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# Midlands State University



**FACULTY OF EDUCATION**

**DEPARTMENT OF APPLIED EDUCATION**

AN ASSESSMENT OF THE EFFECTIVENESS OF ELECTRONIC MEDIA INTO  
TEACHING AND LEARNING IN SECONDARY SCHOOLS OF GOKWE SOUTH  
DISTRICT IN MIDLANDS PROVINCE

By

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**MIDLANDS STATE UNIVERSITY**  
**FACULTY OF EDUCATION**  
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**APPROVAL FORM**

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

For acceptance a research project entitled:

**AN EVALUATION OF THE EFFECTIVENESS OF ELECTRONIC MEDIA INTO  
TEACHING AND LEARNING IN SECONDARY SCHOOLS OF GOKWE SOUTH  
DISTRICT IN MIDLANDS PROVINCE.**

A research project submitted to the Department of Applied Education

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In partial fulfillment of the Post Graduate Diploma in Education

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## **ABSTRACT**

The purpose of this study was to evaluate the effectiveness of electronic media in teaching and learning. The study was carried out in Gokwe South District in Midlands Province. The population of this study consisted of two secondary schools in Gokwe South District. These two secondary school were chosen through purposive sampling technique. The sample comprises of 35 teachers from two schools. The researcher also uses purposive sampling to interview the school heads, school depute heads and the IT Administrators. The researcher uses qualitative research design which enables the researcher to use questionnaires, interviews and observation in gathering data. Qualitative research also enables the researcher to identify the relationship between electronic media and students' performance. The study helps the researcher to explore the types of electronic media devices available in the schools as well as the usage rate of electronic media tools by the teachers. The study establishes that the level of electronic media usage in teaching and learning was still very low in many schools. The study also helps the researcher to identify the challenges faced by schools to employ electronic media technology at full capacity and the major challenges were power supply, shortage of electronic media devices, lack of funds to buy electronic media devices and lack of technical support. Other challenges found in this research were lack of time, poor infrastructure and lack of technical support. In light of this findings the researcher therefore recommend the use of electricity substitutes such as generators and solar power, in service training on how to use electronic media devices and to seek assistance from the government and nongovernmental organizations.

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## **DEDICATION**

This project is a special dedication to my dearest brother Dr. Denboy Gandanhamo for the financial assistance to ensure that my studies went on successfully.

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## **CHAPTER ONE**

### **1.0 Introduction**

This research sought to assess the effectiveness of electronic media technology into teaching and learning in secondary school. The focus of this chapter is also to covers the background of the study which serves to reveal and justify the need to carry out the study, highlight the statement of the problem, research objectives, and significance of the study, assumptions, delimitations and limitations of the study.

### **1.1 Background of the study**

Ruis (2009) highlights that the learning materials used in education consists of instructional media such electronic media and non electronic media. Ruis adds that in the past education was done using traditional methods of teaching such as non electronic media like the chalk board and the teaching methods which were teacher centered. A study carried out by Waluyo and Ruis (2009) about how to improve the quality of teaching using electronic media shows that the major problem in the classroom is that most of the learners are not interested in learning when teachers using traditional methods of learning such as the chalkboard. The scholars found that in order to make learning more interesting and motivational teachers should use electronic media technology such as power point presentation, computers, radios and television in their teaching process and the class will be more meaningful and enjoyable.

The Millenium Development Goal set by the United Nation (2000) specify that the significance of ICT such as computers, projectors, television and radios is the Global Development Agenda and their main aim was to ensure that the benefits of technology especially ICT are accessible to

all countries. The World Summit on the Information Society (2003) highlighted that the education sector plays an important role in the society through knowledge production but there is need to ensure that all teachers and learners are part and parcel of this global technological trend. Zimbabwe as a developing nation should be part and parcel of this trend by integrating the use of electronic media technology into its education. There is evidence on the ground which shows that Zimbabwe is not part and parcel of this global technology especially schools in Gokwe District.

It is through the consciousness that some schools in Zimbabwe especially in Gokwe District are trying by all means to exploit the opportunities of benefiting from electronic media technology in education. Most of the schools in Zimbabwe are informed by globalization trend and understanding that electronic media technology is an important key driver for improving pupils' performance through enhancing production of information and knowledge. The use of electronic media technology by a teacher can increase motivation and learning of the student in education. Kabanda (2012) also added that the greater use of electronic media technology in classroom can promote the acceleration of economic and social development and greater inclusion of isolated rural population into the society.

Kachembere (2011) observes that many students and teachers are failing to get better quality education due to lack of electronic media technology in schools. He added that in Zimbabwe, electronic media technology is not a well-known occurrence, particularly considering rural schools were most schools are not connected to electrical power supply and were most schools do not have computer labs. This causes Zimbabwe to remain at the bottom ten of ICT Network Readiness index (Reddi. 2004). Gokwe South District is a rural area with many schools not using electronic media technology. This means education has largely continued to be done in

traditional way. The Zimbabwean Newspaper on 3 September (2014) shows that the British company of Computer Aid International in conjunction with UNESCO has set up a \$26000 solar power system in secondary schools in Zimbabwe to facilitate the use of electronic media and computers in schools. But however most of the solar systems are not effective and they are affected by cloud cover during the rainy season. Innocent Chademana (2014) also said that government has donated electronic media equipments and computers in school around the country but most of the projectors and computers are remain idle because of lack of electricity and computer teachers.

The Herald 3 September (2012) a local government owned daily newspaper reports that even though many schools receive computers and projectors from the government, electricity supply has been a major problem in Zimbabwe and is seen to still getting worse. The paper added that this situation affects not only rural schools but urban schools as well. Newsday Newspaper (2014) reports that most rural school in Zimbabwe lack basic infrastructure and several computers and projectors donated by the President as part of his *Rural Computerization Programme* have either been stolen or remain unused due to absence of electricity or lack of computer knowledge by the teachers. This paper further report that electronic technology and computers should be implemented in schools because it helps to bridge the gap between theory and practice hence bridging the digital divide,

Taking a wide view beyond the electronic media technology, Bukaliya and Mubika (2011) highlighted that costs of using electronic media technology have been recognized to be high so a lot of some schools cannot meet the expenses of making requirements for the teaching and learning using instructional electronic media technology. Seidmamen (1996) also conducted a research into issues surrounding teacher training and its relationship with the successful

implementation of electronic media technology. He found that most of the teachers in schools lack computer training. This is same applies with most schools in Gokwe South District. Most of the schools found it difficult to buy electronic media materials because students in rural areas do not paying school fees and they also found it difficult to attract qualified computer teachers because of the remoteness of the areas. He further added that most of schools in Zimbabwe are reluctant to use electronic material technology even if it is available and the administration also reluctant to consider the implementation of electronic media which involves computers in teaching and learning.

## **1.2 Statement of the problem**

As highlighted in the afore-mentioned newspaper articles and other researches carried out on the subject, it is arguably clear that most schools in impoverished Third World countries are not effectively using electronic media technology as handy tools for teaching and learning. This is true with schools in Zimbabwe especially schools in Gokwe South District as evidenced by the researcher who has taught in at least three schools within the District. It is this knowledge gap and key research fundamental that a study perhaps ought to be carried out. It is therefore perhaps necessary to perform an assessment of the current state of affair to identify if the teachers are utilizing electronic media technology in teaching and learning. This study is thus carried out to evaluate the effectiveness of electronic media in teaching and learning for the good of learners.

## **1.3 Research questions**

- What are the electronic media technological devices available used for teaching and learning?
- What are the benefits of using electronic media technology in teaching and learning

- What challenges are uncouneted by schools in using electronic media technology in teaching and learning
- How are these challenges faced by schools in adopting electronic media technology in secondary schools could be addressed.

#### **1.4 Significance of the study**

The study sought to benefit teachers to integrate electronic media in their lessons, since it will benefit these teachers to deliver their lessons effectively. It will also benefit teachers by motivating the learners since electronic media enables teachers to use electronic media tools like the overhead projectors and power point projectors, computers and radios that can motivate the learners and reduce the pressure from the teachers. Furthermore, the use of electronic media will benefit the learners as they will be able to bridge the gap between theory and practice. This research will also benefit the policy makers in education sector as a base for planning purposes in the Ministry of Primary and Secondary Education.

#### **1.5 Delimitation of the study**

The researcher will look at the effectiveness of electronic media technology in teaching and learning in Gokwe South District. The research shall take place in two schools in Gokwe South District where the researcher is currently teaching since 2014. The researcher has got deep understanding of the activities of this District. The literature review shall look at the effectiveness of electronic media technology in teaching and learning. The study covered the period from May 2015 to November 2015.

## **1.6 Limitations of the study**

The respondents may not be easily reached because most of the teachers prepare for final examinations in the third term. Some schools may not release other information which they think is confidential and private. The research time frame will be short because the researcher is a full time student. Most of schools in Gokwe are scattered and this will made travelling very expensive. The results of this research may as well have been exaggerated by Hawthorne effect because respondents can change their behavior in order to suit what they thought were the researcher's expectations.

## **1.7 Research Assumptions**

It is the assumption by the researcher that some other unmanageable factors that affect learning style will remain constant. The sample shall symbolize a true sample of the all schools in Zimbabwe. The respondents shall provide true information throughout the study. The study shall be descriptive and explanatory in order to describe and explain the relationship between the variables.

## **1.8 Definition of key terms**

**Electronic Media-** is learning through electronic means such as via the internet or other multimedia materials like computer, television, audio and audio visual cassette, radio disc.

**Information Communication Technology-** ICT (information and communications technology - or technologies) is an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning

**Technology-** The purposeful application of information in the design, production, and utilization of goods and services, and in the organization of human activities.

**Computers** – A computer is an electronic device that manipulates information, or data. It has the ability to store, retrieve, and process data.

### **1.9 Chapter Summary**

The chapter covered the background of the study, statement of the problem, research objectives, and statements of hypothesis, significance of the study, research assumptions, delimitations and limitations of the study. Key terms used in the context of this study were defined by the researcher. The next chapter will present literature review patterning to electronic media.



## CHAPTER TWO

### LITERATURE REVIEW

#### **2.1 Introduction**

The thrust of this chapter is to review literature related to the effectiveness of electronic media technology in teaching and learning. The chapter focuses on the electronic media tools used in teaching and learning, the challenges faced in adopting and implementing electronic media education system. Also to be discussed is the benefits of using electronic media in teaching and key strategies that can be used to improve the utilization of electronic media in teaching and learning.

#### **2.2 Trends in using electronic media technology in teaching and learning**

Information and communication technology such as electronic media has becoming the major part of most institutes and business in the world. David (2001) highlighted that the electronic media development adaptable, ranging from the roll out of telecommunications infrastructure providing voices, data and media services information functions modified to specific sector and applications. Capper (1998) shows that technological development in electronic media is rapid and also become absolute requiring new skills and knowledge to be adopted regularly. Adaptation is only possible when based on a sound understanding of the concept of electronic media tools such as computers. The scholars added that keeping in pace with the technological development and the changing competencies required for both the students and their teachers which is shifting from traditional learning to electronic media technology based learning.

Russell (1999) added that ICT tools such as electronic media have the potential to raise access to and improving the importance and quality of education. Moreover Russell cited that electronic

media technology such multimedia computers, televisions, video televisions and software's that combines text, sounds and colorful moving images can be used to provide challenging and real content that will engage the students in the learning process and also provide the opportunities to connect with real people and to participate in the real world events. Moreover Dewas (2001) shows that, new technology has the potential to support education across the curriculum and provide opportunities for effective communication between the teachers and students in a way that have not been possible before. The researcher noted that use of electronic media technology such as computers, television, power point projectors and overheads projectors in teaching and learning has the potential in bringing about the changes in ways of teaching.

## **2.3 Electronic media devices used for teaching and learning.**

### **2.3.1 The use of television in teaching and learning**

A study carried out by Berkowitz (1974) indicated that the exposure to television during the learning may increase the likelihood of viewers to let go of the constraints on their action and to display such behavior. The theorist added that television learning influences the acquisition of novelty behaviors but also may have effect on whether or not already acquired behavior patterns will be performed. Another research carried by Gross, Morgan and Signorelli (2000) on the impact of television on pupils' attitude shows that, television learning has an impact on pupils' attitude, beliefs and values. The scholars added that the more television learning programs a person watches, the more him or her likely to accept the premises and facts of television reality as if they were facts of the world everyday reality. Gerbner (2001) added that the more the television learning programs pupils watches the more they will be affected.

According to Brynt, Alexander and Brown (2003) television is rich both factual and fictional information in learning. They also further added that television as an electronic media designed to convey information has an effect on pupil's knowledge base. Salomon (1979) explains that there are varieties of way in which a television can influence cognitive skills which are both in terms of its content and in its formal features. Furthermore Brown (1986) has added that television learning practices as an electronic media may provide viewers with a rich storehouse of visual images that they may recall again when engaged in imaginary thoughts. A study carried out by Ball and Bogatz (1973) reported that television learning has an impact on literacy skills because in their study they found that Infinity Factory programs have been shown to increase the problem solving skills performance.

Kinross (2002) shows that the television learning has an important role in communication process of distance education and has proved to be effective media of learning not only for informal education but also for formal and non formal education. In addition Thompson and Hancock (2009) reported that television play a role to deliver lessons to distance learners who has no regular interaction with a formal teacher in preparation of assessment. Moreover a study carried out by Kunucen and Oztark (2003) have recommended the use of electronic media such as television in teaching and learning.

### **2.3.2 Computers in teaching and learning**

Dornyei (1998) highlighted that computers increases motivation to learners. In addition Blake (2008) agreed that the use of electronic media technology such as computers if used wisely and creatively can play a very important role in achieving educational objectives. The scholars added that if teachers and learners cooperate and uses this technology wisely, it can play a significant role in achieving the aims and objectives of teaching and learning of languages specifically

foreign language. Rost (2002) indicated that the current computer technology has many advantages for second language learning. Furthermore Rost added that computer and its attached language learning programs could provide second language learners more independence from classroom and allowing learners the option to work on their learning material at any time of the day. furthermore Lee (2000) further declared that the reasons why we should apply computer electronic media technology in second language instruction, include computer and its attached language learning programs can (a) prove practices for students through the experiential learning, (b) offer students learning motivation, (c) enhance student achievement, (d) increase authentic materials for study, (e) encourage greater interaction between teachers and students and students and peers, (f) emphasize the individual needs, (g) regard independence from a single source of information, and (h) enlarge global understanding.

### **2.3.3 The uses of power point presentation in teaching and learning**

Savoy, Proctor & Salvendy, (2009) define PowerPoint as a software program that has become a basic means of delivering presentations in both lecture halls and educational centers. The scholars added that every day more than twenty million presentations and lessons are delivered with PowerPoint.

A study carried out by Szabo and Hastings (2000) indicated that more than 90% of students in the world said that power point projector presentation brings more attention in detain than the traditional way of education and 85% of students from another school also commented that power point presented lessons are more effective than the traditional way of education. This shows that power point presentations are more effective traditional lessons. A research conducted Bryant and Hunton (2000) about the effectiveness of Power Point presentation on

education shows that level of understanding increase at an increasing rate when the teacher uses electronic media technology.

Mason and Hlynka (2008) state that projectors helps students to structure the content and processing of a lesson. Bultler and Mautz (2006) found that multimedia presentations such as projected presentation improve short term memory of the students who prefer an imagery appearance. The researchers added that since power point present visual information, there is an improvement for those students who prefer an imagery presentation. Nowaczyk et al (1998) carry out a research by assessing semester long students' perception of multimedia in an introductory behavior statistics and they reported that media technology such power point projectors made the class presentation and discussion more interesting. Butler and Mautz (2006) also added that students in the multimedia group viewed the multimedia presentation more favorable compared to researchers in the traditional presentation group. Another research carried out by Bushong (2008) on weather power point presentation promotes the favorable attitudes towards in learning shows that power point presentation causes learners to change their attitude and behavior. Harrison (2000) also added that power point presentation motivates students to learn and has positive influence on student's performance.

This study findings occur with what Oliver (2000) says that teachers claim that they have inadequate time to prepare for and integrate electronic media in the school curriculum. A working solution as suggested by a majority of teachers is to increase the number of machines especially the electronic media. This will ensure as many slots in the timetable for the literacy classes as well as for teaching and learning.

## **2.4 Benefits of using electronic media in teaching and learning**

Yusuf (2005) highlighted that electronic media technology enhances teaching and learning process. Yusuf further explain that the uses of electronic media technology have the potential to accelerate and deepen skills, to motivate and engage students to help to relate school experience to work practices create economic viability for future workforce. In addition Lamke and Coughlin cited in Yusuf (2001) indicated that due to changes in the world, basic education is essential for an individual to be able to access and apply the information and technology in every situation. Moreover Oliver (2001) further explains that the implementation of electronic media technology can help to refresh teachers and students. The scholar added that electronic media technology can help to improve and develop the quality of education by providing curriculum support in difficult subject area. Another contribution was made by Berge and Barron (1998) who explain that the learning approach using electronic media tools provide many opportunities for constructivism learning through their provision and support for resource based centered and students' center approach. Basing on the above contributions made by the scholars above the researcher noted some essential contributions because all the scholars highlighted that the use of electronic media technology can improve the quality of education delivered to students.

Young (2002) highlighted that electronic media technology increases the flexibility of delivery of education so that learners are in a position to access knowledge anytime and from any ware. The scholars added that electronic media technology can enhance the quality of education and able to access education effectively. Moreover Moore added that the uses of audio and visual electronic media benefited the students with special needs during the lesson because it removes the constraints faced with students with special needs. Young also added that the adoption of electronic media technology in teaching can also allow the academic institutions to reach the

disadvantaged group and international markets. In Addition an Indian scholar McGorry (2002) pointed that electronic media technology has the potential to remove barriers that are causing poor pass rate in education in any country.

New Media Consortum (2007) shows that electronic media technology has the potential to enhance learning environment. This paper added that it enhances the learning environment because a student is in a position to increases volume of information from the variety of sources. When looking at the current general dissemination and use of electronic media in the modern society especially by the young generation it is clear that the electronic media technology can enhance the learning process completely today and in future.

Reeves and Jonason (2006) highlighted that electronic media technology enhancing learning motivation in teaching and learning in schools. Furthermore the scholars added that electronic media also improves the quality of education delivered to the students in severe ways by increase learners motivation and engagement by facilitating the acquisition of basic skills and by enhancing teachers training. In addition Valasidou and Bousion (2005) highlighted that the use of electronic media technology in teaching in learning enhancing the scholastic performance. Another contribution was made by Atwell and Battle (2009) who evaluate the relationship between having electronic media technology at home such as computers and schools performance, their findings shows that students who have access to computers at home shows a better performance in reading and in Mathematics.

Goldman and Syer (2001) highlighted that the use of electronic media technology into teaching and learning allows the teachers to model learning strategies and allow students to deal with concepts in different ways using different approaches. In addition the scholars added that the use

of electronic media technology facilitate deep investigation and integration of information, better level of thinking and it allows students to design , explore experiment , access information and deal with complex tasks. Johnston and Cooley (2001) found that the use of electronic media technology built a strong knowledge base for the students. In addition Etner and Ross (2001) found that the use of electronic media technology promote the construction of new knowledge. Furthermore Norton and Cooper (2001) conclude that the use of electronic media enables the teachers to become facilitators and promote child centered learning style.

Haggins and Moseley (2001) highlighted that the uses of electronic media technology during the lesson motivate students and offer a different mode of presentation. However Grey (2001) further highlighted that the successful adoption of electronic media by teachers in the classroom depends on the type of administration the school have. Sten (2001) commented that teachers must see how technology fits within their localized classroom setting. In addition Sithole agreed with the suggestion made by Haggins and Moseley which shows that electronic media technology has the powerful potential to motivate and engage students in learning. Sithole also added that the use of electronic media technology can enhancing existing teaching and learning tools in the classroom in order to facilitate the development of electronic media tools related competencies.

The use of electronic media, with internet, is effective not only for teaching and learning foreign language like English but also for testing and assessment purpose. The use of electronic media, to assess and test learners, ensures correct assessment of their language ability. Many scholars like Chapelle, and Douglas (2006); Dandonoli (1989); and Stansfield (1990), have advocated this use of electronic media technology in the field of foreign language assessment and testing. There



are many useful websites which provide language learners with many online tests. English as a foreign language learner can visit them and assess.

Motivation is one of the key factors that influences the rate and success of foreign language learning cited by Dornyei (1998). Motivation provides the primary impetus to initiate EFL learning and later remains the driving force that sustains this long and often tedious learning process (Dornyei, 1998). He added that many EFL luminaries and pedagogues agree that the use of electronic media technology in EFL instruction provides situations that motivate learners to learn. In addition he also cited that the use of electronic media technology, along with internet, helps in motivating EFL learners to learn through authentic, challenging tasks that are interdisciplinary in nature and such use also encourages EFL learners' active involvement with the target language and content in a real, authentic situation.

Fajola (2001) asserts that electronic media is diligent and consistent in its mode of operation, as it does not suffer from tiredness or lack of concentration like human beings. Fajola added that, electronic media performs multi-functional roles in teaching and learning processes at all levels. At the primary and secondary levels of education students can explore and generate learning through electronic media programme. At the tertiary level, electronic media can be used to store the daily or weekly observation of experiments in science. It can be used to mix colour, separate colours, scan, and draw, design various things and create charts and graphs for instructional purposes (Ajibade, 2006). According to Adekomi (2001), information can be stored in manual files in the electronic media magnetic disc and retrieved when needed. It provides reliable instruction from learner to learner regardless of the teacher/learner at any time of the day and location. In the study carried out by Cramer and Smith (2002) on the impact of electronic media such as power point projectors in teaching and learning shows that electronic media technology

has a positive impact on learning. In their experiment a posttest design was done with a sample of 138 students used. 88 students were in an experiment group and 51 were in the control group. At the end of an experiment, there was evidence which shows that electronic media has a positive impact on teaching and learning which was obtained because the experiment group performs better than the control group. Furthermore another experimental study was carried out by Fan Orey (2001) to evaluate the constructivist uses of multimedia technology such as computers to improve students' performance. They organized a control group, pre and post writing sample. Their findings agreed with the findings obtained by Cramer and Smith which shows that the use of multimedia electronic media technology has a positive impact on students' writing performance.

A study carried out by Veen and Jacob (2005) about the relationship between electronic media technology with students' performance in mathematics shows that students who use computers during the lesson for several years mostly perform better than students who do not use computers. The scholars further explain that students who access electronic media tools at home such as computers and mobile phones tend to perform better than students who come from a poor background. Moreover the ELNORD (2006) also further added that pupils who use electronic media tools at home to communicate with their classmates can give or receive help when doing their homeworks. The ELNORD added that the analysis of perceptions by headmasters, teachers, pupils and parents also shows that electronic media technology has an impact and benefits on students' performance. This paper also added that electronic media technology is seen as positive by teachers as a valuable tool for tailoring learning with beneficial effects on both academically strong and academically weak pupils. However the researcher noted some difference between these scholars because Veen and Jacob

only concentrate on the relationship between electronic media technology and learners' performance but the ELNORD put more emphasis on having electronic media tools at home. However the researcher is not agreed with point made the ELNORD because most of the students in rural areas of Zimbabwe do not access electronic media tools at home.

## **2.5 Problems faced by schools in adopting electronic media in teaching and learning**

An evaluation on the challenges affects the implementation of electronic media into teaching and learning carried out by Manyati (2006), itemized a number of constraints and challenges on the integration of electronic media into Zimbabwe's teacher education curriculum. These constraints include the following among others:

- (1) Lack of skills in end users on using electronic media tools.
- (2) No defined training plan for end users;
- (3) Inefficient infrastructure affecting the proper electronic media tools maintenance and assistance to end users;
- (4) Inadequate financial resources to procure the required electronic hardware and software in sufficient quantities to meet institutional needs;
- (5) Poor electricity supply

In addition Ginsberg and McCormack (2008) carry out a survey of 1123 teachers to determine what barriers teachers meet in using electronic media. The responses to their assessment indicated that issues surrounding electronic media hardware were the most serious hindrance affecting implementation of electronic media such as projectors and computers in schools. The scholars added that, regarding the issue of hardware, teachers in both highly and less effective

schools reported serious concern with too fewer electronic media such as projectors and computers. Ginsberg and McCormack also pointed out that those teachers in less effective schools reported the issue of computers being too limited in schools. Another research carried out by Middleton, Flores and Knaupp (2007) supported that the issue of hardware is another problem affect the usage of computers. They also commented that computer labs are an effective strategy for reducing the student-to-computer ratio in schools. However, the researcher noted that competition between teachers for blocks of time in the computer lab may result in some teachers giving up on scheduling time in the computer lab and thereby ceasing to implement electronic media technology in instruction. They also commented that the accessibility to electronic media hardware may also be dictated by the subject being taught. In some cases, the physical location of electronic media such computers and the students' access to them will act as a barrier to teachers implementing the technology, (Knaupp 2007). He further explains that a second problem is that real scientific activities and hands-on mathematics are difficult to carry out in a computer laboratory. Most such activities require more room and equipment than staff members can drag into and out of a room not dedicated to such activities.

According to Middleton et al (2008), involves limitations of computer labs and issues of scheduling computer time. Middleton et al argue that electronic media need to be situated in classrooms where they can be easily accessed by students and used in a meaningful and practical way. The barrier of poor or limited accessibility prevents true integration of the computer in the instructional process when large numbers of computers are in a room separate from classrooms, many students get hands-on experience occasionally, but no one gets to use the computer in a truly authentic way that is, the way a scientist or mathematician might use it to solve a difficult, time consuming problem

The researcher however noted that the scholars have the same issue of electronic media hardware in common. All of the three scholars explain the issue hardware such as computer hardware's as the major issue affecting computer usage in most schools. But however Middleton et al (2008), added limitations of computer labs and issues of scheduling computer time and he also argue that electronic media need to be situated in classrooms where they can be easily accessed by students and used in a meaningful and pragmatic way. The researcher agreed that the issue of electronic media hardware's affect computer usage in Zimbabwean schools.

However basing on the above literature from different scholars on electronic media hardware's as a constrain in adopting electronic media in schools, the researcher noted some gapes on the work and contribution by these scholars. Most scholars manage to concentrate on the issue of computers hardware only. They over look the issues of other electronic media like televisions, radios and projectors.

Stallard (2008) state that the time factor surrounding the implementation process is viewed by teachers as being a major barrier that affects the implementation of using electronic media such as computers and projectors. In addition, Stallard (2008) further commented that teachers are hesitant to use technology because of its potential to shorten learning time for students. Furthermore the scholar added that teachers face a number of potential disruptions during the typical hour-long class and that, consequently, the actual time spent teaching and learning is shortened significantly. The scholar concludes that the implementation of electronic media technology involves a potential interruption to teaching and learning time, teachers may avoid using the technology. The Congressional Office of Technology (cited in Bennett 1996) includes a list of other conditional factors that make demands on teachers' time and affect individual teachers' decisions regarding implementing electronic media in the classroom, teachers who have

taught with electronic medias agree that at least initially most uses of electronic medias make teaching more challenging. Roszell (2005) cites a study by Pelgrum and Plomp (2001) whose worldwide study of electronic media in education identified 29 conditions that affected the implementation and use of electronic media technology in education. This study found that one of the most frequently occurring and significant conditions affecting teachers' willingness to embrace electronic media technology in instruction was the lack of available preparation time for teachers to develop lessons that used electronic media.

With regards to the above literature on the issue of time factor as a challenge in using electronic media in teaching and learning. All the scholars highlighted lack of adequate time as the major issue affecting the implementation electronic media technology in teaching and learning. However the scholars are different in such a way that Bennet (1996) focused more on time taken in decisions regarding the implementation of electronic media in the class room while Stallard (2008) shows that the use of electronic media in teaching and learning shorten learning time for students. In general the researcher noted that most of the schools in Zimbabwe set aside time for lesson preparation and the issue of time factor is not applicable in Zimbabwe to a large extent.

Lack of support by administrators is identified as a significant barrier toward implementation of electronic media in classrooms (Morton 2007 and Brand 2008). Arzt, (2001) and Lockard et al (cited in Mann, 2007) argue that successful implementation of electronic media can only occur if administrators offer teachers support and leadership. Persky (cited in Brand, 2008) states that in addition to administrators developing a philosophy to guide the implementation of electronic media technology, they can support the technological professional development of teachers by establishing flexible schedules so teachers can practice what they have learned, encouraging and facilitating team teaching and peer coaching allowing teachers to visit each other's classrooms to

observe computer technology integration and scheduling regular meetings among teachers using technology to plan and evaluate instruction.

The different between the above views is that Morton, Brand and Mann commented that the successful implementation of electronic media can only occur if the administrators offer teachers support and leadership. Persky highlighted that the administrators developing a philosophy to guide the implementation of electronic media technology; they can support the technological professional development of teachers by establishing flexible schedules so teachers can practice what they have learned.

Abbitt and Klett (2002) highlighted that teacher training in technology is a strong factor that affects the adoption of electronic media technology in teaching and learning. In addition a study carried by Baylor and Ritchie (2002) on the factors that affects the implementation of electronic media technology in teaching and learning shows that professional development or teachers training has a significant influence on how well electronic media technology embraced in the classroom. In addition Schaffer and Richardson 2004 also commented that when technology is introduced into teaching and learning inadequate preparation or training to use such technology is one of the reason that most of the teachers are not do not use the electronic media available in their classrooms. The researcher support the contribution made by the different scholars above because teacher training is a very important factor when introducing new technology. Hruskocyl et al (2000) added that students also want to be prepared when introducing new technology.

According to Rogers (1995) school culture is one of the important factors in the innovation diffusion process of electronic media technology in education. In addition Albirini (2006) agreed that if technology is not received properly by the school, there must be a mismatch of values

between schools culture and the technology. Albirini added that the school who take the cultural relevance of electronic media technology in teaching will apply the ICT process in its education. Furthermore, Hodas (1993) supported that the diffusion of technology may be inhibited by the micro-culture of a certain institution or school and the acceptance of new technology such as electronic media technology depends on how well the proposed innovation fits the existing culture.

According to NCATE (1997), technical support is another factor that impacts the adoption of new technology into teaching and learning this paper added that most of the teachers do not want to use electronic media technology tools because they were not sure where to turn for help when something went wrong while using it. In addition National Center for Education Statistics (2000) found that in her study 68% of teachers surveyed believed that lack of support regarding ways of using technology in the classroom can hinder technology use. The paper also added that most of the teachers in school with no technical supporters are more likely to cite lack of technical expert as a barrier to their use of electronic media technology. Moreover Tong and Trinidad (2005) also agreed that lack of technical support is a very stressful for the teachers which may affect the teachers willingness in the adoption of electronic media technology.

Schiller (2003) highlighted that teachers characteristics such as educational level, age, gender, experience and experience with the electronic media technology for educational purposes can affects the adoption of technology in many schools. The report made by NCES (2000) shows that teachers with fewer years of experience are more likely to use electronic media technology during the lesson than the teachers with more years of experience at work. In addition the paper also found that teachers with three years or less teaching experience reported using computers 48% of the times, teachers with 4 – 9 years experience reported 30% of the time,



teachers with 10 – 19 years shows 20% of the times while those with 20 years reported using computers for only 5% of the times. However the researcher noted that new teachers are using computers during the lesson because they have been exposed to electronic media technology during their college training.

Okorow (2003) indicated that due to the lack of electricity supply, especially in rural areas, secondary schools located in such areas had cannot use electronic media because all electronic devices used in teaching and learning requires electric power. Nigeria was said to be lagging behind other African countries like Uganda, Senegal and South Africa which were already helping secondary school students to become better information users.

Effective and efficient use of technology depends on availability of hardware, software and having access to resources by teachers and students and administrative staff Nueman (2003). The scholar added that most of the electronic media used in schools such as computers in the schools are as a result of donations or projects from private companies or foreign donors. Furthermore Nueman added that when the project is still funded by the donor, the maintenance of the electronic media tools as well as funding for the teachers is included. Immediately the project comes to an end, then the government has to take over and that is the beginning of the problems. The schools realizing that there is no funding coming from government, and they want to maintain the computers and the subject be taught in the school then the parents have to pay for the computer classes which is the maintenance of the computers and the teacher's salary. In most developing countries it is very hard when it comes to implementing technology into education systems because it involves substantial funding by the government. The teaching aids for

electronic tools demands a lot of funds and setting up the infrastructure, maintenance and support of electronic tool facilities are some of the problems that the schools are having.

According to Demetriadis et al (2003) lack of parents and community support is another factor that affects the implementation of electronic media technology in teaching and learning in schools. In addition Granger (2002) studied on four schools to identify factors contributing to successful implementation of ICT by teachers and found that the successful implementation requires not only the electronic media technology but also the parents and community support. In addition Bankkok (2004) added that that when parents are encouraged to participate in changing management activities within a school, ICT plan changes will occur more quickly. Basing on the above contribution from different scholar, the researcher noted that parents and community can influence the implementation of electronic media technology into teaching process. The researcher also noted that the parents should be involved in school decision making process.

Gulbahar (2005) indicated that accessibility to the electronic media hardwares and softwares resources is a key factor that affects the diffusion and innovation. Basing on the above scholar the researcher noted that the school needs to be equipped with different kinds of technological infrastructure and electronic resources. A study carried out by Albirini (2006) about the factors that affect teachers to implement electronic media shows level of accessing electronic media technology as the major factor. The scholar found that relatively high percentage of respondents 57% had computers at home while only 33% of the respondents had accessing computers at school. The researcher noted that this percentage gives a clear picture that accessibility of electronic media tools is one of the most important factor that affects the implementation of technology in teaching and learning.

## **2.6 Strategies to deal with challenges faced by schools in implementing electronic media technology in teaching and learning.**

Access to technology resources was mentioned as a critical factor in studies conducted by Ruthven et al. (2004). The scholar added that teachers' comments highlighted the need for accessibility and flexibility of use over and above quantity of electronic media tools. Teachers felt that the school management should solicit for more electronic media from all sources possible. For instance, expenditures on textbooks could be reduced and the money channeled to buying the electronic media. One head teacher suggested that a sustainable electronic media project requires a comprehensive ICT plan to be drawn. This, he said, would take into consideration all requirements up to and including adequate electronic media.

Boom (2007) cited that training teachers enable and promote student-centered learning and develop individual learning program for their students. Boom also encourages the students to work independently on their own electronic media. Silver (2000) highlighted that a school in Sidney conducted a regular workshop to increase teacher confidence in using electronic media tools and the workshop involved local experts and consultants to ensure sustainability. Furthermore, Jones (1999) states that the barriers that hamper the teacher from using electronic media tools can be eradicated through two ways, specifically, individual level enablers and whole school level enablers. Jones added that at individual level, the teachers have full access to personal electronic media tools with good quality hardware and software, access to good educational resources, and appropriate training and whole school level, adequate technical support, effective timetabling, support from senior staff or principal and adequate equipment, such as whiteboards in classroom are key factors.

Cox (2001) cited that teachers should have faith that the use of technology would enhance the effectiveness of their goals, which is unachievable through ordinary means. He further explains that they should also believe that the use of electronic media technology would not hinder the other high-level goals they want to accomplish. They should believe that they have full command on available resources and have enough potential for effectively utilizing electronic media. Professional development for teachers was considered as a critical factor in the successful integration of electronic media in schools. (Webb 2003) shows that teachers should have 'technology-supported-pedagogy knowledge' which is required when they plan to integrate electronic media in classrooms. He added that by this knowledge, teachers may ask students to write their assignments in a word processor document rather than submitting a hand-written paper.

There is a provision of various trainings on the electronic media and package software operations. As a result, the teachers became increasingly confident in operating electronic media in during their lessons. Furthermore, in 2002 the Welsh Assembly Government in UK incurred £9.9 million from grants to provide all the primary schools with interactive whiteboards, electronic media, and projectors.

Ozaji (2003) in his research designed to find out the problems facing the use of electronic media in teaching and learning of agricultural science and home economics education has revealed that such problems as finance poor power supply, electronic media literacy level, poor support from governments quality assurance, low quality and expensive nature of VSAT connections affect the use of e-learning. That is why Ozaji (2003) stated that lack of fund affects the use of electronic media in teaching as many schools lack electronic media materials even those that have them cannot properly maintain them due to lack of money. Results in table 4 revealed that

strategies to be adopted to improve the use of e-learning in teaching includes training of teachers in electronic media, government to allocate fund to electronic media, problem of poor power supply to be addressed, schools to source out funds and telephone lines to be digitalized. In his write up Okereke (2009) stated that there is a compelling need for training and retraining of teachers in the effective use of information and communication technology.

Seyal (2012) says administration is regarded as a key factor in the successful implementation of electronic media in education. While some evidence suggests that focus of electronic media leadership support is centers on the school head, some others supported the preposition that distributed leadership throughout an educational institution enables successful implementation on electronic media technology to take place. Researchers like Kearney and McGarr (2009), supported that a leader who is close to the curriculum and teaching are well placed to influence pedagogical change through electronic media learning. On the other hand, Hayes, (2007) in Seyal (2012), supports the idea that school leadership harness commitment to improve teaching and learning through electronic media integration.

A study by Yildirim (2007), found that access to technological resources is one of the effective ways that facilitate the adoption of electronic media into teaching and learning. He added that access to hardware and software is not only central factor, but also the use of suitable kind of tools and program to support teaching and learning. The scholar added that it is also important to encourage student centered technology learning, it is necessary that learners have access to quality technology resources.

Jones (2004), reported that the breakdown of a electronic media tools and equipments causes interruptions and if there is lack of technical assistance, then it is likely that the regular repairs of

the electronic media tools will not be carried out resulting in teachers not using computers in teaching. The effect is that teachers will be discouraged from using electronic media tools because of fear of equipment failure since no one would give them technical support in case there is technical problem. Becta (2004), also agreed that if there is a lack of technical support for electronic media tools at available in a school, then it is likely that technical maintenance will not be carried out regularly , resulting in a higher risk of technical interruptions.

Buabeng-Andoh, (2012), access to electronic media infrastructure and resources in schools is a necessary condition to the integration of electronic media in teaching and learning in schools. The scholars added that the effective use of electronic media technology into teaching and learning in schools depends mainly on the availability and accessibility of electronic media technology resources such as hardware and software obviously, if teachers cannot access electronic media resources, then they will not use them. Therefore, access to computers and projectors updated software and hardware are key elements to successful integration of electronic media in teaching and learning.

## **2.7 Chapter summary**

The chapter covered the views and contributions made by several scholars on the effectiveness of electronic media in teaching and learning. It has also highlighted the researcher's views on the challenges faced by the school in implementing electronic media in schools.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.0 Introduction**

This chapter will deal with the research methodology adapted for the study. It embarked on the research design which involved the population the sample, sampling techniques and the data collection instruments used. The chapter also dealt with data presentation and analysis techniques used by the researcher.

#### **3.1 Research Design**

Saunders (2007) defines research design as a planned deliberate arrangement of conditions for analysis and collection of data in a manner that aims to combine relevance to the research purpose with the economy of procedure. Panneerselvam (2005) stated that research design provides complete guidelines for data collection and there are basically three types of research designs which are widely used and these include amongst others, explanatory research, descriptive research and Casual research. A well designed research increases the chances of getting valid and accurate information as a result of good preparation and implementation and the researcher therefore used both descriptive and explanatory study. The researcher also uses both quantitative and qualitative research.

In this study, the researcher will use descriptive research designs. The researcher looked at the most appropriate design which is the descriptive survey design. Cohan and Manion (1996) argue that descriptive survey intends to provide answers to questions such as who, what, when, where and how of a study area. This design as such seems to match the research question.

### 3.2 Population

The population of this study comprises of teachers from schools in Gokwe South District. Saunders, Lewis and Thornhill (2009) define population as the complete set of cases or group members that are of interest to the researcher. The target population of this study included teachers and heads of schools of the selected schools. This target population was therefore likely to provide more informed and considered responses to the sought information on the effectiveness of electronic media into teaching and learning. See table 3.1 on target population distribution.

**Table 3.1 Showing targeted Population**

Name of School	No of Teachers	No of School Heads	No of depute Heads	Total
School A	58	1	1	60
School B	34	1	1	36
Total	92	2	2	96

*Primary data 2015*

### 3.3 Sampling

According to Saunders (2007), sampling is a process of selecting an adequate number of elements from the population so that by studying the sample and understanding the properties of the subject it will then be possible to generalize the characteristics of properties to the entire population.



### **3.3.1 Sampling Techniques**

In this study, the researcher used both probability and non probability sampling methods in order to improve representativeness and convenience. The researcher used stratified sampling technique because the population is heterogonous. The researcher focused on two secondary schools in Gokwe South which and the participants are school heads, school depute heads, IT Administrators and the teachers to ensure that there is representativeness from each school. Basing on the above view, the researcher noted that the use of stratified sampling technique enables the researcher to represent every department of schools in Gokwe South District. The researcher will also use the simple random sampling because the stratified sampling technique cannot work on its own. Simple random sampling technique helps to ensure that every individual in the organisation has an equal chance of being selected at first. This helped to limit biased selection of a sample and made the data collected more valid and reliable.

The researcher used judgmental or purposive sampling method in order to select the most representatives that can bring more accurate results. The researcher used judgmental sampling to the school heads and IT Administrators. The researcher used judgmental on the basis of level of authority and technical knowledge within the organization.

### **3.3.2 Sample Size**

The sample size is the sub set of the entire targeted population and the rule of thumb stipulates that at least 30% of the entire population should be used for populations less than 500. Saunders (2007) mentioned that it is of great advantage for a researcher to take a sample of 30% or more of the population under study to obtain a sample that highly represents the target population. Taking ideas from Saunders (2007), the researcher will use a sample of 36% of the total

population which gives a total sample of 35 respondents. The sample size the researcher will use is as follows:

**Table 3:1 Showing sample size made of different elements from three different schools in Gokwe South.**

<b>Respondents</b>	<b>School A</b>	<b>School B</b>	<b>Total</b>
School heads	1	1	2
School depute heads	1	1	2
Teachers	17	12	29
IT administrators	1	1	2
Total	20	15	3

### **3.4 Data collection instrument**

#### **3.4.1 Questionnaire**

Devaus (2002) define a questionnaire as a general term including all techniques of collecting data in which each person is asked to respond to the same set of questions in a predetermined order. Troff and Bloomer (2000) defined a questionnaire as an instrument that consists of a set of questions on topic or group of topics designed to be answered by a respondent in writing. Furthermore a questionnaire is a pre formulated return set of questions to which respondents record their answers usually within closely defined options, Saunders (2007). Collins and Hussey (2008) mentioned that a questionnaire can be described as an open ended or closed ended questions. The researcher used both closed and open questions in order to improve the quality of the research findings. The researcher also used both structure and unstructured questionnaires.

The researcher used questionnaires because questionnaire is in a better position to provide empirical information as it could be presented quantitatively and can have deeper detail as explanations can be given and the respondents had the opportunity to respond to questions during their own time outside the daily pressure of work. Open ended questions were used when collecting qualitative data, sometimes there is need for the respondent to give a detailed personal opinion. In addition, the researcher used closed questions in order to obtain two mutually exclusive responses and used the frequencies as the base for the research findings.

The researcher also found that administering questionnaires is effective because large amounts of information can be collected from a large number of people in a short period of time and it is less expensive. In addition the researcher had a chance to introduce the research topic and encourage the respondents to give frank answers through the use of questionnaires so as to improve the reliability and the validity of the research.

### **3.4.2 Interviews**

According to Saunders et al. (2009) an interview is a purposeful discussion between two or more people. Cohen and Manion (2000) also define an interview as a conversation initiated by the interviewer for the purpose of obtaining relevant information focused by the researcher on content specified by the research objectives. The research used face to face interview with the school heads, depute heads and IT Administrators. The use of interviews helped in further clarification of questions on the specific areas aligned to the research objectives and the researcher can obtain detailed information about personal feelings, perceptions and opinions about the topic.

The researcher used interviews because personal questioning allows the researcher to more detailed questions to be asked on short period of time. In addition, the researcher found that personal interviews usually achieve a high response rate and allows ambiguities to be clarified.

### **3.4.3 Observation**

The researcher also employed observation as a way of collecting data. Cohen (2005) defines observation as a systematic description of events, behaviours and artefacts in the social setting chosen for study. The observation method was used as it enabled them to describe the existing situations in so far as the effectiveness of electronic media into teaching and learning. This supports Leedy (1993) who posits that we learn some truth by observing events as they are taking place. The researcher also used this method due to its numerous advantages that include the provision of rich qualitative data, the increase of validity of study since the participants being observed may help the researcher to have a better understanding of the context of implementation electronic media in education. The instrument also has its weaknesses and the researcher also tried to use unobtrusive methods as she is aware of the ethical problems that observation is likely to cause.

### **3.5 Data Validation**

Saunders, Lewis and Thornhill (2009) define validity as the extent to which the data collection method or methods accurately measure what they were intended to measure or the extent to which the research findings are really about what they profess to be about. An analysis of instruments used was carried out after the research so as to ensure that the instruments used in the collection of data was valid to ensure that they provided accurate results.

### **3.6 Reliability**

Carmines and Zeller (2000) define reliability as the extent to which an experiment, test, or any measuring procedure yields the same result on repeated trials. Four key types of reliability for the researchers are equivalent reliability, stability reliability, internal consistence and integrate reliability.

To ensure validity and reliability the researcher used triangulation. Punch (1998) defines triangulation as the use of two or more methods of data collection in the study. Triangulation refers to the combination of two or more theories, data sources, methods or investigators in one study of a single phenomenon to converge on a single construct, and can be employed in both quantitative (validation) and qualitative (inquiry) studies Rahman and Yeasiman (2012). The process of triangulation is often used to point out that more than two methods are used in a study with a view to double or triple checking outcome also referred to as cross check.

### **3.7 Data presentation techniques**

Saunders (2007) highlighted that data presentation entails organizing, processing and summarizing large amounts of data into small easily understood instruments like tables, graphs, histograms, bar charts and pie charts. The researcher presented data according to logical themes which emerge from the study. In presenting data, both qualitative and quantitative techniques were used including tables to enable the researcher to study the trends and patterns. The researcher used tables and graphs to present information because they can be easily analyzed and they are interpretive.

### **3.8 Data Analysis**

Rubin and Luck (1999) defines data analysis as the refinement and manipulation of data to prepare them for application of logistical inferences. Having commented on the information given by respondents, the researcher relates the findings with the secondary data used in order to come up with conclusions. The process involved the arranging, classifying, tabulating and analysis of research findings and some arithmetical tools like regression and hypothesis testing were used to analyze data. The researcher also used deductive technique to analyze data.

### **3.9 Data collection procedure**

According to Babbie (1995), data collection procedures are the measures taken and processes in data collection in a research. There are procedures and measures that the researcher has to take so as to be able to collect data on the impact of implementation of learner centred approach in schools in Gokwe District. The researcher had to self-administer questionnaires as they were to make the questionnaires simple and easy to answer. The researcher also made sure that all ethical principles and issues are addressed. Issues such as confidentiality, which is asserted by Cresswell (2003) as the extent to which information is not revealed to people who are not directly involved will be looked at. Respondents were also given assurance that the information they gave on the questionnaires would not be revealed to anyone who is not directly involved in the research. A letter from the Ministry of Education and from Midlands State University so as to access the needed information from the schools and so as not to have clashes with the school authorities was sought. Respondents were also reminded not to write their names when answering the questionnaires and names of those observed were in no case disclosed.

### **3.10 Chapter summary**

This chapter dealt with the research philosophy adapted for the study. It embarked on the research design which involved the population the sample, sampling techniques and the data collection instruments used. The chapter also dealt with data presentation and analysis techniques used by the researcher.

## **CHAPTER FOUR**

### **DATA ANALYSIS, PRESENTATION AND DISCUSSION**

#### **4.1 Introduction**

This chapter focuses on the presentation, interpretation analysis and discussion of data gathered on the effectiveness of electronic media in teaching and learning. Data was collected through questionnaires, interviews and observation from teachers and school heads. This chapter will present data on the findings on the demographic situation, the findings on the benefits of integrating electronic media into teaching and learning and also findings on the challenges faced by teachers in using electronic media tools. Finally the chapter discusses the research findings.

##### **4.1.1 Response Rate**

The researchers sent a total of thirty questionnaires and out of this twenty eight were returned giving a response rate of 94%. In addition the researcher conducted all interviews and giving a response rate of 100%. The researcher conducted an interview with the two school heads, one of School A and the other one from School B. The researcher also conduct interviews with the school depute heads and an IT administrator from School B. Information from the questionnaires is also supported by the table below



**Table 4.1 Showing Response Rate for Questionnaires**

<b>Respondents (departments)</b>	<b>Questionnaires dispatched</b>	<b>Questionnaires returned</b>	<b>Response rate</b>
Sciences	8	8	100%
Commercials	10	10	100%
Arts	12	10	83%
Total	30	28	94%

*Source- survey (2015)*

As shown on the table above, 30 questionnaires were distributed and the researcher collected 28 questionnaires which were administered to the teachers and these represents a response rate of 94%. The response rates from the interviews were 100%. The response rate of 94% and 100% is large enough to allow inferences to be drawn from the population under study. The response rate from this study is supported by Aaker (2000) who pointed out that if the response rate is more than 50%, enough conclusions about the research topic can be achieved and thus the researcher is able to use his response rate because it is above 50%.

#### **4.1.2 Demographic Data of teachers**

Basing on the age of the respondents, 6 out of 28 (21%) shows that they are between the age of 25 – 30 years, 7 out of 28 (25%) shows they are between the age of 31- 35 years. In addition 10 out of 28 (36%) shows that they are between the age of 36 – 40 years and only 5 out of 28 (18%) are above 40. With regards to the educational qualifications about 11 out 28 (39%) indicated that they have Diploma in Education, 7 out of 28 (25%) shows that they have the Bachelor of Education. The researcher also noted that about 2 out 28(7%) shows that they have Masters in

education and finally 8 out of 28 (29%) indicated that they have no teaching qualifications. The analysis of working experience shows that the majority of the teachers have more than 11 years in the teaching field because out of 28 respondents, 17 teachers indicated that they have more than 11 years working experience. The data collected also indicated that only five teachers have less than 5 years in education sector. Table below shows demographic data of teachers.

**Table4.2 showing departmental profile for respondents**

<b>Demographic</b>	<b>Category</b>	<b>Frequency</b>	<b>Percentages</b>
<b>Age</b>	Below 25 years	0	0
	25 – 30 years	6	21
	31 – 35 years	7	25
	36 – 40 years	10	36
	40 years and above	5	18
	<b>Total</b>	<b>28</b>	<b>100</b>
<b>Workingexperience</b>	Below 5 years	4	14
	5 – 10 years	7	25
	11 – 15 years	5	18
	16 – 20 years	8	29
	Above 20 years	4	14
	<b>Total</b>	<b>28</b>	<b>100</b>

<b>Education qualification</b>	<b>Category</b>	<b>Frequency</b>	<b>Percentages</b>
	Diploma in education	11	39
	Bachelors in education	7	25
	Masters in education	2	7
	Non teaching degrees	8	29
	<b>Total</b>	<b>28</b>	<b>100</b>

*Source- survey (2015)*

The demographic table also indicates that most of the respondents (52%) are above the age of 36 years and the majority of the teachers have more than 11 years working experience in the education sector. The findings of more respondents above the age of 36 years with more than 10 years working experience are similar to a study that was carried out by Schiller (2000) on the effectiveness of electronic media in teaching and learning in Brazil where he discovered that most of the teachers with more than 10 years working experience are reluctant to use electronic media during the lessons because teachers colleges were not teaching Information and Technology for the past 10 years. The researcher however found out that most of the respondents, about 11/28 (39%) have Diploma in education and 8/28 (29%) have non teaching qualifications. The findings above on the educational qualifications are in line with the study carried out by Daniel (2009) on the challenges faced by teachers in using ICT system in teaching and learning in German. He found that most of the respondents have Diploma in Education and followed by teachers with non teaching qualifications because most of the teachers were leaving the country to search for greener pastures. The researcher also noted that only 2 respondents have Masters Degrees.

## 4.2 Types of Electronic Media available in two schools

Generally the results from teachers on the types of electronic media available at their schools shows that there is a serious shortage of electronic media tools used for teaching and learning in both schools. This is supported by data collected from respondents which revealed that, school A has 45 computers, one digital projector, one overhead projector, one television and one printer used by 51 teachers and 1463 pupils. School B has one computer used to carry out administration duties in school's office, one digital projector and one printer. The researcher noted that other teachers in both schools are not aware that the schools have digital projectors. The table below shows electronic media available at school A and School B.

**Table 4.3 Showing types of electronic media available in two schools**

<b>Devices</b>	<b>School A</b>	<b>School B</b>
Computers	45	1
Digital projectors	1	1
Overhead projectors	1	0
Television	1	0
Printers	1	1

*Source- survey (2015)*

With the support of information from the interview with the school depute heads the researcher noted that school A has forty five computers, one power point projector, one overhead projector and two printers. The researcher however noted that the findings are contradicting with the literature by Gulbahar (2005) who shows that every department should have a departmental computer and a digital projector so that everyone has a chance to use these tools. The issues of

teachers not aware of the availability of projectors at school is also supported by Ritchie (2002) who point out that all teachers should be aware of all teaching materials available at their school through school development meetings. The researcher also noted that school heads should communicate all teaching material available at school through the right channel such as school meetings. The findings above at school A are in line with the results obtained by Orey (2001) in his experimental study on the constructivist use of multimedia technology to improve students' performance where he found that most of the schools in rural areas do not use electronic media tools due to lack of electricity.

#### **4.2.1 How often do the teachers use electronic media during the lessons**

The analysis of data collected by the researcher indicates that very few teachers in both schools use electronic media devices in teaching and learning. This is because out of 28 respondents only 5 teachers always use computers. The results also indicated that two teachers out of twenty eight use projectors and five teachers use printers. On average 90% of respondents highlighted that they do not use electronic media during the lessons at all, only 4% of respondents' shows that they use electronic media sometimes while 6% indicated that they always use electronic media. From the interviews with the school IT Administrator the researcher noted that most of teachers do not use electronic media in conducting lessons. The table below summarizes the findings.

**Table 4.4 showing results on how often the teachers using electronic media tools during the lessons**

Electronic media	Always		Sometimes		Not at all		Total
	N	%	N	%	N	%	
Computers	5	18%	2	7%	21	75%	28
Power point projector	1	4%	0	0	27	96%	28
Overhead projector	1	4%	1	4%	26	93%	28
Television	0	0	0	0	28	100%	28
Printers	5	18%	3	11%	20	71%	28

*Source- survey (2015)*

Accordingly the researcher found that most of the teachers are not using electronic media tools available during the lessons. The findings are in line with the results that were obtained by Manyati (2006) on his research about the challenges faced by schools in implementing effective instructional media in teaching and learning. Manyati found that more than 70% of teachers in Zimbabwe are not using electronic media tools during the lessons. But however the findings are contradicting with the results obtained by Cramer and Smith (2002) on the impact of electronic media such as power point projectors in teaching and learning because he found that most of the teachers are using electronic media technology in Brazil.

#### **4.2.2 Purpose of using different types of electronic media devices at school**

The analysis on the purposes of using electronic media by teachers revealed that the majority of teachers uses electronic media devices especially computers to browse the internet. This is supported by 18 out of 28 respondents who highlighted that they use electronic media devices to

access the internet. Data collected by the researcher also indicated that few teachers' uses electronic media tools for teaching purpose and this is supported by the response rate of five teachers who shows that they use electronic media tools for teaching and learning purposes. The data analysis also shows that other teachers are abusing school electronic media tools such as computers by playing online games and watching movies because nine out of twenty eight teachers indicated that they use electronic media devices for entertainment and playing games. This shows the researcher that majority of teachers who indicated that they use IT devices for internet purposes spent most of their time doing social network, plying games and watching online movies. The IT administrator at school A also supports that most of the teachers uses computers to play online games and watching movies as well as doing online networks.

**Table 4.5 Showing results on what purposes do the teachers using electronic media tools during the lessons.**

<b>Purposes</b>	<b>Frequency</b>	<b>Percentage</b>
Teaching and learning	5	18%
Playing games	3	11%
Recording of students marks	11	39%
Entertainment	6	21%
Internet browsing	18	64%

*Survey data 2015*

The results from the interviews with the IT administrator reviewed that most of the teachers spent their time playing games, watching movies and doing social networks on face book during their spare time in the computer lab. During the interview session with the school heads and

school depute heads; the researcher noted that most of electronic media tools such as televisions and radios are used for entertainment purposes. The school head of school also pointed out that most of the teachers are only using electronic media tools such as computers to search information on the internet. The researcher concludes that most of the teachers are not using electronic media tools for teaching and learning purposes. The findings above are contradicting with a research carried out by Harrison (2002) in United Kingdom on the impact of electronic media technology in education. In his research Harrison found that 80% of the teachers are using electronic media tools for teaching and learning purposes.

#### **4.2.4 Perception of teachers on the effectiveness of electronic media**

The general findings on the perception of teachers about the effectiveness of electronic media technology in improving learners' performance shows that electronic media was perceived as useful and effective by the majority of teachers. This is because 69% of respondents show that electronic media can improve learners' performance to a larger extent. Almost three quarters of respondents agreed that electronic media is effective and efficiency in teaching and learning. The respondents identify computers and digital projectors as the most useful and effective electronic media that a teacher can use to facilitate better understanding during the lesson. But however twenty out twenty eight teachers indicated that radio cannot improve learners' performance. On the other hand all teachers highlighted that computers is the only electronic media that can improve class performance. This information can also be summarized by the table below.



**Table 4.6 showing the respondents on the perception of teachers if electronic media tools can improve the performance of students.**

Electronic media	Not at all		Lower extent		Large extent	
	N	%	N	%	N	%
Computers	0	0	1	4%	27	96%
Power point projector	2	7%	2	7%	24	86%
Overhead projector	5	18%	3	11%	20	71%
Television	7	25%	4	14%	19	68%
Radio	20	71%	6	21%	2	4%
DVD	5	18%	5	18%	20	71%
Printer	6	21%	4	14%	18	64%

*Source- survey (2015)*

The researcher noted that about 69% of the respondents indicated that, the use of electronic media technology can improve students' performance to a large extent, 13% of the teachers indicted to a lower extent and 20% shows not at all. Results from the interviews with the school heads and depute heads also reviewed that electronic media such as computers, power point projectors and overhead projectors improve students' performance to a large extent. The IT administrator also supported that, the use of power point projectors during the lesson improves learners' performance. This also supported by Blake (2008) who agreed that the use of electronic media technology such as computers if used wisely and creatively can play a very important role in achieving educational objectives.

#### 4.2.5 Teachers perception on the benefits of using electronic media in teaching

The analysis of data on the benefits of electronic media shows that electronic media has a positive impact on the level of understanding. Out of 28 respondents about 21 respondents indicated that electronic media benefits students to a larger extent. Very few teachers' shows electronic media technology cannot improve learners' performance at all. As shown on the table 4.7 below only 3 teachers highlighted that electronic media cannot benefit students.

**Table 4.7 Showing the responses on the perception of the benefits of using electronic media technology**

Level of extent	Frequency	Percentages
Large extent	21	75%
Lower extent	4	14%
Not at all	3	11%
Total	28	100%

*(Source; survey 2015)*

The researcher noted that about 89% of respondents agreed that electronic media can benefit the students and only 11% did not agree. According to Berge and Barron (1998) support the above findings by highlighting that the learning approach using electronic media tools provide many opportunities for constructivism learning through their provision and support for resource based centered and students' center approach. The findings above are in line with the results in literature by Young (2002) who highlighted that electronic media technology increases the flexibility of delivery of education so that learners are in a position to access knowledge anytime and from any where. The researcher therefore found that the use of electronic media technology during the lessons improve students performances during the educational process.

The researcher went on to identify the challenges faced by the school in implementing electronic media in their teaching and the following results were obtained.

#### **4.3 Challenges faced by schools to implement electronic media at full capacity.**

Generally the results on the challenges affects the smooth adoption of electronic media shows that all teachers indicated that there is poor electricity supply, shortage of electronic media devices in their school, lack of time, poor infrastructure, lack of technical support, lack of IT skills, lack of government support and school culture. Poor electricity facility was cited by the majority of teachers as the major hindrance supported by 25 out of 28 respondents followed by shortage of electronic media devices with 24 out of 28 respondents. Other high rated challenges as indicated by teachers are lack of funds to buy electronic media tools, poor infrastructure, lack of IT skills and lack of time to use electronic media tools.

Teachers on the other hand indicated that they are interested in teaching using electronic media devices but however this strategy cannot be applicable properly due to shortage of electronic media devices such as computers and projectors. Among the challenges listed below school culture and lack of technical support were cited by few teachers as hindrances that affects full utilization of electronic media in teaching and learning. The table below summarizes the challenges faced by teachers to implement electronic media.

**Table 4.8 Showing results on the challenges faced by schools in implementing electronic media technology**

Challenges	Agree		Disagree		Total
	N	%	N	%	
Poor infrastructure	17	61%	11	39%	28
Lack of electronic media tools in schools	24	86%	4	14%	28
Frequent electricity interruption	25	89%	9	32%	28
Lack of teacher skills	18	64%	10	36%	28
Lack of funds to buy electronic media tools	23	82%	5	18%	28
School culture	15	54%	13	46%	28
Lack of time to use electronic media	22	79%	6	21%	28
Lack of technical support	17	61%	11	39%	28
Lack of government support	20	71%	8	29%	28
Poor maintenance	19	68%	9	32%	28

*Source- survey (2015)*

The findings above are almost similar to the results of a study carried out by Manyati (2006) on the challenges affects the implementation of electronic media technology in schools. Were he found that lack of electricity in Zimbabwe, lack of funds to buy electronic equipments and lack of time are the major challenges affects the usage of electronic media in most of the schools in Zimbabwe. In background of the study the Herald 3 September (2012) a local government owned daily newspaper reports that even though many schools receive computers and projectors from the government, electricity supply has been a major problem in Zimbabwe and is seen to only getting worse. However the findings above are difference to the findings obtained by Abbitt

and Klett (2002) because they highlighted that teacher training in technology is a strong factor that affects the adoption of electronic media technology in teaching and learning. The findings also contradict with the findings by Mumtaz (2000) who pointed out lack of time as the major factor that hinders the implementation of electronic media technology in many schools.

With the support of information from the interviews given by the school heads and the school depute heads, the researcher noted that lack electricity, lack of funds to buy electronic media equipments and lack of time to use electronic facilities in classroom as the major challenges affects the implementation of electronic media in teaching and learning. During the interview with the IT administrator the researcher also noted that lack of electricity, lack of funds to buy electronic media equipments are the major challenges affects the implementation of electronic media technology into teaching and learning. The researcher also conclude that poor electricity, lack of funds to buy equipments and lack of time to use electronic media are the major challenges affects the implementation of electronic media technology.

#### **4.4 Ways to achieve full utilization of electronic media technology**

Data analysis on the ways to improve the utilization of electronic media technology indicated that the majority of teachers' emphasis that schools should introduce other sources of power besides electricity such as generators and solar power system. Out of 28 respondents 25 teachers shows that the school must use electricity substitutes. About 21 out of 28 teachers show that the school should make sure there is enough electronic media for both teachers and students. The researcher therefore found that schools should purchase electronic media tools such as computers and projectors to reduce the ratio proportion. Teachers also indicated that the school should conduct ICT regular training to develop staff so that they will copy up with new technology. Fifteen out of 28 teachers indicted that the school must have a technological development culture

such that every teacher at school become technologically equipped. Teacher response on the other hand suggested that technical support is very important at school in order to reduce breakdown of electronic media especially computers and projectors. Technical support ensures proper maintenance of electronic media tools.

**Table 4.9 showing ways that can be used to overcome the challenges faced by teacher to implement electronic media in class**

Ways	Frequency	Percentage
Electricity substitutes	25	89%
Technological development culture	15	53%
Regular ICT training	18	64%
Technical support	17	61%
Availability of vision which put technology into account	6	21%
Make electronic media tools available at school	21	75%

*Source- survey (2015)*

With the support of information from the interviews the researcher noted that the school should motivate teachers to use electronic media facilities, seek assistant from the government and nongovernmental organization and to involve the community in decision making regarding the implementation of electronic media. The findings above are similar to the suggestions made by Boom and Silver (2000) were they suggested that schools must introduce electricity substitutes

such as generators and solar systems and make electronic media tools available in schools by reduces the expenditure on textbooks and channel the money to buy electronic equipments.

## **4.5 Discussion**

### **4.5.1 Level of electronic media usage in schools**

The general findings on demographic data revealed that the majority of teachers have more 10 years working experience in educational sector. The researcher also noted that there is serious shortage of electronic media devices in schools. All respondents from school A and school B highlighted that, there is a serious shortage of electronic media devices in their schools. This shows that most of teachers find it difficult to access electronic media from the school administration because of high electronic media to teachers' ratio. These findings contradict with the views of Gulbahar (2005) who pointed out that every department with more than ten teachers should have 2 computers, a projector and a printer. The study also revealed that only few teachers are making use of few available electronic media tools. Few teachers who are utilizing electronic media tools are only make use of computers and projectors. The statistics on data collected shows that 90% of respondents are not using electronic media facilities at all. Literature by Manyati (2006) on the challenges faced by schools in utilizing electronic media shows that, most of rural schools are not using electronic media because there is lack of power supply and most of schools have no money to buy electronic media devices.

The researcher also noted that most of teachers colleges and universities introduces Information and Technology module in 2009 after the introduction of the multicurrency in Zimbabwe. This shows that all teachers who attain Diplomas and Degrees before 2009 did not do information and technology as a module at their college and that's way most of them find it difficult to use

electronic media during their lesson. This could also cause most of the old teachers to resist the introduction of electronic media technology into teaching and learning. The findings above are also in line with the findings obtained by Schiller (2000) on the effectiveness of electronic media technology where he found that most of teachers with more than 10 years working experience are not able to use electronic media technology in their teaching and they resist it.

The findings on the purpose of using different types of electronic media devices shows that most of the teachers are using electronic media tools to access internet. However the researcher noted that most of teachers spent their time playing online games, watching movies and doing social network on such things as face book on internet. The researcher therefore noted that only fewer teachers are using electronic media tools for teaching and learning purposes. These findings are contradicting with the research done by Harrison (2002) where he found that the majority of teachers in UK uses electronic media tools for teaching and learning. The researcher concludes that majority of teachers in Zimbabwe are not using electronic media for teaching purposes.

The majority of respondents perceived that electronic media technology is effective and useful in teaching and learning. From the teachers responses it was also evidenced that electronic media technology can improve learners performance. Most of the teachers and school heads agreed that electronic media can improve learners' performance to a larger extent. The researcher therefore noted that most of teachers are willing to use electronic media but there is lack of support from the school administration and the government. In the study carried out by Cramer and Smith (2002) on the impact of electronic media such as power point projectors in teaching and learning, their findings shows that electronic media technology has a positive impact on learning. The researcher concludes that electronic media can improve learners' performance if used properly.



#### **4.5.2 Challenges in the adoption of electronic media in schools**

Through the study, the researcher found that there were a number of challenges hindering the smooth implementation of electronic media in teaching and learning. The major challenge indicated by the majority of respondents were poor electricity supply, shortages of electronic media equipments, lack of funds to buy electronic devices and lack of time to use electronic devices during the lesson. The researcher also noted that other factors like electronic media to teachers and pupils ration also affects the implementation of electronic media and lack of technical support. The schools also lack technological development culture and poor infrastructure. The reason for lack of power supply could have been caused by poor infrastructure and the remoteness of schools in rural areas. ZESA Holdings is also experiencing a lot of power cuts caused by load shading. The respondents views were also supported by the Herald Newspaper on 3 September (2012) which highlighted that even though many schools receive computers and projectors from the government, electricity supply has been a major problem in Zimbabwe. But however the findings are contradicting with the literature by Mumtaz (2000) who pointed lack of time as the major challenge affects the adoption of electronic media during the lesson. The researcher concludes that in Zimbabwe poor electricity supply is the major factor that affects the adoption of electronic media technology in schools.

The researcher noted that shortages of electronic media devices and lack of funds to buy devices are also of much concern in the schools. This could be having been as a result of the costs associated with the purchase of electronic media devices such as computers and projectors. Most of parents in Zimbabwe are found it difficult to pay school fees due to poverty. Literature by Manyati (2006) on the challenges faces by school to adopt electronic media in Zimbabwe shows that most of schools lack funds to buy electronic media equipments. Nueman (2003) also support

that full utilization of electronic media into teaching and learning depends on the availability of resources to purchase hardware and software. The researcher therefore concludes that full implementation of electronic media technology depends on the availability of financial resources to buy the devices and proper maintenance.

#### **4.5.3 Ways to improve the implementation of electronic media into teaching and learning.**

The research study also establish that quiet a number of teacher respondents were aware of the ways that can be used to improve the implementation of electronic media into teaching and learning. This was confirmed by the response rate of all teachers who identify quiet a number of strategies that can be used in schools.

The researcher noted that electricity substitutes such as generators and solar power system are the vital facilities that can be put in place to increases the adoption of electronic media into teaching. Since most of the schools face the problem of power supply from electricity they may buy generators or install solar power system. This is supported by the majority of respondents who indicated that the school can use other sources of power such as generators. In rural areas most of the schools are far away from electricity so that they can use generators or solar power to generate electricity. The findings above are in line with the suggestions made by Boom and Silver (2002) on the use of electronic substitutes to generate power if there is no electricity. Booms and Silver also suggested that the school administration can reduce the expenditure on textbooks and use the money to buy electronic media tools. Respondents also indicated that the schools should introduce staff development training such as ICT development programmes so that teachers will gain experience on how to use electricity.

The researcher also noted that there is need for technical support and technological development culture within the school. Technical supports can ensure smooth integration of electronic media technology at school and can minimize level of ICT breakdowns. If a school implements a technological development culture, every teacher within that school will try by all means to utilize the available electronic media in classrooms.

#### **4.6 Summary**

The main focus of this chapter was data presentation, interpretation and discussion. The data presented was gathered through questionnaires, interviews and observation. The researcher uses tables to present data and uses both qualitative and quantitative methods to analyse data. The data obtained revealed that there is shortage of electronic media devices in many schools. The data collected also shows that most of the teachers use electronic for other purposes besides teaching and learning. The study also indicated that there are challenges affects the implementation of electronic media in teaching and learning but most of them are beyond the teachers' control.

## **CHAPTER 5**

### **SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATION**

#### **5.0 Introduction**

The chapter gives a summary of research findings as well as the summary objectives. The researcher will also identify and explain the conclusions and recommendations of the research objectives and findings. The major focus of this chapter is to summarize the findings, drawing up of conclusion and recommendation on the effectiveness of electronic media technology in teaching and learning.

#### **5.1 Summary of objectives**

The main aim of this study was to evaluate the effectiveness of electronic media technology into teaching and learning. The researcher also wanted to identify challenges faced by teachers in trying to implement electronic media technology and other alternatives or strategies that can be used to improve the adoption of electronic media technology into teaching and learning. The researcher manage to achieve all these objectives and found that lack of electricity, shortage of electronic media tools, lack of funds to buy electronic media equipments and lack of time are the major challenges affects the implementation of electronic media technology into teaching.

##### **5.1.1 Types of electronic media available in schools**

As shown on the table 4.1 in chapter 4, the results shows that School A has 45 computers, one power point, one overhead projector, one television and one radio. The researcher noted that School is affected by electronic media to pupil ratio because the school has 1365 students uses

45 computers and one projector. School B has two computers used to carry out administration work and one power point projector not used at all.

### **5.1.2 Purposes of electronic media tools in schools**

As shown on the table 4.2 in chapter only 18% of respondents shows that they use electronic media for teaching and learning. 39% of teachers indicated that they use electronic media tools to record student's marks, 21% shows that they use electronic media for entertainment purposes and 64% uses computers to browse the internet. The researcher found that most of the teachers use electronic media tools to browse the internet.

### **5.1.3 Usage of electronic media during the lesson**

As shown on the table 4.3 about 93% of respondents indicated that they do not use electronic media during the lessons and only 7% shows that they use electronic media during the lesson. With the support of information from the secondary data and interviews the researcher noted that teachers are not using electronic media during the lesson.

### **5.1.4 The effects of electronic media on students' performance**

About 82% of respondents indicated that the use of electronic media technology in education can improve learners' performance. Only 18% of the teachers highlighted that electronic media cannot improve learners' performance. With support of information from the interviews the researcher found that electronic media improves students performance.

### **5.1.5 The benefits of electronic media to students**

About 89% of teachers show that electronic media technology benefits the students to a larger extent. Only 11% of teachers indicated that electronic media cannot benefit students during the lesson.

### **5.1.6 Ways to improve the implementation of electronic media during the lesson.**

About 89% of respondents highlighted that the school should introduce the electricity substitutes such as generators and solar systems. 53% of the respondents indicated technological development culture as a way to overcome the challenges affects electronic media in schools. 64% of the respondents show that the school should do regular ICT training, 61% indicated technical support as a solution. About 75% of respondents pointed out that school should make electronic media tools available by sourcing funds to buy electronic media equipments.

## **5.2 Conclusion**

Basing on the findings of the research the researcher concludes that electronic media technology is not used at all during the lesson by the teachers. The investigations shows that majority of teachers in Gokwe South District are not using electronic media to conduct lessons. The researcher also concludes that the school should use other sources of power to eradicate the problem of power shortages.

The researcher also concludes that there is need for schools to allocate funds for the purchases of electronic media equipments such as computers and projectors. If possible the school should seek assistance from the government and other nongovernmental organization.

The findings also indicated that the teachers trying to use electronic media technology but encounter some problems such as poor electricity, shortage of electronic media equipments, lack of time and poor infrastructure.

### **5.3 Recommendations**

From the findings of this study and the conclusions reached at, the study suggested the following recommendations:

- 5.3.1** There is need for schools to source adequate funds from government and from non-governmental organizations to buy electronic media tools.
- 5.3.2** Provision of electronic media infrastructure by the government.
- 5.3.3** The school should also persuade with the School Development Committee to buy substitutes for electricity such as generators and solar systems.
- 5.3.4** The school administrators should make sure that seminars, workshops and in service training on how to use electronic media tools in teaching and learning are held regularly.
- 5.3.5** The school heard should make sure that they include technology adoption in the school vision, mission and values such that school culture will put technology at the center.
- 5.3.6** The ministry of Primary and Secondary Education should do inspection to make sure that teachers are using electronic media during the lesson.

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## APPENDICES

### Appendix 1

#### QUESTIONNAIRES FOR TEACHERS

My name is Tumai Kelvin a Post Graduate Diploma in Education student from Midlands State University conducting a research on the effectiveness of electronic media in teaching and learning. I am kindly asking you to answer all questions in the space provided below. I guarantee you that all the information gathered will be treated with confidentiality and will only be used for academic purposes.

Tick on the appropriate box on demographic data.

1. Age group : below 25
- 25 - 30
- 31 - 35
- 36 – 40
- 40 and above

2. Academic and or Professional Qualification

- Certificate in education
- Diploma in education
- Bachelors in education
- Master's in education

Non teaching qualification specify

.....  
.....

3. Working experience

0 – 5 years

6 – 10 years

11 – 15 years

16 years and above

**SECTION A: Electronic media tools used by teachers**

1. Do you use electronic media in the lesson?

Yes

No

2. Please indicate the type of electronic media you have at your school?

<b>Electronic media</b>	<b>Tick</b>
Computers	
Power point projector	
Overhead projector	
Television	
Radio	
DVD	
Printer	

And if any

.....  
.....  
.....



3. How often do you use the following electronic media during the lessons?

- Key 1. Always  
 2. Sometimes  
 3. Not at all

<b>Electronic media</b>	<b>1</b>	<b>2</b>	<b>3</b>
Computers			
Power point projector			
Overhead projector			
Television			
Radio			
DVD			
Printer			

4. For what purpose do you use electronic media in your teaching?

<b>Purpose</b>	<b>Tick</b>
Teaching and learning tool	
Playing games	
Recording of students marks	
Entertainment	
Researching through the internet	

State other purposes if any.....

5. To what extent do you think the following electronic media tools can improve the performance of students?

- Key 1. Not at all      2. Lower extent      3. Large extent

<b>Electronic media</b>	<b>1</b>	<b>2</b>	<b>3</b>
Computers			
Power point projector			
Overhead projector			
Television			
Radio			
DVD			
Printer			



**SECTION C: Ways to overcome challenges faced by teachers in using electronic media**

1 Which of the following ways can be used to address the challenges mentioned in Section B?

<b>Strategies</b>	<b>Tick</b>
Technical support	
Regular teacher training	
Technological development culture	
Electricity substitutes (solar panels )	
Availability of vision and plan	

Other strategies not mentioned above

.....

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## Appendix 2

### Interview guide questions for the teachers

My name is Tumai Kelvin a Post Graduate Diploma in Education student from Midlands State University conducting a research on the effectiveness of electronic media in teaching and learning. I am kindly asking you to answer all questions in the space provided below. I guarantee you that all the information gathered will be treated with confidentiality and will only be used for academic purposes.

1. For how long have you worked for this school?
2. How long have you been using the electronic media tools in classroom
3. Which type of electronic would your school have
4. Did your students benefiting from the electronic media technology used at your school
5. Are you capable to use electronic media in teaching and learning?
6. What do you think are the challenges faced by teachers and school in using the electronic media?
7. In your opinion what do you think should be done to improve the use of electronic media in teaching?
8. In your own view is the electronic media effective in teaching and learning.

## Appendix 3

### Interview guide question for the school heads

My name is Tumai Kelvin a Post Graduate Diploma in Education student from Midlands State University conducting a research on the effectiveness of electronic media in teaching and learning. I am kindly asking you to answer all questions in the space provided below. I guarantee you that all the information gathered will be treated with confidentiality and will only be used for academic purposes.

1. What is your school policy on the use of electronic media in teaching and learning?
2. Which electronic media did you have at your school?
3. Do you supervise your teachers to make sure there is effective use of electronic media in teaching and learning?
4. Do you normally have the staff development to incorporate the use of electronic media in teaching and learning?
5. What challenges do you face as a school as a school in implementing electronic media at your school.
6. Are your students benefiting from using electronic media in teaching and learning?
7. What do you think can be done to improve the usage of electronic media in teaching and learning?
8. How do you rate the effectiveness of electronic media in teaching and learning?

