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AN ANALYSIS OF THE FACTORS AFFECTING THE ADOPTION OF E LEARNING IN ZIMBABWEAN RURAL SECONDARY SCHOOLS. A CASE OF PFUNGWE DISTRICT, ZIMBABWE.

BY

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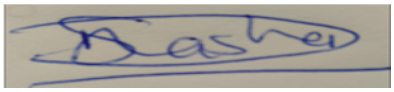

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Dedications

I dedicate my dissertation work to my family and many friends. A special feeling of gratitude to my loving husband, Taurai Sean Mlambo whose words of encouragement and push for tenacity ring in my ears. My daughter Cheryl and not forgetting the prayers of my loving mother Tsitsi Zano who has never left my side and they are very special.

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Abstract

Today we are in the era of educational technology and e learning were the teachers and learners are expected to thrive in the new normal making use of technology either for learning or for teaching. It is not everyone who is enjoying the fruits of e learning phenomenon despite the fact that other people from the developed countries are enjoying the rewards. In this vein, the study sought to understand the factors that affect the adoption of technology in secondary schools in the teaching of combined science. The study follows a mixed method research where it uses qualitative and quantitative research approaches. On quantitative research, twenty (20) questionnaires were administered and only eighteen (18) questionnaires were returned with responses and were found to be useful in the study. On Qualitative research, six (6) teachers were interviewed and their participation was consented. The findings of the study showed that that the factors affecting adoption of e learning in secondary school are different and they vary with the school or per person. Some of the factors that were discussed by participants included the likes of motivation towards technology, resistance to change, lack of technological resources and infrastructure and technological support. Interestingly, it was found that the technology support can be by the parents, teachers and /or by the school. These are just among the others that were discussed. These findings are expected to enhance policy and decision makings in matters concerning e learning adoption in schools.

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1 CHAPTER ONE

1.1 INTRODUCTION

There are a number of studies carried out on the effects that affect e learning in the teaching and learning in secondary schools. This chapter will focus on the background of the study, statement of the problem, objectives of the study, limitations, delimitations, definition of key terms and the summary of the chapter.

1.2 BACKGROUND TO THE STUDY

The use of educational technology in teaching and learning has becoming one of the most important and widely discussed issues in contemporary education policies (Thierer, 2000). Most people in this field of education agreed that, when educational technology properly used, it gives promise to improve teaching and learning in addition to shaping workforce opportunities (Kasembe, 2011). Information and communication Technology (ICT) has the potential to deepen skill, motivate and engage students in learning, help relate school experiences to work practices, help create economic viability for tomorrow's workers, contribute to strengthen teaching and to provide opportunities for connection between the Zimbabwean schools and the world (Zimbabwe school examinations, 2015).

The changing of the world is increasing global market competition and increasing democratization. Basic education is necessary for individuals to have the capability to access and apply information. Such capability must find bearing in educational technology in the global village. According to Paris (2012) has indicated that the ability to access and effectively utilize educational technology is no longer a luxury but a necessity for development. Many developing countries, especially in Africa, have already see the importance of educational use of technology during the were everyone was staying indoors no school to attend to.

Industrialized nations like Britain and Lagos, have been supporting educational technology through the wider availability of computers in schools. Zimbabwe School Examinations (2015) defined practical work as hands-on learning experience which prompts thinking about the world in which we live. Therefore, the O' level syllabus is designed in such a way that learners acquire theory and practical skills so that they develop cognitively, emotionally, physically and socially. The syllabus aims to balance knowledge understanding and practical skills in order to produce

effective and competent learners. The syllabus also clearly stated that, practical work plays a significant role in teaching and learning as well as passing the examination since it contributes to the final mark (Ministry of Primary and Secondary Education, 2015). Graduates who lack science practical, technical and investigative skills will be ill equipped for progression to higher education, employment in science related fields, and for solving real life problems (Science Practical Manual).

The Zimbabwe school examination council, clearly stated that, if science is taught and assessed correctly, it prepares students for life, regardless of the profession they choose to follow. The use of e learning, initiate critical way of understanding, exploring, engaging and have the capacity to change the world through acquired knowledge and skills on how to solve life problems. Learners only acquire these skills when they are exposed to computers, laptops and phones. This means under normal circumstances online lessons should be conducted in teaching and learning in secondary schools.

Zimbabwean education system has an Information and communication technology policy requiring all school and college students to be exposed to computer skills (Government of Zimbabwe 2004). This is in view of the importance of ICT literacy skills expected in today's world. The policy view of impacting teachers with ICT skills and knowledge since, they are responsible for preparing the future nation's workforce. Our former Zimbabwean president, Robert Gabriel Mugabe (2012), introduced ICT capacity building by donating computers to schools in Zimbabwe. For the improvement of ICT utilization in schools, all training institutions in Zimbabwe have introduced ICT skills training as a compulsory component of the curriculum for all their diploma and Bachelor of Education and their Master of education degrees (University of Zimbabwe, 2004, Bindura University of Science Education, 2005).

Prof Mavhima point out that, educational technology is the way for future. He emphasized that through the Ministry, every school in Zimbabwe should embrace technology. The ministry organized various workshops, conferences to capacitate teachers on how to use educational technology in teaching and learning. This helps during the pandemic to cover some of the topics during lockdown to Taha et al. (2020) pointed out.

Teachers and schools are facing challenges in conducting lessons due to various factors; this paper intends to find out factors that affect e learning in Zimbabwean schools. Evaluation of Barriers to the Integration of ICT in Teaching and Learning of Science and Mathematics in Zimbabwe's Secondary Schools found that teachers have a strong desire to conduct lessons but failing due to lack of resources in schools.

Varies studies have indicated the computerization, challenges of implementing educational technology in rural schools. A case study done in Zimbabwe reviewed that the use of computer technology for the purposes of teaching and learning is still very low and, in some cases, non-existent (Kasembe, 2011). Teachers are still relying on the traditional talk and chalk mode of delivery especially in rural areas. Incompetence and lack of resources are barriers of educational technology use in teaching and learning. Studies performed are associated to Educational Technology as an enhancement tool for teaching and learning in secondary schools. This research is going to investigate factors that affect e learning adoption in secondary schools.

1.3 STATEMENT OF THE PROBLEM

The twenty first century is characterized by dramatic technology revolution. We are now living in an increasingly, globalized and complex, media saturated society. It should be noted that technology revolution will have a greater impact on society and its institutions such as the education system. New curriculum appears as simple to implement as pointed by the MOPSE and other educational players. This statement sounds to be a reality, as evidenced by low pass rate in secondary schools in Zimbabwe. ZIMSEC results of 2020 and 2021 show that, learners are failing. The learners in the Guruve District are not spared. To note in this new curriculum, is the need to integrate technology in school contexts be it in the physical classroom or through the doing of CALAs. However, there is paucity of literature on e-learning adoption in the district. It is in the regard that the study sought to understand the factors that affect the E-learning adoption in secondary schools in Guruve district, Mashonaland central Zimbabwe.

1.4 PURPOSE OF THE STUDY

The purpose of this study is to find out factors affecting E learning adoption in secondary schools.

1.5 MAIN RESEARCH QUESTION

What are the factors affecting E learning adoption in secondary schools in Zimbabwe?

1.6 SUB -RESEARCH QUESTIONS

I. What are the learner's perspectives in e learning at Chimbumu secondary school?

ii. What are the teacher's perspectives in the E learning at Chimbumu secondary school?

iii. Why learners are adopting the use of E learning in schools

iv. What challenges are encountered by schools when using e learning in secondary schools during lessons delivery?

1.7 OBJECTIVES OF THE STUDY

i) To determine the factors that affect the adoption of e learning in schools

ii) To examine the student perspective in E learning at Chimbumu secondary school

iii) To examine teacher perspective in e learning at Chimbumu secondary school

1.8 SIGNIFICANCE OF THE STUDY

The outcomes of this study will explain the deficit created by Covid-19 in teaching and learning in secondary schools. It will also reveal how the educational technology can be used to close the gap in conducting lessons in science subject. This research seeks to find better teaching and learning methods that prepares learners to fit into the global village due to hands on skills to be acquired through ICT.

According to Geladze D (2015), students tend to retain more of what they see, hear or do and learn more when they are involved in the teaching and learning process. The findings of this study is going to help secondary schools, management board and Non-Governmental Organisation in distribution of resources mostly educational technology materials. Various groups of individuals will benefit from the findings of the study.

It is also expected that the findings of the study will add to e-learning literature in the teaching and learning of sciences in the district in question. This will also add to the body of knowledge in the field and inform policy decisions in the district.

1.9 DELIMITATIONS OF THE STUDY

The study will be carried at selected schools in Guruve District. This study will be focusing on factors that affect e learning adoption in secondary schools in Zimbabwe. Current form four B class to be used for the purpose of this research.

1.10 LIMITATIONS OF THE STUDY

The major limitation of this study will be electricity to charge the phone, laptop, savers and projectors due to load shedding. Learner to learner computer ratio and financial constraints to visit the selected schools are amongst some of the limitations. Short time span is also one of the limitations that might hinder the research. To overcome these challenges, the researcher shall strive to utilize the available time

1.11 DEFINITION OF KEY TERMS

Educational technology is the use of both physical hardware, software, and educational theoretic to facilitate learning and improving performance by creating, using, and managing appropriate technological processes and resources (Spector, 2015).

Adoption is the act of taking something on as your own. It also refers to the act of embracing ideas, habits or free kittens.

Secondary schools refer to institutions where students of over thirteen years attend. Form words of (Jay, 2010) a secondary school is an institution that provides education for primary graduates before they are ready for university. Kazie (2012) validates this view by defining a secondary schools one way of delivering education to adolescents in level two or junior secondary education which is considered the second final phase of education. Thus, secondary schools are

institutions that accommodate students who are at upper forms of education and are preparing to enter tertiary level of education.

E-learning is the technology mediated learning (as defined by the author).

1.12 Chapter Summary

The chapter looked at the background of the study statement of the problem, purpose of the study, research questions, and research objectives, significance of the study, limitations and definitions of key terms. Chapter two will focus literature review.

2 CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The previous chapter outlined the background of the study. This Chapter presents a review of literature pertinent to the effects that affect e learning in the teaching and learning in secondary schools. The conceptual literature of e learning is presented together with literature related to the specific objectives of the study. In addition, empirical literature and the research gap is also presented in the chapter.

2.2 The concept of e learning

For the past two decades an increased use of e learning has been on the increase in both developed and developing countries. The term e learning according to Goyal, et al (2018) refers to a broad use of software's, hardware's, media, networks in storing, processing and sharing information for learning purposes in classes or outside the classroom. Leys (2010) adds that e learning includes all the technology that is used to gather, convey, manipulate and store and reproduce data using electronic means. The electronic means that is associated with e learning includes SMS, email, online chatting using different communication platforms which among others includes, WhatsApp, Facebook and TIK TOK. For e learning to be achievable access to ICT devices including computer desktops, smart phones, laptops that allows for easy storage and transmission of information, allowing teachers and learners to interact remotely (Perron, et al. 2019).

Regardless of the importance of e learning in the contemporary teaching and learning discourse, the majority of schools in developing countries including Zimbabwe particularly in rural areas find it extremely difficult to adopt and use e learning in teaching and learning (Rusere, 2021). According to Kwade (2021), the majority of rural schools does not have basic infrastructure for e learning. As a result, adoption and use of e learning in most rural areas is so minimal. With this in mind, this study focuses on accessing the effects of e learning on teaching and learning.

2.3 The impact of integrating ICT in teaching and learning in secondary schools

The debate on the effects of e learning in teaching and learning at secondary school's levels is far from over due to social, economic differences among schools as well as the location of schools. According to Newton and Rogers (2020) regardless of a number of studies concluding that e learning is absolutely positive in teaching and learning, there are some negative effects of e learning particularly in rural schools where there is massive shortage of e learning supporting infrastructure. Below are some of the negative effects of e learning in teaching and learning at secondary school level.

2.3.1 Brings confusion to learners

Mikre (2021) revealed that adopting e learning in teaching and learning may result in learners being confused by multiplicity of available where they are supposed to select relevant information for their level as well as addressing questions at their level. According to Shearmen (2020) this challenges of confused learners is highest in areas where learners have access to the internet where they are encouraging to do research. This study accessed whether this is none of the negative effect of e learning at Chimbumu secondary school.

2.3.2 Exposure to harmful information or sites

The other negative effect of e learning particularly to learners is that they are exposed to undesirable adult information sites which results in learners spending most of the time surfing on gambling or pornographic sites at the expense of educating sites (Devadason, 2010). According to Unisa (2010) the prevalence of this situation results in loss of concentration among learners at the same time teachers will spend a lot of time trying to educate learners on the dangers of bad websites thus reducing teaching and learning time. In light of his, this study assessed whether exposure to harmful information and sites is one of the negative effect of e learning being experienced at Chimbumu secondary school.

2.3.3 Learners spend time on unproductive things

The other notable, negative impact on the use of e learning in teaching and learning at secondary school level is that it is open for abuse resulting in learners wasting learning time doing unproductive things (Devadason, 2010). In line with the above, Peron et al (2010) argue that the openness of the internet and other social media platforms puts learners into an exploratory mode, which results in a lot of time being spend on non-educative activities on internet gadgets. In

addition, Dahmani (2017) revealed that e learning results in minimal teacher supervision and student might spend time on entertainment rather than on their studies. This study asses' whether the use of e learning at Chimbumu secondary school is affecting time that is dedicated to studies.

2.3.4 Promoting anti-social behavior

Related to the above, it can be argued that using ICT in teaching and learning exposes secondary school learner's unsolicited content that may result in the development of anti-social behavior which they learned from the interne Wheeler (2020). According to Mikre (2021) notable anti-social behavior that is learned from excessive exposure to the internet includes violent tendencies, drunkenness, initiation into Satanism and promiscuity. This study therefore assessed whether the use of e learning is resulting in the development of anti-social behavior among learners at Chimbumu secondary school.

In addition, Bharat (2016) identified the following as some of the major negative impacts of relying over reliance on e learning in teaching and learning among secondary school learners it reduces critical and analytical thinking among students, learners only have superficial information that they downloaded from the internet. Learners are tempted to neglect other useful learning resources which narrow their understanding and research. In line with the above negative impacts of using e learning, this study assessed whether he discussed impacts is being experienced at Chimbumu secondary school.

2.4 Positive impacts of integrating ICT in teaching and learning in secondary school

Kozma (2013) highlighted that from empirical studies there is growing and overwhelming evidence that the use of e learning is the most effective teaching and learning approach in this era were technology have overtaken the manual approach in doing things. Presented below is some of the positive impact of e learning and teaching and learning at secondary school level.

2.4.1 Increased effectiveness and efficiency in educational tasks

Peter (2010) highlighted that the positive rational of e learning is related to the increased effectiveness and efficiency in teaching and learning. The efficiency and effectiveness in teaching will in turn results in reduced cost that are associated with teaching resources that are needed without e learning. In related to the above (Swerewer, 2021) argued that e learning is effective in the sense that information is gathered stored and between teachers and students

within a very short space of time as compare to the traditional teaching and learning approaches were information was largely concentrated in the hands of a single person or single text book.

2.4.2 E learning is exciting to learners

Peter (2010) indicated that the pedagogic rationale and advantage of e learning is that on top of improving the quality of education it is also exciting and motivating to learners who will be afforded the opportunity of researching on their own. According to Van Ark (2011) when learners are exciting their participation in learning increases resulting in higher pass rate and level of understanding. This study assessed whether e learning is bringing excitement and its other benefits to learner at Chimbumu Secondary school.

2.4.3 E learning increase pass rate.

According to Klen J (2017), e learning increases pass rate for a learner who does not abuse the platforms. These assertions are supported by a study (Kulik, 2018) which revealed that 79% of interviewed teachers indicated highlighted that the use of e learning in teaching and learning increase passes rates. In another research by David and Morris (2018) it emerged that learners who uses e learning resource in subjects such as Mathematics, Science, and Accounts score higher grades as compared to students who are not exposed to e learning resources such as laptops, computers and the internet. This study will assess the impact of e learning on the pass rate at Chimbumu secondary school.

2.4.4 E learning increases sharing of resources and information

According to Newman (2020) the use of e learning in teaching and learning in secondary schools increases sharing of resources, sharing of learning space, promotes collaborative learning and autonomous learning because it increase interactions between teachers and learners as well as learners to learners. In explain this positive benefit further (Newman, 2020) argued that e learning allows teachers to use videos or audio in transmitting information so that learners and benefit in the comfort of their homes. On sharing of resources, Bhaga (2010) posits that e learning minimizes the cost of procuring learning resources year in year out, rather e learning resources can be procured once and used over a long time period. This study assessed whether e learning, is bringing easy sharing of information at Chimbumu Secondary school.

2.4.5 Increases sharing of learning space

In terms of shared learning spaces as one of the positive impact of e learning in teaching and learning in Primary Schools. Wheeler (2010) argued that, networked computing facilities easily creates an environment where learners can easily communicate with each other and their teachers, share work spaces as well as accessing a wide variety of resources external and internal information using web-based systems on the internet. Sharing learning space using e learning in teaching and learning in Primary schools goes a long way in reducing the challenge of over crowdedness and shortage of teachers which is a huge challenge that is faced by the majority of Primary schools in Zimbabwe; this is according to Mdletshe (2013). In this same vein, shared learning through e learning will also promote collaborative learning. According to Riel (2010), the use of e learning makes it possible for what used to be individual learning to shift and become collaborative learning for all who have access to the internet. This study assessed whether e learning improved information sharing space at Chimbumu Secondary school.

2.4.6 Increases autonomous learning

Furthermore, Gay et al (2013) indicated that integrating e learning in teaching and learning in Primary school facilitate the move towards autonomous learning, e learning as a whole and computers have the power to bring to the learner access, modify, manipulate, store and retrieve information and most importantly promotion of greater autonomy in learning (Wheeler, 2010). In turn, learners will be empowered to exert more choice on how best they can approach study, with less direction from teachers. This however does not necessarily mean e learning should completely replace teachers rather it promotes independent learning as they will be able to direct their own studies. This set up the teacher will increasingly become more and more of a moderator rather than being a director (Forsyth, 2016). In this case e learning can be regarded as an agent of change through the enhancement of educational reforms which enable teachers and learners to shift from traditional learning and teaching ways to more innovative approaches (Beyers 2015).

2.5 Factors that affect adoption of e learning at secondary schools

There are a number of obstacles to the adoption of e learning in teaching and learning in secondarys schools. The following factors are discussed in detail below ,lack of teacher competence, confidence of teacher confidence to teach using e learning , unqualified teachers,

negative attitude towards e learning, lack of technical support and limmited parental involvement.

2.5.1 Teachers' attitude toward E learning

Oladosu (2012) highlighted that teacher's attitude towards e learning plays a crucial role in the adoption of e learning in schools. It is however unfortunate that some teachers have a negative attitude of e learning based on their background (Wheeler, 2013) pointed out. According to Kapfunde (2017) teachers' negative attitude towards e learning is primarily based on wrong view that e learning makes them irrelevant in controlling teaching activities as well as losing their class influence.

Elation to the above, Bingimlas (2017) indicated that lack of knowledge, skills is also another reason which forces teachers to develop a negative attitude towards full adoption of e learning. In this study focus was on assessing whether negative teacher's attitude is also another factor that might contribute to adoption of e learning at Chimbumu Secondary school.

2.5.2 Resistant to change

Resistance to change is also regarded as one of the leading factor affecting adoption of e learning in some schools. According to Hargreaves and Fullan (2012) whenever something new is introduced resistance to new information or approaches is inevitable the same applies with the introduction of new learning as a replacement of the traditional teaching and learning approaches. To such changes is inevitable; the same applies whenever a new curriculum is introduced. In the study, focus was to investigate whether resistant to change is one of the factors that might contribute to adoption of e learning at Chimbumu Secondary school.

2.5.3 Human capital challenges

One of the challenges of adopting e learning in teaching and learning in Secondary schools' shortage of qualified and competent human resources or teachers (Shearmen,2020). According to Kapfunde (2021) the introduction of e learning resulted in the emergence of new pedagogical approaches, skills, demands and attitude which calls for and qualified teachers to utilize in teaching. However, Simango (2017) posits that majority of teachers who trained as teachers' way before the introduction of ICT or e Learning lacks the skills and competency hence they can do all they can to ensure delayed adoption of e learning in teaching and learning. The study assesses

whether shortage of competent and skilled teachers is a factor that can be associated with the adoption of e learning at Chimbumu secondary school.

2.5.4 Poor infrastructure

Poor infrastructure or unavailability of infrastructure is another factor that affects adoption of e learning in most developing countries Paterson (2015). This is not the case in developed countries where a report by Nelson and Kruger (2019) in the USA indicated that 99% of public school have infrastructures that support e learning such as internet, laptops, and computers. In contrast, the only a minority of private owned schools in Zimbabwe have infrastructure that fully support easy adoption and use of e learning (Kasembe, 2021). The worst scenario mostly in rural schools is the lack of classrooms, chairs and desks. A study conducted by Samango (2017) in some rural parts of Kariba Zimbabwe concluded that adoption of e learning is affected the absence of normal buildings. In addition, the, the majority of schools not electrified which makes it impossible to adopt e learning. The study assessed whether shortage of infrastructure is one of the factors affecting adoption of e learning at Chimbumu secondary school.

2.5.5 Shortage of financial resources

Shortage of financial resources which refers to all the money needed to buy e learning resources is one of the biggest hindrance for the adoption of e learning in Secondary schools Ellis (2010). E learning adoption requires huge budgetary allocations from the government, however governments in most case lacks adequate financial resources to buy e learning ,which results in poor adoption of e learning (Samango 2017). Bush and Bell (2022) further explained that shortage of funds from governments and parents' lack of funds to support e learning affects the rate at which e learning is adopted particularly in public schools. Studies from developing countries where enough financial resources are channeled towards education indicates that the adoption of e learning is high due to the availability of other resources that can be purchased, according to Bell (2022). In this study focus was to address the question whether shortage of financial resources affecting adoption of e learning at Chimbumu Secondary school.

2.5.6 Limited Parental Involvement

Adoption of e learning calls for an inclusive e approach was all relevant stakeholders are active participants. However, Sclafani, (2014) indicated that limited involvement of parents hinders easy and quick adoption of e learning in schools. Mamosa, (2010) highlighted that the majority of parents they are ill-informed when it comes to the importance of e learning because they did not use it during their school days. As a result, they are not willing to invest in e learning gadgets for their children which then affects the adoption of e learning in schools. The level of parental involvement in supporting e learn was analyzed at Chimbumu secondary to ascertain whether lack of parental involvement is one of the factors that affects adoption of e learning.

2.6 How schools are addressing challenges of integrating e LEARNING

The above section highlighted the positive and negative impacts of e learning adoption from teachers and learner's perspectives. The presented factor that affects adoption of e learning from teachers and learners indicated that there is need for broader and comprehensive strategies to address factors that are militating against e learning adoption. Discussed below are some of the strategies that can be introduced to increase the adoption of e learning in Secondary schools.

2.6.1 Staff development programs

Role (2013) argued that one of the best strategies to improve adoption of e learning in schools is to have competent teachers who regularly undergoes staff development programs so that they will always be abreast in latest teaching and learning trends. Mimosa (2010) defined staff programs as training that teaching staff undergo before the introduction of a new teaching approach so that they can implement it with knowledge. In countries where adoption of e learning is high staff developing programs are regularly conducted. It is therefore important for schools in Zimbabwe to introduce staff development programs to increase the adoption of e learning in schools

2.6.2 Procurement of critical materials

Procurement of critical e learning materials and equipment is one of the strategy ha can be used to address poor adoption of e learning in secondary schools. According to Nyirenda (2017) procurement of e learning resources should be concentrated more in rural areas where the

adoption of e learning is low for most of the developing countries. In addition, schools need to be well funded so that they develop infrastructure that support adoption of e learning.

2.6.3 Hiring of additional human resources

Shortage of qualified and experienced staff has been noted as one of the hindrances to full integration of e learning in teaching and learning in rural Primary schools. As a solution a number of schools through their respective School Development Association have been hiring additional human resources who are experienced in e learning.

2.7 Chapter Summary

The chapter presented the literature related to the effects of e learning adoption in secondary schools. Conceptual literature was presented together with literature related to the specific objectives of the study in the next chapter. The methodology of the study is presented.

3 CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter gave a detailed account of the procedures and steps that were used. It also explained the research methods used to obtain the information and to compile the study and the instruments used in information collection, a synthesis on how the problem was investigated and comments on particular methods and tools used, was also highlighted in this chapter.

3.2 Research Approach

In this study the researcher looked at some methods used to gather information and mixed methods approach will be used. According to Plano Clark and Creswell (2014), mixed methods research is a research design with philosophical assumptions as well as methods of inquiry that guide the direction of the collection and analysis of data and the mixture of qualitative and quantitative approaches in different phases in the research process. A pragmatic paradigm will be employed, according to Song, Sandelowski and Happ (2010) as cited in Walliman (2005), this approach focuses on collecting, analyzing, and mixing both quantitative and qualitative data to provide a better understanding of research problems instead of using only one of them. In this study, the two approaches will be used on an equal base. Quantitative data will be collected using questionnaires and qualitative data will be collected using interviews. Mixed methods research helps to answer questions that cannot be answered by qualitative or quantitative approaches alone (Plano Clark & Creswell 2014). Sandelowski and Happ (2010) point out that the rationale for using the mixed method approach is based on triangulation to examine the same phenomenon. Triangulation provides comprehensive evidence for studying a research problem than either quantitative research or quantitative research alone since there is no restriction of data collecting tools. This approach will be used as it provides the strengths that offset the weaknesses of both qualitative and quantitative research.

3.3 Research Design

According to Saunders Lewis and Thornhill (2012) research design is a plan and structure of the investigation used to obtain evidence to answer research questions. The research design that will be adopted in this study is the concurrent triangulation design. According to Creswell and Plano Clark (2011) in this design qualitative and quantitative data will be collected concurrently and the data will be analyzed separately. In this study concurrent triangulation design will be used since the researcher has limited data collection time and this design allows simultaneous data collection as compared to sequential design.

3.4 Population, Sample and Sampling Techniques

3.4.1 **Population**

According to Manga (2012) the term population refers to the total of elements or cases that one can investigate. Population also is defined as the number of audiences suitable for the collection of information sought by the researcher for a particular problem cited (Webster 2020). Polite and Hungler (2009) define a population as the totality of all subjects that conform to a set or a group of persons that is of interest to the researcher and to whom the research results can be generalized. The target population will be Ordinary level learners and teachers at Chimbumu secondary in Guruve District, Mashonaland Province.

3.4.2 Sample and Sampling Techniques

Bhattacherjee (2012) define sampling as the statistical process of selecting a sample from a population of interest to the researcher for purposes of making observations and statistical inferences about that population. Sampling can also be defined as a process of selecting a small number of elements from a large defined target group of elements such that the information gathered from a small group will allow judgements to be made about the larger group. A sample is defined as a smaller, manageable version a large population. Chiromo (2006) define a sample as a subset of the population which takes part in the study. Sampling is concerned with the selection of a subset of individuals from within a statistical population to estimate characteristics of the whole population (Etikan et al. 2016). Kumar (2011) asserts sampling as the process of choosing subjects from a population following certain governing procedures to participate in a study. To make sure that adequate information was collected with full representation simple random sampling will be employed to select the samples for the study. The researcher will use a

random sampling method to select schools to be involved in the target population. Simple random sampling is the process of selecting a sample in such a way that every member of the population has an equal and independent chance of being selected (Cohen et al. 2011). Researcher will use random sampling to select learners, gender balance to be concerned in the sample. It should be noted that also be noted that, simple random sampling has a risk of selecting samples from a few variations so get rid of this purposive selection was used to select teachers to be used as a key informant for important information. Thus, in this research the sample is consisted 20 participants. These were ordinary levels students of which 10 students from each of the selected schools who are given questionnaires and 6 teachers who were interviewed 3 teachers per school.

*3.5 **Data Collection Instruments***

Data collection instruments are tools used to collect data from the researcher to evaluate skills and knowledge gained by learners after they complete online lessons according to (Abawi, 2013). In these study questionnaires and in-depth interviews will be used for data collection.

3.5.1 **Questionnaires**

According to Brog and Gall (2010) in Chiot (2013) questionnaires are documents that ask questions to all individual in a sample. Spector (2015) supported this view by defining questionnaires as documents containing a set of question to respond in writing designed to gather information appropriate for analysis. Also, Abawi (2013) defines a questionnaire as a form of inquiry, a systematically compiled and organized series of questions that one sends to the population sample. Questionnaires will be used since it allows the researcher to collect large amounts of data in a relatively short period as cited by (Gay, 2011). Short structured questionnaires will be used to ensure that they motivate respondents to answer all questions. To ensure the validity and reliability of the data to be obtained, simple language will be used to produce clear questions to the respondents. Questionnaire to be tested using students who are doing ordinary level at a secondary school out of the sample of the study to determine the validity and reliability of the instruments. Closed and open ended questions to be included in the questionnaire to improve the relevance of the tool. Cohen et al (2011) define closed questions as questions that prescribe the range of responses from which the respondents may choose. Gay et al. (2011), define open-ended questions as those questions that enable respondents to write a free

account in their own terms, to explain and qualify their responses. Open and close ended questions to be included, using simple language to ensure that, respondents will understand the requirements of the questions.

3.5.2 **Structured Interviews**

Interview is a verbal communication between two people with an objective of collecting relevant information for the purpose of research. A structured interview is a type of interview in which the interviewer asks a particular set of predetermined questions. In structured interviews, questions are planned and created in advance, which means that all participants are asked the same questions in the same order. Structured interviews are also known as standardized interviews (Pathfinder International, 2016). A structured interview is a type of interview in which the interviewer asks a particular set of predetermined questions (Crossman, 2017). Structured interviews will be used to collect data from teachers because it is assumed they would give more informed responses. The researcher will use this method since it enables him to ask each respondent the same questions in the same way. It also allows her to gather detailed information about thoughts and feelings of participants on the area under study or to explore new issues in depth as stipulated by (Adams & Cox 2012). They reduce the amount of thinking that a respondent needs to undertake to complete the task it also saves time. This generally leads to higher response and more accurate data. They also provide a good atmosphere for data collection since participants may feel at home and say out their minds more comfortable when they have a conversation with the researcher. Structured interviews can also help to collect data faster.

*3.6 **Data collection procedure***

There are steps taken in administering the instruments and collection of data from subject under study. The procedure of the data collection entailed the administration of questionnaires to identify respondents. The questionnaires were delivered by hand since the subjects were locally available.

The respondents were being assured that strict confidentiality will be maintained in dealing with responses. The respondents were instructed not to reveal their identity and were assured that the information collected was strictly for research purpose thus the ethical principle of confidentiality and privacy was observed. The researcher made appointments through visits to

the schools. The filled in questionnaires were collected after a week and this enable the respondents to fill the questionnaires at their own pace. This enabling the researcher to gather more information. The interviews were conducted on appointment with relevant respondent at their own time which was convenience to them.

3.7 Data presentation and analysis

Quantitative data will be coded into a numerical representation that will be analyzed graphically and/or tabulated. Data generated from structured interviews will be presented as quotes from respondents. Patton (2012) suggested that using respondent's quotes aids credibility to the information. Similar quotes to be displayed in tables, boxes, and figures to make it easier to read. For example, if you have several quotes to be highlighted.

3.8 Ethical Considerations

William (2010) defined Ethical consideration as having respect for another's property, refraining from violence against another, treating others with civility, being in accordance with the accepted principles of right and wrong that govern the conduct of a profession whilst (Grove et al 2015) described ethical considerations as a set of principles that guide your research designs and practices. Grove (2015) highlighted that consideration is a collection of principles and values that should be followed while doing human affairs. He also highlighted those ethical considerations make sure that no-one acts in such a way that is harmful to society or an individual ethical consideration refrains people and organizations from indulging in vicious activities. Every participant to be informed that the research will be voluntary and they can quit any time in the process (Zohrabi, 2013). Participants will be informed that the collected information will only be used for this particular research. Anonymity and confidentiality of participants will be guaranteed through the use of pseudonyms (Schutt, 2010), which will be explained to the participants before the commencement of the study. The researcher will ensure that the collected information will be treated with privacy.

3.9 Data presentation and analyses procedures

The study generated both qualitative and quantitative data hence both qualitative and quantitative techniques were used to analyze the data obtained. Qualitative analysis considered the inferences that were made from opinions of the respondents. Qualitative data analyzed by analyzing meanings and implications emanating from respondent information and comparing responses to

documented data on impact of media and technology in the teaching and learning in secondary schools. The data will be presented in tables.

3.10 Chapter Summary

This chapter discusses in detail the research methodology and procedures used to gather and analyze data from the respondents. The research approach and design were described, the target population, sample size and sampling techniques were explained. Data collection procedure, research instruments and data analysis techniques were also explained. An explanation on the ethical considerations is given. The next chapter presents the results of the study.

4 CHAPTER FOUR: DATA ANALYSIS, REPRESENTATION AND INTERPRETATION

4.1 Introduction

The chapter focuses on data presentation, analysis and discussion based on data collected from questions taken from the research questions of the study what are factors that affecting adoption of e learning in secondary schools. Sub-research questions 1) What are the learner's perspective in e learning at Chimbumu secondary school? 2) What is the teacher's perspective in the E learning at Chimbumu secondary school? 3) Why learners are adopting the use of E learning. 4) What challenges are encountered by schools when using e learning in secondary schools? The main informants were (20) learners, (10) from each of the two (2) schools, six teachers form 2 differences schools, three (3) teachers from each of the two schools. Thus, in total the number of informants was 26.

4.2 Response rate

Table 4-1 provides response rate on administered questionnaires from School Learners.

Table 4-1 response rate on administered questionnaires

Level of respondents	*Number of questionnaires administered*	*Number of questionnaires returned*	*Response rate*
Form four	10	8	80%
Form six	10	10	100%
Total	20	18	90%

The researcher administered twenty (20) questionnaires and the response rate was eighty percent (80%) for the participating form fours and 100% for participating form six learners. The average response was ninety percent (90%). It was found that the response rate was generally high because the instrument was hand delivered.

4.3 Biographical data of the Participants

This section presents the biographic information of the participants who were involved in the assessment of factors that affect the adoption of e learning in secondary school in Guruve district, Mashonaland central, Zimbabwe. The Biographical data presented included gender, age, attitude towards technology, academic and professional qualifications of the participants.

4.3.1 Gender and education level

The participants were evenly distributed amongst the form fours at fifty percent (50%) per gender group. The majority of participants amongst the form sixes were males at sixty percent (60%) followed by females lagging at forty percent (40%). It was also noted that the females in form four were more that the females at form six with a difference of 10%. In total the number of males was more than the females

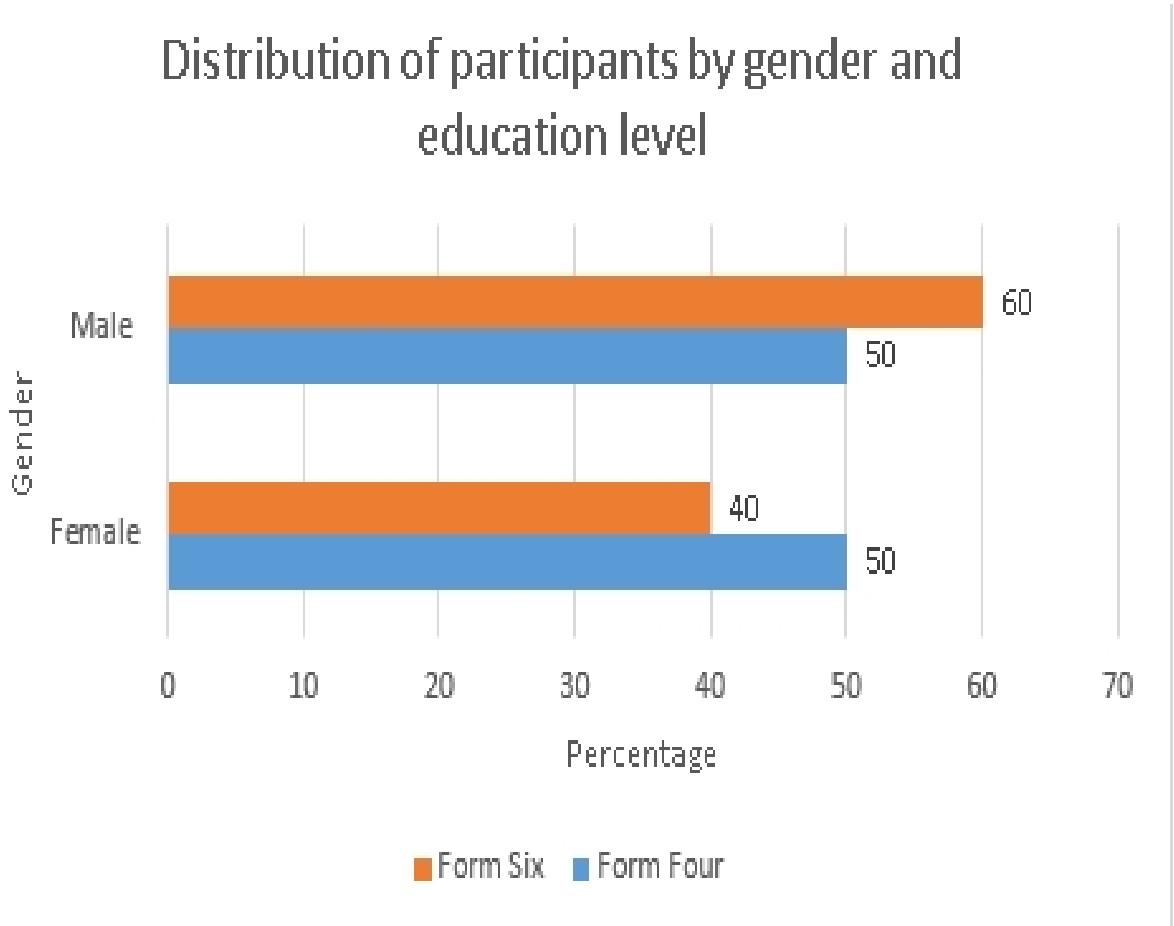

Figure 4-1 gender by education level of participants

4.3.2 Teacher Qualification(s) of respondents

A total of six (6) teachers were participated in the qualitative study through interviews. Table 4-2 shows the spread for their gender, and qualification and year the qualifications were attained.

Table 4-2 qualifications of teachers as respondents

Qualifications	Year obtained	Gender	
		Males	**Females**
Diploma in education	1988	1	0
Teaching degree	2015	1	
	2017		1
Non-teaching degree	2008		1
Degree with education diploma	2015	1	
Masters degree	2019		1

Table 4-2 shows that one of the sampled participants were holders of Master Degree in Education, one is a holder of Diploma in Education two were holders of teaching Degree in Education Honors, one is a holder of other qualifications not related to education, one was holders of degree with education diploma. To sum up on the findings of the informants' qualifications in relation to education, the highest qualification attained was a Master degree in Education Honors and the minimum qualification attained by sampled teachers was diploma in education. Evidence from the table above, professional participants sampled portrays that they were in tandem with what is required of a professional teacher. These were found to be qualifications that had to do with teaching and learning of science which may not have influence in the integration of technology in the classroom.

4.4 Technologies that the participants have

It was found that learners do have technology in one way or the other. Figure 4-2 shows that ten percent (10%) of the learners have desktop computers at home, thirty five-percent (35%) of the learners have smartphones/iPad in person and seventy-five percent (75%) have smartphones/iPad at home. Twenty –five percent (25) of the learners have laptops at home. It was found that thirty five-percent (35%) of the learners have radio in person owing to the fact that their smartphones have the radio app. Eighty percent (80%) of learners have radio at home. the learners acknowledge that they have television at home and this had a representation of seventy percent (70). The spread of possession of the technology is shown in Figure 4-2. It is unfortunate that the learners acknowledged the absence of technology in the school computer lab.

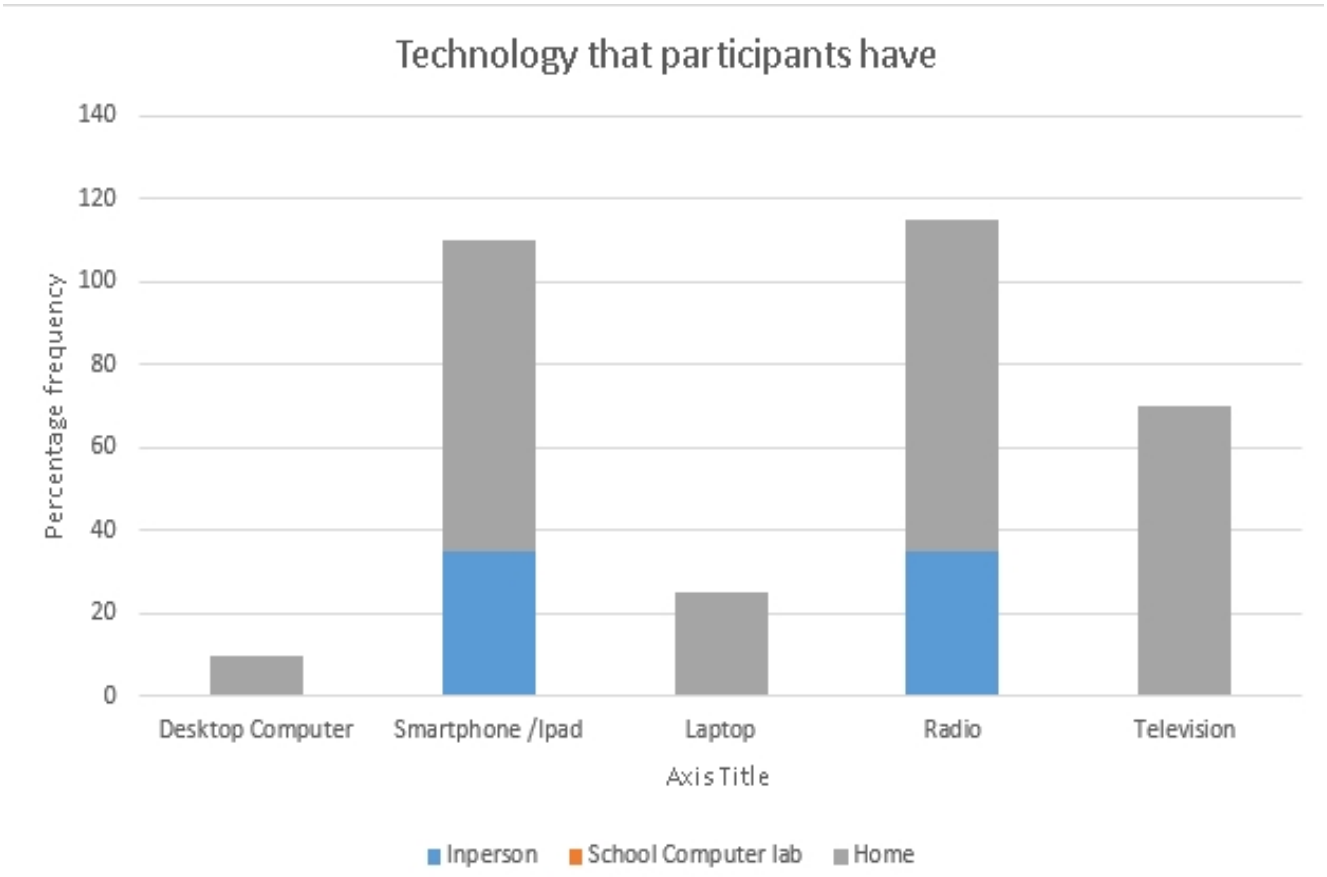

Figure 4-2 Technology that participants have

4.5 Ability to use a computer

It was found that eighty-seven percent (87%) of the learners were able to use the computers and thirteen percent (13) were not able to. However, learners acknowledged their willingness to learn to use the technology and also use it if integrated in the classroom. The detail is reflected in Figure 4-3.

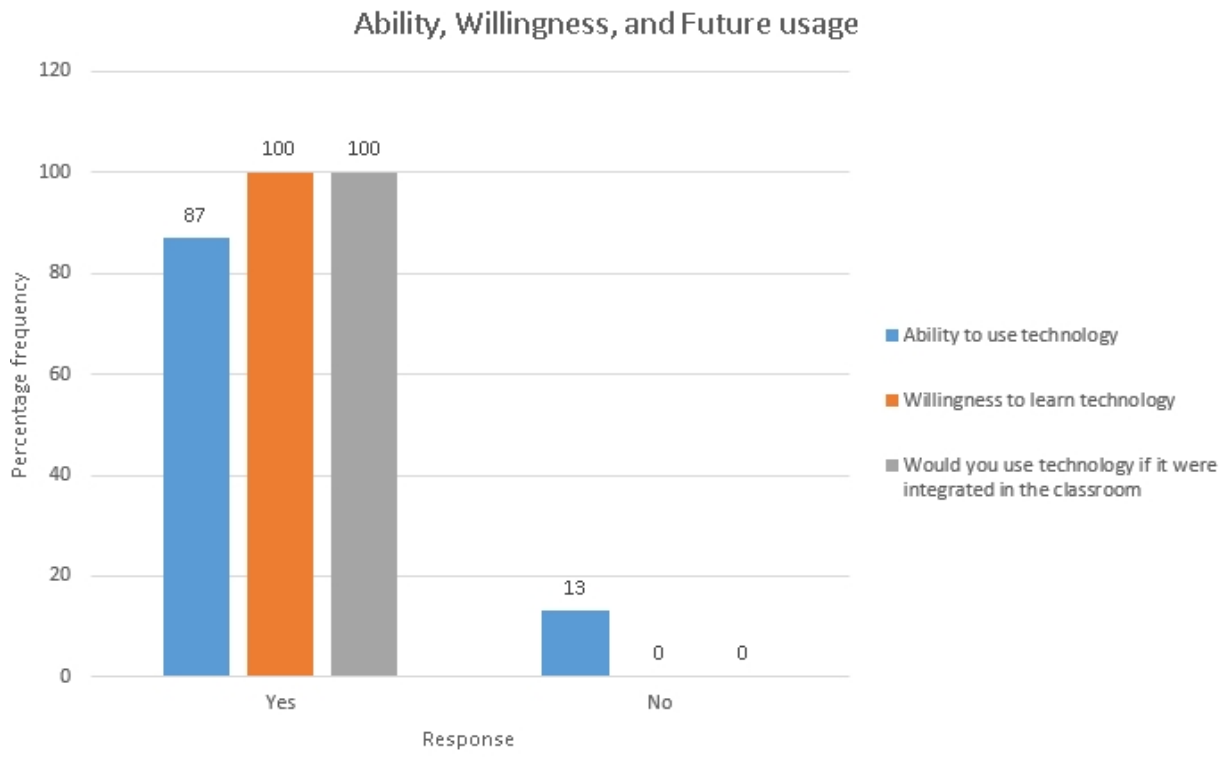

Figure 4-3 Ability and willingness to technology today and in future

4.6 Software used by learners

It was found that even though the learners did not have technology at school they were able to use their technological abilities in using software such as WhatsApp, TikTok, and Simulations. It was found that thirty-four (34) percent of the learners were already using TIK TOK and 48 percent were using WhatsApp. Thirty-five (35) percent of learners indicated that they have smart phones. However, sixty six percent (66) of learners indicated that they did not use TIK TOK and fifty- two percent (52) indicated they did not use WhatsApp and also 100 percent indicated that they do not use simulations. It can be inferred that it is owing to a not fully equipped computer lab as shown in figure 4-2. The responses were summarized in figure 4-4. Since there is no

computer lab, I t is not expected that learners would use educational tools. One cannot use what they are not aware of.

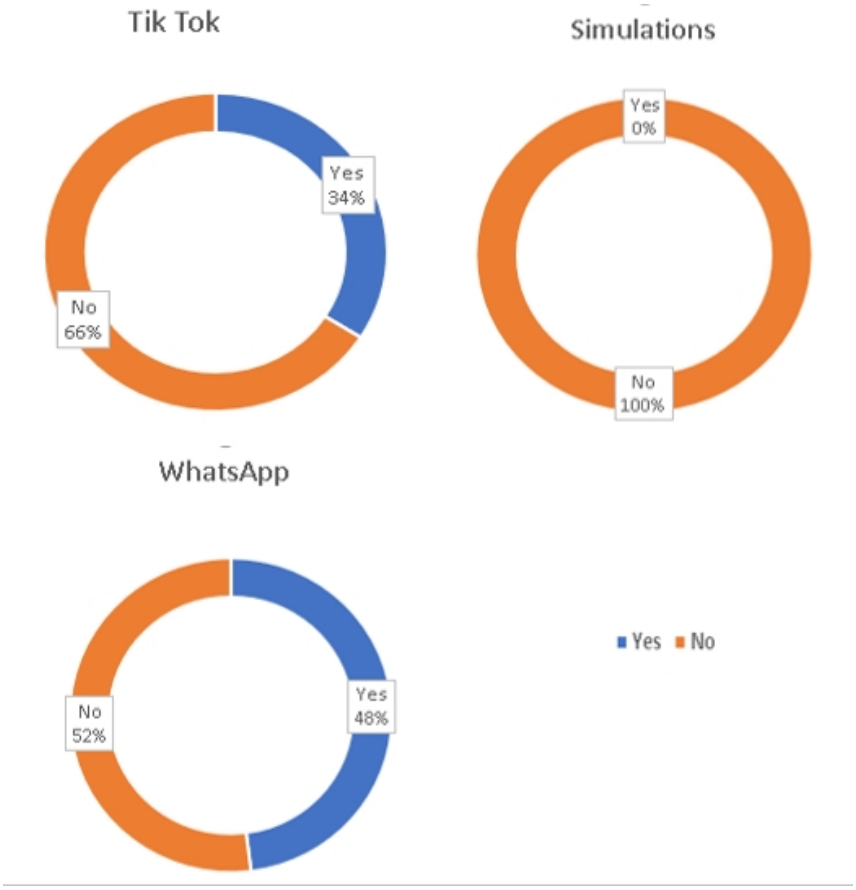

Figure 4-4 Software use by learners

4.7 Perception on use of ICT on lesson delivery

The statistics presented on Table 4-3 suggest that 66% of the informants cited those teachers use ICT tools during lessons through E learning in teaching, 34% indicated that they do not use e learning due to lack of knowledge on how to do on line lessons 6.1% highlighted that they use them for online group teaching**.**

Table 4-3 Teachers using ICT in lesson delivery

Responses	Teachers using ICT	Percentages
Yes	4	66%
No	2	34%

4.8 ICT uses by teachers

Evidence gathered through interviews from the sampled participants show that 66% of the participants indicated that they use E learning as very effective to enhance teaching and learning in secondary schools. Thirty-three (33%) are male teachers and other 33 % are females who teachers are using e learning during lessons. The other 34% are teachers who are not using any ICT tools because they believe that E learning is partially effective as compared to traditional methods in enhance teaching and learning and also it promotes laziness to some learners. This was also supported by information of new discoveries are obtained through the ICT tools in education. E learning tools expose learners to different sources of information mostly when one is using internet. It also arouses the desire for learners to learn new concepts each and every time.

One of the male teachers using E learning point out that, E learning is very effective, since we can now able to prepare PowerPoint presentations, notes, videos and audios that we can send to learners. This was very effective especially during the period of COVID 19. This was supported by a female teacher who is also using E learning for delivering the lessons. She said, it is very effective, it encourages learners to come to school and even master the concepts through watching the reality of processes for example in Biology when teaching about living organisms.

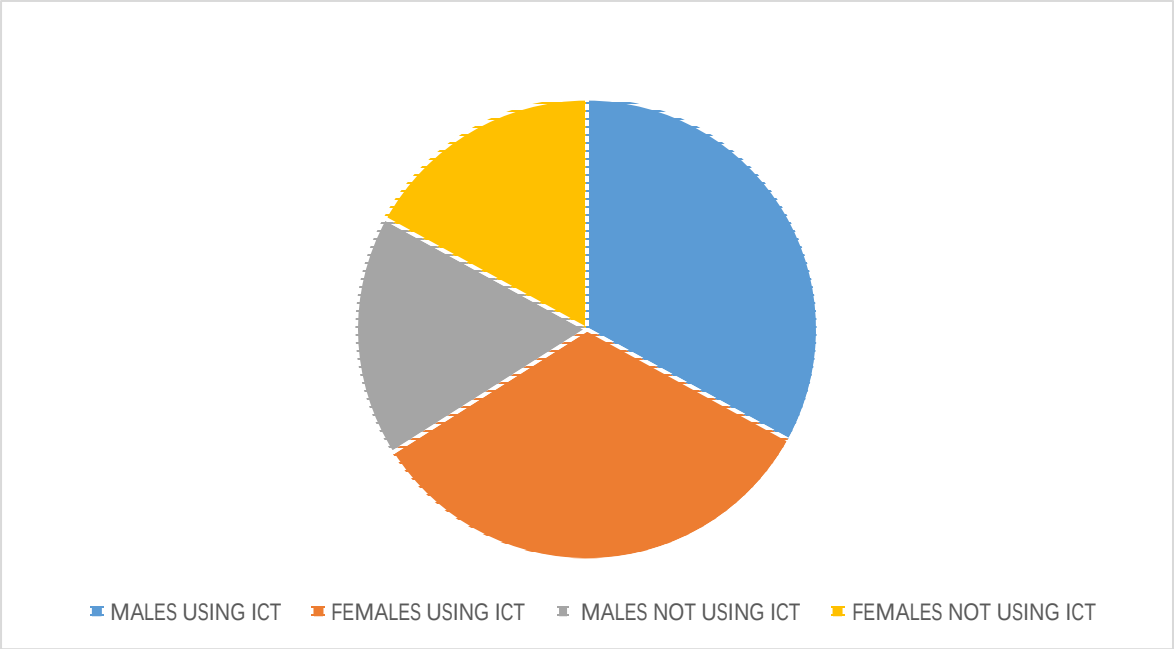

Figure 4-5 ICT used by teachers

4.9 Nature of ICT tools used by teachers

Table 4-4 ICT in Teachers used by teachers

ICT tools	Numbers of teachers
Smart phones	4
Lap top	2
Simulation soft ware	1
Social media	4
Radio	1
Television	2

The majority of teachers were found to be using smart phones and social media. On asking them about what they use social media for, they had this to say:

Interviewee 3: "*on social media, I normally use WhatsApp*."

When asked again on what they use WhatsApp for learning, the following was said:

> **Interviewee 3**: *"The use of WhatsApp platform helps me to easily accessible many of my learners at the same time. But the challenge is they use the platform when they are home, because they do not have the phones*"

The respondent's response corroborates with that of the learners that at school they do not have technology. However, the teacher is going out of his/her way to make sure the students use technology even when at home. By so doing the teacher is taking advantage that three parents have the smartphones thereby acknowledging that there is limited access to ICT by learners. The respondent attitude was so different from that of Interviewee 1 who had this to say:

> **Interviewee 1**: *"I do have the smart phone but I do not use it in the classroom because I do not know how to. I just use it with my friends and relatives. If someone teaches me I will be glad to use it.*"

Interviewee 1 shows that she lacks the skills to use ICT in the classroom even if he would have loved to. The respondent also points to the power of support to make eLearning a possibility in schools.

Thirty four percent (34%) of the participants acknowledged that they use TIK TOK for social media and this shows that they have knowledge about this. Sixty-six of the participants pointed out that they do not use TIK TOK. This shows that they don't have knowledge on how to use TIK TOK. Interestingly none of the participants admitted to use simulations. This resonates with claim by learners and teachers who indicated none usage of technology in classroom settings. Figure 4-4 also corroborates the stated finding.

4.6 CHALLENGES ENCOUNTERED BY SCHOOLS IN THE USE OF E LEARNING IN SECONDARY SCHOOLS

This study sought to establish challenges encountered by schools in the use of E learning. Sub questions were asked to give answers to the research question. The responses were put into different groups of five (5) categories that is limited ICT resources (LR), Incompetence of teachers (IC), Electricity (E), Poor infrastructure (PI) and Network Challenges (NC).

Indicates challenges that affect e learning which faced by the schools in using ICT tools in teaching and learning in secondary schools. Evidence indicates that most of the respondents identified limited resources as a major challenge that prevents schools to fully integrate E learning to enhance teaching and learning. Poor in infrastructure and also network have an effect. Apart from that, shortage of electricity in schools it's another challenge and incompetence of teachers is another challenge. These opinions were also highlighted by respondents from interviews conducted. These were statements pointed out by the teacher include:

> **Interviewee 5** "*There is need for continuous capacitation of teachers, need of increase of staff turnover towards the use of ICT tools, shortage of equipment like laptops and also the cost of bundles which is very expensive and the schools cannot afford to by bundles or Wi-Fi at school these are some challenges faced schools to use E learning in teaching and learning in school*".
>
> **Interviewee 6: "***Network challenges, lack of knowledge on how to use some ICT applications by the teacher. The use of a single laptop (Personal laptops for teachers) in a class of more than 40 learners is time consuming and the lesson takes more time than the originally planned for***".**

The responses from **Interviewee 5 and 6** show that the ICT tools are limited. The interviewees are mentioning the need for continuous capacitation of the teachers. This resonates with the fact that they cannot be able to use skills that they do not have. Hence they are calling for capacity development in the area of e-learning. The interviewees also point to the lack of infrastructure for use in the classrooms with the learners. Its inadequacy also affect their level of usage.

> **Interviewee 1**: "*The main challenge faced is that, ICT tools are very limited. This causes over crowded to few ICT tools and these few ICT tools are also to be shared among other subjects at schools. Which can cause us not to conduct some lessons without any use of ICT tools? Network is also a challenge. This was also supported by students stating that they are facing challenge of lack of ICT tools in school even at home and this affect the adoption of E learning*".

The ICT tools are limited and there is no plan on how the laptops and projectors can be used in the department which may lead to frustrated teachers.

In support interviewee four had this to say:

> **Interviewee 4**: "*... ICT tools are limited especially computers and most schools do not have Projectors. The quality of videos and pictures might be of poor quality due to too much light especially when using laptop in the Science laboratory*".

Also collated from the interviewees was that teachers were also complaining, stating that the new curriculum is complex and involves a myriad of new demands for all schools while the majority of institutions in Zimbabwe lack the requisite infrastructure and most teachers were not literally versed with newly introduced demands Sciences. For instance, integrated teachers are not capable of teaching some concepts in Biology, Physics and Chemistry effectively, which then compromise the results (Daily news Live 2017/01/22).

This was supported by Dr T Zhou during the meeting conducted by PTUZ on January 4, 2018, under the theme, Perspectives and Reflections on the New Curriculum. He stressed the need for Schools financial support either from the government, private business or parents in order to support E learning effectively (chronicle: 14. 2015). He also stressed that, some parents do not have money to pay for education of their children, hence need to support schools financial.

With the discussions above, it is worrying to note that schools have no resources to use on e-learning. Hence, if the school cannot provide for the learners the next question would be will the parents manage it with the current economic conditions where they are also struggling to provide for their children's needs and educational necessities.

4.10 Chapter Summary

The chapter presented the data collected from the study participants and respondents. Descriptive statistics were used to present the analysis of the quantitative data and verbatim quotes were used to present the qualitative data. The chapter paved way to the next chapter where discussion and interpretation of the data would be done.

5 CHAPTER FIVE: Discussion, conclusions and recommendations

5.1 Introduction

The chapter gives the summary of the study in relation to the fulfillment of the set objectives and research questions presented earlier in chapter one of the document. A case Study of two Secondary Schools in Guruve District of Mashonaland Central Province was considered. Findings, conclusions and recommendations are presented in the chapter. Recommendations are given for further studies on related research area.

5.1 Discussion and Findings

The section identifies the main findings as inferred from the subsequent chapter. It was found that factors that affect adoption of e-learning in secondary schools included the following: Support, e-literacy skills, availability of technological resources. These are discussed in more detail in the succeeding sections.

5.1.1 Support

From the data analysis it was found that technical support is needed for technology adoption in the classroom to be possible. Where learners have challenges, the technical support could be offered by the technical staff. This support can also be given at different levels as follows:

i. Teacher level-: Teacher immediacy is pertinent when it comes to provision of possible solutions or trouble shooting the problems. By so doing the learner tends to have that sense of belonging in the classroom or learning community

ii. School level: Technology resources such as computers, iPads, provision of internet access amongst other resources needs to provide for its learners and staff to make a conducive e-learning and exciting environment.

iii. Parents /guardian level: whereas some resources could be provided at school level, parents and guardians need to support the learners by providing mobile technology that can be used on the go, anytime, everywhere in addition to the computer laboratory bound gadgets.

5.1.2 e- Literacy skills

Technology adoption in the classroom is a new phenomenon in the digital era in the education sector. On analyzing the data, both the learners and teachers alluded to that for one to adopt technology there is need to have technological skills to manipulate and navigate. These skills are equally important for both the teachers and the learners alike. Where there is lack of such skills, exposure is a requirement and it can be done through workshops, hands on training, and or demonstrations.

5.1.3 Availability of technological resources and infrastructure

The study found that one cannot use what they do not have. It is therefore a necessity and a driver that the necessary technology be availed to arouse that curiosity in learning it. Even if one has a skill but the availability of the technology resources is important for continued use and further enhancement of the digital skill. Of course, sharing can happen amongst individuals but for effective usage, one needs technology that is readily available when needed. The finding echoes the finding by Paterson (2015).

5.1.4 Resistance to Change

It was found that whilst there is no technology infrastructure in schools, some teachers and learners are putting effort to learn the technology with the little resources they have, but some are resistant that they cannot even use TIK TOK nor WhatsApp platforms. Hargreaves and Fullan (2012) agreed by saying that whenever something new is introduced, resistance to new information or approach is inevitable. The same applies with the introduction of new learning and a replacement of the traditional teaching and learning approaches.

5.1.5 Motivation towards technology

The current crop of learner population is digital natives who were born and bred in technology. In this vein, it can be said that their motivation in default and intrinsic. They learn or operate better and efficiently with technology. Not having technology in person is one thing but their wishes if they were to be granted, everything would be technologically controlled. They prefer easy life.

5.1.6 Previous experience with technology

This is in relation to elite racy skills. If the learner or teacher has technology experience, it is easier to learn to use other similar or related technologies without fear, hesitation or having to be taught from scratch. If there will anything to learn, that would be the new things inexperienced before. For example, if one used to watch TikTok videos then watching a video on titration would not mean that the learner must be taught how to use technology and the titration content. The technology content will have been addressed by experience.

5.2 Conclusions

The aim of the study was to find out factors that affect e learning adoption in secondary school. The findings of the qualitative pointed on the need of the following alleviate challenges faced by teachers in their endeavor to adopt technology use in schools:

i. improvement of infrastructure,
ii. availability of ICT tools,
iii. teacher capacitation,
iv. Government donations and involvement of parents in ensuring that learners have the much-needed ICT tools.

The findings of the quantitative study somehow agree with the qualitative study findings on the need of the following for ICT adoption in schools to be possible:

i. Support
ii. e- Literacy skills
iii. Availability of technological resources and infrastructure
iv. Resistance to Change
v. Motivation towards technology
vi. Previous experience with technology

The study revealed that if all these factors are in place e-learning will be adopted in each and every school across the country and better results will be obtained. This can only be achieved when teachers are capacitated with knowledge, skills and tools as revealed by the qualitative study participants. Whilst the use of e learning when conducting lessons works as a pedagogical

instrument which prepare learners to fit in the developing world of technology it is a necessity that the teachers and learners be equipped with the digital literacy they need to survive the e-learning platforms.

Generalisation of results may only apply to those school that share the same conditions as the schools used in the study. However, the factors raised in this study can be said to be the determinants of any other school. It was found that support is critical for both the learners and teachers alike. Technology is the driver for ICT adoption so it is a must if teachers/ schools are to adopt technology in their schools.

5.3 RECOMMENDATIONS

Due to the findings and conclusions made in this study, the following recommendations were made: School administrators should ensure that teachers and learners are connected to the Internet for them to get information for effective teaching and learning. This is very important nowadays as learners can research easily from the Internet by themselves. Having Internet helps to reduce costs of buying text books as books are replaced with electronic books found on the Internet and learners will have access to different books. Through government intervention, staff development programs should be conducted on how to use ICT tools as well as how to do online learning. Some teachers, especially those who joined the service long back are unable to use ICT tools and some still have no interest in trying to do online lessons. Parents should support their children with the provision of ICT tools for example tablets or cell phones for them to use when doing online learning. Teachers and parents should join hands to monitor the learners on the use of internet so that learners remain guided so that they will not end up abusing the internet.

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APPENDIX

QUESTIONNAIRE FOR LEARNERS

Instructions

a) Please respond to all questions
b) Respond by ticking the applicable in questions where responses are provided and briefly explain where spaces are provided.
c) They are no right or wrong answers, hence, please give the response that is closest to your opinion
d) Please note that all your responses will be treated with strict confidence and the study will be used for academic purposes only

1. FORM: FORM 1 F3 F4 F6

2. In your own words, what is meant by e learning? …………………………………………………………………………………………… ……………………………………………………………………………………………

3. Does the school have a computer laboratory? YES NO

4. Are you allowed to use ICT tools at schools YES NO

   If yes, what kind of ICT tools do you use at school? ,, …………………………………………………………………………………………..

5. Are you able and willing to use a computer YES NO

6. Would you use technology if it were integrated in the classroom? YES NO

7. Do teachers use ICT in the learning process? YES NO
   If yes, what kind of ICTs tool do they use? …………………………………………………………………………………………… ……………………………………………………………………………………………

8. What benefits can be derived from using ICT in e learning?.....
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9. What challenges are learners facing in using ICT in the learning process?
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10. What measures can be employed to allow the ethical use ICT tool at school?.....
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INTERVIEW GUIDE FOR TEACHERS

Instructions

a) Please respond to all questions
b) There are no right or wrong answers, hence, please give the response that is closest to your opinion.
c) Please note that all your responses will be treated with strict confidence and the study will be used for academic purposes only

1. In your understanding, what does E learning incorporate?

2. Does the school offer any ICT tools to support your lesson delivery?

3. Do you use ICT in conducting lessons?

4. What kind of ICT tools do you use in lesson delivery?

5. What are the benefits of using ICT in discharging lessons?

6. Do you face any challenges in using ICT during the learning process?

7. What can be done to improve use of ICT in lesson delivery?