT in teaching and learning of Economics?

9. What do you think should be done to overcome the challenges that are faced by schools when integrating ICT in the teaching and learning processes?