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# Primary School Teachers' Attitudes towards ICT integration in Social Studies: A Study of Lusaka and Katete Districts

A Dissertation Submitted in Partial Fulfilment of the Requirements for the Degree of Master of Education Social Studies

By

Enala Sharon Lufungulo

The University of Zambia

**2015**

**DECLARATION**

I, the undersigned, hereby declare that this dissertation entitled, '*Primary School Teachers' Attitudes towards ICT Integration in Social Studies: A Study of Lusaka and Katete Districts*' is my original work, and that all the sources I have cited have been acknowledged by means of completed references.

_____ _____

Enala S. Lufungulo Date

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**CERTIFICATE OF APPROVAL**

This dissertation by Enala Sharon Lufungulo is approved as partial fulfilment of the requirements for the award of the Masters of Education (Social Studies) by the University of Zambia.

Examiners' Signatures

1. _____ _____ 2015

2. _____ _____ 2015

3. _____ _____ 2015

## DEDICATION

This study is dedicated to my husband, Exnobert Zulu and my mother, Agness Tembo Lufungulo, for their assiduous support during the period of study.

**ACKNOWLEDGEMENTS**

This Dissertation has been the most momentous, crucial and challenging academic writing I have had to face. Without the assiduous support, patience and guidance of the following, this study would not have been successful. It is to them that I owe and express my deepest gratitude.

- Dr. M. Simuchimba my supervisor, I salute your commitment to work. Despite your many other academic commitments you tirelessly spent time guiding me. Your wisdom, knowledge and intelligence will always inspire and motivate me.
- The University of Zambia Staff Development Office, I appreciate your providence of all necessary facilities and financial support that led to the completion of my studies.
- All primary school teachers, head teachers and pupils who participated in this study with interest and enthusiasm despite their busy schedules.
- Exnobert Zulu, my husband whose support, patience, love and encouragement saw me through the period of this study.
- Agness Tembo Lufungulo, my mother and friend, I am what I am today because of you. You taught me the value of education in its truest sense.
- All friends and colleagues for their encouragement and support during the period of study.

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## ACRONYMS AND ABBREVIATIONS

| | | |
|---|---|---|
| AIDS | - | Acquired Immune Deficiency Syndrome |
| CEs | - | Colleges of Education |
| DEBS | - | District Education Board Secretary |
| FGI | - | Focused Group Interviews |
| HIV | - | Human Immunodeficiency Virus |
| ICT | - | Information and Communication Technology |
| ICT4D | - | Information and Communication technology for development |
| MCT | - | Ministry of Communication and Transport |
| MESVTEE | - | Ministry of Education, Science, Vocational Training and Early Education |
| SOS | - | Serve our Souls |
| SS | - | Social Studies |
| UNDP | - | United Nations Development Programme |
| UNMDG | - | United Nations Millennium Development Goals |

**ABSTRACT**

The thrust of the study was to find out primary school teachers' attitudes towards the integration of ICTs in the teaching and learning of SS. The study targeted schools piloting the e-learning programme with iSchool in Lusaka and Impact Network in Katete district of Zambia. The study was guided by the theory of Diffusion of Innovation which is one of the most referred to theories in studies related to ICT integration in education. Rogers (2003) in his theory emphasises that the adopter's attitude is a crucial factor for adoption of a new technological innovation. Thus teachers' attitudes are responsible for the success or failure of a new innovation in education.

The study used a multiple case study design because as Yin (2009) points out, multiple case designs are likely to produce robust results as compared to single case studies. Data was collected by interviews with head teachers and teachers, focused group interviews with pupils and observations of the lessons. Data was analysed using cross case and thematic analysis methods. The findings compared and contrasted within and between cases suggested that, the most widely used ICT tools in the schools piloting the e-learning programme were Ipads, laptops, speakers, ear phone and projectors used during the audio visual lessons.

Findings also revealed that primary school teachers in Lusaka and Katete held positive views towards the integration of ICT in the teaching and learning of SS. This was mainly attributed to the training they had undergone with iSchool and Impact Network on the usage of ICTs. Although the schools are located in different spatial dimensions, the urban and rural setup, the teachers' attitudes were positive. Furthermore, teachers across the schools regarded ICT as advantageous over traditional methods of instruction and as suitable for the curriculum.

Although the ICTs were available in the schools, they were not adequate to the extent that each pupil could have had one and use at the same time in the classroom. Thus the teachers called on the MESVTEE to subsidize the purchase of ICT tool and resources, as this would benefit both the pupils and teachers.

The study recommends that the MESVTEE should enact the ICT draft policy to guide schools and stakeholders on the Ministry's official position regarding the integration of ICTs in education. Further, the MESVTEE should closely monitor pilot projects in schools to ensure quality. For further research, the study recommends that scholars in the field of Social Studies should explore in detail benefits and challenges of incorporating ICTs in the subject area and also examine consequences of Ipads and Computer screens on the sight of teachers and pupils.

# CHAPTER 1

# INTRODUCTION TO THE STUDY

## 1.0 Introduction

This chapter explains the Background to the Study, Statement of the Problem, Objectives of the Study, Research Questions and Significance of the Study. It also presents the Theoretical Framework and Limitations of the Study.

## 1.1 Background

The world has embraced Information and Communication Technologies (ICTs) as an enabler of social and economic development. Thus, ICTs are receiving focus at various platforms as demonstrated by the UNMDGs and The World Summit on the Information Society (MCT, 2006). In Zambia, its importance in education is demonstrated by its inclusion in the Fifth National Development Plan, 2006 -2010, by the country's participation in the E-African Commission, by the enactment of the ICT policy and, more currently, by the Ministry of Education Draft ICT policy (Mwale, Chilala & Kumar, 2011).

The MESVTEE endeavours to integrate ICT in teaching and learning at all levels to assist improve the quality of education delivery system and provide support to alternative electronic stand alone or distance education systems, thereby increasing access to education (Mwale, Chilala & Kumar, 2011). The ICT policy indicates that in the sphere of education, ICTs have the potential to improve the quality of education. Its vision is to have 'information and communication technology that will contribute towards achieving the objective of providing innovative and productive life long education and training accessible to all by 2030' (Mwale, Chilala & Kumar, 2011: 6). Consequently, the goal for education is to integrate ICTs in the education system.

In line with the policy direction, there are initiatives and projects currently running. They include, 'Computer for Zambian Schools,' a registered trust established by the local educational and ICT specialists, representatives from the British Council, the MESVTEE and Biet Trust; 'School Net Zambia,' an initiative that promotes access to satellite television and video in schools; 'One World Zambia,' involved in lobbying

and advocacy in ICTs for developmental issues, including education; 'iSchool Zambia,' and 'Impact Network'. Additionally, both the University of Zambia and Copperbelt University offer computer science programmes in support of ICTs integration in the social and economic development of the country, including education (Isaacs, 2007).

The nature of SS is such that it emphasises the development of an informed citizenry. Hence, excluding ICTs in the teaching and learning of SS would be a drawback. With a view to improve the teaching and learning of SS, iSchool Zambia and Impact Network were piloting the integration of ICTs in primary schools in Lusaka and Katete districts. In his theory referred to as, 'Diffusion of Innovation,' Rogers (2003) emphasises that the adopters' attitude is a major determinant to the success or failure of a new technological innovation in education. Therefore, there is need to find out primary school teachers' attitudes towards ICTs integration in the teaching and learning of SS.

### 1.2 Statement of the Problem

The government of Zambia visualizes a country transformed into an information and knowledge based society and economy, supported by consistent development and pervasive access to ICTs by all citizens by the year 2030 (Mwale, Chilala & Kumar, 2011). As a result, the ICT policy with regard to education aims at integrating ICTs in the education system, including primary education. Consequently, there have been efforts to promote and facilitate the integration of ICTs in the teaching and learning processes in the primary school curriculum, including SS (MCT, 2006). However, we do not know the attitudes of primary school teachers towards the integration of ICTs in the teaching and learning of SS. Summers (1990) states that teachers' attitudes have a great influence on their acceptance, style of implementation and outcome of using ICTs for teaching. Thus, if attitudes are negative, teachers are less likely to contribute effectively to the integration of ICTs consequently, compromising the teaching and learning of SS. On the other hand, if attitudes are positive, it would be necessary to ensure that they are used effectively and for the right purposes, hence this study.

### 1.3 Purpose of the Study

The purpose of this study was to find out primary school teachers' attitudes towards integration of ICTs in the teaching and learning of SS.

### 1.4 Specific Objectives

The specific objectives of the study were as follows:

a) To establish what ICTs are available in the sampled primary schools.
b) To find out the level of ICTs usage across the curriculum in the sampled schools.
c) To find out teachers' attitudes towards the use of ICTs in the teaching and learning of SS.

### 1.5 General Research Question

What are primary school teachers' attitudes towards integration of ICTs in the teaching and learning of SS?

### 1.6 Research Questions

a) What ICTs are available in the sampled schools?
b) What is the level of ICTs usage across the curriculum in the sampled schools?
c) What is the teachers' attitude towards the use of ICTs in the teaching and learning of SS?

### 1.7 Significance of the Study

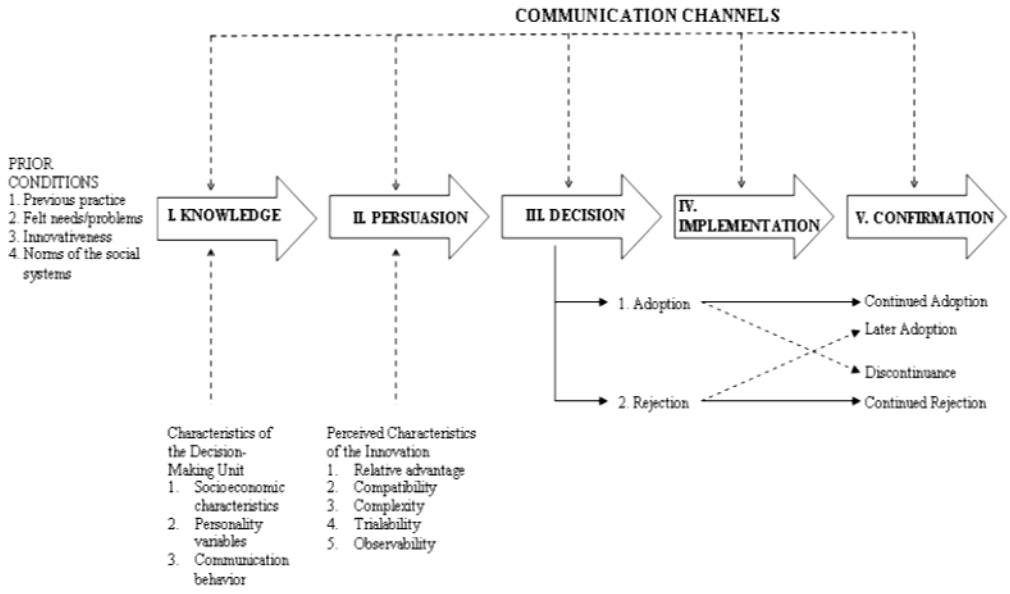
The findings, conclusions and recommendations of this study captured primary school teachers' current attitudes towards ICT integration in the classroom, thereby potentially assisting in policy making, curriculum revision and relevant teacher education. Furthermore, the findings of the study may assist the government of Zambia to achieve its desired standards and vision of having an information and knowledge based society by the year 2030. Additionally, the study may assist schools that have not yet integrated ICTs in the teaching and learning process to make informed decisions. The study may also contribute to existing literature on ICT

integration in the classrooms in Zambia. More importantly, the study may improve pedagogical practices in Social Studies.

### 1.8 Theoretical Framework

This study was guided by the Diffusion of Innovation theory (Rogers, 2003), which provides a theoretical framework to ICT integration in education. In this theory, Rogers (2003) stresses the user's attitude towards a new technology or innovation. He states that a person goes through five stages while deciding on the adoption or rejection of an innovation. These stages are as follows: (1) Knowledge (2) Persuasion (3) Decision (4) Implementation (5) Confirmation. The stages typically follow each other in a time-ordered manner. This process is shown in figure 1.

**Figure 1 The Innovation-Decision Process**




Source: Sahin (2006: 15)

In this case, for primary school teachers to either adopt or reject a new innovation such as the use of ICT in teaching SS, they would first need to be knowledgeable by training, understand why they are using the new innovation by persuasion, and then decide on whether to adopt or reject it. If they do accept it then it can be implemented and confirmed.

The theory holds that the individuals' level of knowledge on the target technology is a crucial determinant for technology adoption, while the persuasion stage is related to the user's attitude; that these two stages are important because they precede the decision stage. Sahin-Kizil (2011) says that an individuals' level of knowledge affects his attitude and that these two stages together lead the individual to adopt or reject the target technology. The theory further holds that stages four and five occur in the case of adoption.

In an effort to understand the teachers' attitudes towards ICT integration in Social Studies in Zambian primary schools, the study measured its respondents against the following five perceived characterists of technology as identified in Figure: 1. these enable the adopters to either adopt a technology or reject it.

1. Relative advantage; teachers should show that the target technology has an advantage over precious innovations for it to be accepted.
2. Compatibility; teachers should reveal that usage of ICTs to teach SS is compatible with existing teaching practices.
3. Observability; teachers should indicate that the use of ICTs in teaching of SS produces observable results.
4. Complexity; teachers should reveal that the use of ICTs is not difficult and complicated for them.
5. Trialibility; the sites selected for the study, were under pilot for the e-learning Project. Therefore, at the time of the study, teachers had already had the experience with ICTs.

The above points helped the current study to clearly explain primary school teachers' attitudes towards ICT integration in SS.

### 1.9 Limitations

Unlike in quantitative surveys where the researcher makes generalisations and inferences about a population on the basis of empirical data collected about a sample, in most case study designs, statistical generalisations of the results does not apply. This is so because cases are not sample units but rather individual cases selected as a

laboratory (Yin, 2009). A quantitative researcher may argue that this is a limitation for case study designs. However, under these circumstances, the mode of generalisation is analytical in which a previously developed theory is used as a template with which to compare the empirical results for case studies.

The second limitation was that some respondents could not articulate issues properly even in their local languages. Consequently, the researcher may not have gotten as much information as expected from some respondents.

The third and related limitation was that in some cases, respondents were not willing to spend much time with the researcher because they had busy schedules. This may have affected the quality of the data collected since the respondents may have left out important information as they articulated their position on the different issues discussed.

In this chapter, I have explained the background to the study, stated the specific problem, outlined the purpose of the study, specific objectives, research questions, significance of the study, theoretical framework and limitations of the study. The subsequent chapter reviews relevant Global, African and Zambian literature on the topic.

# CHAPTER 2

# LITERATURE REVIEW

## 2.0 Introduction

This chapter reviews studies and other related literature on the topic of study. The discussion of literature has been done under the following headings: Global studies, African Studies and Zambian studies.

## 2.1 Global Studies

The general domain regarding ICTs in schools has gathered significant research momentum in the recent years (Selwood & Pilkington, 2005). Studies about the integration of ICTs in the classrooms have been conducted in many parts of the world. However, only pint-sized research has been done in Zambia. This study will try to reduce the gap.

Windschitl (2002) observes that in the 21st century, the new vision of education is to make learning accessible to all, but it is hard to achieve this goal through the use of traditional methods. Hence, there is increasing demand for technology innovations in teaching and learning approaches. That is why pedagogies of school reform are now highly influenced by and built around constructivist theories of learning that assume the use of technology in education.

Most scholars in Zambia agree with Windschitl's observation. For instance, Mwale, Chilala and Kumar (2011) state that the MESVTEE endeavours to integrate ICT in teaching and learning at all levels to assist improve the quality of education delivery system. Furthermore, the MESVTEE endeavours to transform the country into an information knowledge based society and economy, supported by consistent development and pervasive access to ICTs by all citizens by the year 2030. The vision of the government of Zambia which is in line with Windschitl's (2002) observations gave the researcher ground on which to carry out this study.

One theoretical foundation that has promise for framing the discussion of integration of technology and social studies is constructivism. Upon entering the third

Millennium, it is hard to ignore the pervasiveness of information technology within education, on both a national and international level (Doolittle and Hicks, 2003). Constructivism is a learning theory based on the notion that people are active knowledge seekers powered by innate curiosity (Sunal and Hass, 2000). Thus, constructivism challenges the traditional goals of education and proposes re-structured and innovative teaching approaches such as ICTs (Ayas, 2006). Constructivism essentially endorses the idea that the learner constructs his or her own knowledge by use of new forms of pedagogies such as ICTs (Doolittle and Hicks, 2003; Rice and Wilson, 1999; Roblyer and Edwards, 2000; Sunal and Hass, 2002; Windschitl, 2002).

Globally and locally scholars hold the above-mentioned views. The researcher will build on these views, by investigating ICTs integration in SS in primary education, thereby adding to the scanty Zambian literature. Additionally, the study will try to establish whether primary school teachers in Lusaka and Katete agree that learners need to be taught using constructivist approaches in an effort to improve the teaching and learning of SS.

Research shows that teachers tend to teach the way that they were taught (Ball, 1990; Lortie, 1975). Therefore, if we expect teachers to teach in a constructivist way using technology, we need to teach and train them in constructivist ways using technology (Vrasid and McIsaac, 2001). Technology can help reform education and the education system needs to be reformed for successful technology integration.

The studies by Ball (1990) and Lortie (1975) are similar to the current study because they address the issue of teacher training. Among other things, the researcher seeks to find out and understand the professional training primary school teachers in Lusaka and Katete districts have undergone in ICTs usage and how this training influences their attitude.

AL- Zaidiyean *et al* (2010) suggests that teachers' beliefs, practices and attitudes are important for understanding and improving the educational process. They shape students' learning environment and influence students motivation and achievement. In

addition, Albirini (2006) postulates that teachers' attitudes are considered as a major predictor of the use of new technology in the educational settings.

Al-Zaidiyean *et al* (2010) and Albirini (2006) suggest that teachers' attitudes are important if the teaching and learning process is to be successful. The current study will attempt to confirm Al-Zaidiyean *et al* (2010) and Albirini's (2006) findings by exploring the matter using teachers from Lusaka and Katete districts implementing the e-learning project in the teaching and learning of SS.

In his study, Ayas (2006) notes that it is almost impossible to ignore the pervasiveness of information technology within education and that technology has become a valuable resource to educators. Similarly, Almekhlafi and Almeqdadi (2010) asset that technology integration in the classroom has become an important aspect of successful teaching because it allows students to learn more in less time and allows schools to focus on global learning environments if used appropriately. Consequently, many researchers have tried to investigate such integration (Zhao, 2007; Almekhlafi and Almeqdadi, 2010; Ayas, 2006; Isaacs, 2007 and Monteith, 2004).

In their study, Ayas (2006), Almekhlafi and Almeqdadi (2010) established that it is impossible to ignore the pervasiveness of ICTs in education as it is a vital tool for successful teaching. Like the study above, this study will endeavour to understand whether teachers in Lusaka and Katete districts agree with Ayas (2006), Almekhlafi and Almeqdadi's (2010) statement. The study will further try to establish whether teachers believe that ICTs can change education for the better and whether they can advocate for the integration of ICTs in the teaching of SS in primary education. This is important because it will help the researcher clearly explain teachers' attitudes towards ICTs integration in the teaching of SS in primary schools.

According to Lam and Lawrence (2006), technology not only gives learners the opportunity to control their own learning process, but also provides them with ready access to a vast amount of information over which the teacher has no control. During the 20th century, education embraced technology believing that, education technology could facilitate unique learning environments or contribute unique features to make

traditional learning more powerful and effective. Technology promised smarter, better educated and more fulfilled learners (Jonassen, 2000).

The significance of the works by Lam and Lawrence (2006) and Jonassen (2000) is that they touch on aspects that the researcher will explore. The current study attempts to establish whether teachers in Lusaka and Katete also appreciate ICTs for its potential to enable leaners control their learninng environments. This study will further attempt to determine whether teachers appreciate that ICTs enable both teachers and pupils have access to a vast amount of information. It is possible that research findings for this study may differ since the study is conducted from a Zambian context. Unlike the United States that is technologically advanced and developed, Zambia is a developing country that may not have ICTs integration in the schools as a priority area needing for attention hence the need to conduct this study.

A comprehensive study by Mason *et al* (2000) presented guidelines for the use of technology within Social Studies Education, suggesting that Social Studies educators need to focus on (a) utilising technology to engage students in learning experiences that are impossible without it, (b) integrating technology to support student learning not just to teach technology skills, (c) reducing the digital divide, while presenting learning experiences with technology that encourages critical thinking and decision-making skills in all students, (d) developing the knowledge and skills necessary for students to be active and productive citizens in a democratic society, and (e) conducting ongoing investigations of how technology can be used to enhance teaching and learning in the social studies.

Masons *et al'*s (2000) study is similar to the current study in that both studies focus on the use of ICTs in Social Studies education. While focusing on some of the aspects pointed out in Masons' study, the current study will further attempt to understand in detail the attitudes teachers hold with regard the integration of ICTs in the teaching and learning of SS.

Some studies like Zhao (2007) showed that some teachers use technology for its efficiency, some embraced it for the enhancement of their instructional practice and

student enhanced learning, still others use it for relaxation and consider the use of technology as a win-win situation for themselves and their students.

The foregoing study is essential because it will provide an opportunity for the current study to make comparisons between findings from other countries and those from Zambia. However, Zhao's (2007) study did not consider views from teachers in the rural areas which this study does. It is imperative for the current study to explore primary school teachers' attitudes towards ICTs integration in the classroom from a rural dimension because most people have misconceptions about rural areas. The current study will also look at competencies that teachers have in ICTs, availability of ICTs in schools and the level of ICT integration within and between schools.

In another study conducted by Cano and Garcia (2013) the aim was to evaluate and analyse strategies, proposals and ICT tools to promote a paradigm shift in education supervision that enhances the schools in Spain, that were involved not only in teaching face learning but e-learning and blended learning.

While the foregoing study was focusing on developing a new model that would complement the traditional models in education supervision, this study differs from the foregoing in that while the both are looking at ICTs in the education system, the current study focuses on the teachers' attitudes towards the integration of ICTs in the teaching and learning processes. However, both studies were promoting a paradigm shift from the traditional forms of pedagogy to the modern forms (ICTs).

### 2.2 African Studies

In his study on the role of ICTs in education, Mikre (2011) concludes that regardless of all the limitations characterising it, ICT benefits education systems by providing quality education in alignment with constructivism, which is a contemporary paradigm of learning.

Mikre's (2011) study is important because it has the same basis as the current study. This study will strive to explore whether primary schools in Lusaka and Katete understand the limitations ICTs have in the teaching of SS and whether with these

limitations teachers still have positive attitudes towards the integration of the same (ICTs) in teaching SS.

In yet another study conducted by Arinze *et al*. (2012), the study investigated the availability of ICTs in school, skills competence of junior secondary school students and the influence of the application of ICT innovations in teaching and learning of SS in the academic performance of students. The findings of this study showed that the ICT availability in the secondary schools was low and students had low competence in the application of ICTs in learning SS.

The study by Arinze *et al* (2012) is similar to the current study because both studies looked at the availability of ICTs in school. However it is different from the current study because while it focused on secondary schools in West Africa and investigating competence levels of students in the application of ICTs in the learning of SS, this particular study focused on primary schools in Zambia, Lusaka and Katete districts. It also not only focused on availability of ICTs in Schools but also the teachers' attitudes towards the integration of ICTs in the teaching of SS.

In his study called, 'Understanding the Importance, Impacts and Barriers of ICT on Teaching and Learning in East Africa Countries' (Tedla, 2012) explored internal and external factors that surround ICT issues, policies of ICT integration, and factors that facilitate or impede the use of ICTs, with the focus of improving the quality of the teaching-learning process. The study revealed that the inhibiting factors are unrealistic policies of ICT, poor infrastructure, lack of teacher competence, confidence, incentive, perception and beliefs, imposed curriculum, lack of proper network, political instability, brain drain, sporadic electricity, poor transportation, lack of public awareness and participation, poor school leadership, technological illiteracy, and lack of pedagogical skills. The study further revealed that ICT integration was far behind in East African schools as a consequence of ICT deficiency, absence of pre-service and in-service teacher training and poor teachers' welfare and morale.

The foregoing study is essential because it guides the current study on what to focus on and what questions to ask in understanding primary school teachers' attitudes

towards ICT integration in the classroom in general and the teaching of SS in particular. Tedla focused on a number of policy issues which do not concern this study. Thus my study differs from that of Tedla (2012) in that it largely focuses on issues that affect teachers' attitudes towards ICTs integration in the teaching and learning of SS and not necessarily problems surrounding ICTs in education. Nevertheless, his study helps the current study to establish, from a Zambian perspective, what benefits and minuses ICTs infusion has in the classroom.

### 2.3 Zambian Studies

In Zambia research on ICTs integration in the classroom is pint sized. However, there are related studies we can refer to.

For example, Hennessy *et al* (2011) conducted a study called, 'An investigation of Appropriate New Technologies to support Interactive Teaching in Zambian Schools.' This study sought to determine what suitable ICTs were currently available or likely to be available in the near future, and what factors needed to be considered in making choices for primary education.

Hennessy et *al*'s (2011) study gives premise on which my study stands. My study capitalises on the fact that Hennessy's (2011) study did not raise any attitude related issues with regard to the usage of new technologies by the teachers. The attitudes of the teachers will thus be examined in detail in this study.

Similarly, in his study, entitled 'Integration of Information and Communication Technologies (ICTs) in the Teaching Process in selected Colleges of Education in Zambia,' Kangwa (2011) investigated the extent to which ICT are integrated in the teaching process in selected colleges of education (CEs) and the effect of integration. He concludes that there is a general lack of adequate knowledge on effective use of ICTs in the teaching process, majority of lecturers who integrate ICTs in their teaching only use it in PowerPoint presentations and that ICTs equipment is inadequate in most colleges of education while internet connectivity is unreliable and most lecturers in CEs are in the emerging stage of ICT integration in the teaching process. He adds that

countries that have made significant advances in ICT integration in education have policies in place and well defined curricula on ICT integration.

While Kangwa (2011) focused on colleges of education and how they integrated ICTs in teaching, this study focuses on primary schools and the teachers' attitudes towards ICT integration in the teaching of SS. The current study actually examines teachers who use e-learning to teach their classes. This means that they have a hands-on experience with ICTs and thus are in a position to give reliable views with regard the integration of ICTs in teaching of SS. Like his study, the current study will establish what technologies are available in teaching and learning process with a focus on primary schools in Lusaka and Katete districts.

In a study called 'ICT in Education in Zambia' conducted in 2007, Isaacs (2007) concluded that penetration levels of ICTs in Zambia's education institutions remained low, with those schools that are equipped mostly utilising second-hand and refurbished computers. The integration of ICTs in teaching and learning practice has been limited, although the introduction of Computer Studies as a school curriculum subject has begun to change this.

The foregoing is an important study as it gives the current study an opportunity to find out what ICTs are available in the schools and the level of usage across the curriculum. The current study, therefore, examined in detail the ICTs available in the schools piloting the e-learning programme so as to determine whether Isaacs' (2007) conclusion stands in all cases.

Mtanga *et al* (2012) conducted a study on the use of ICTs in education in selected urban based high schools in Lusaka, while Chaamwe (2012) did a research on Information and Communication Technologies (ICTs) for Zambia's Distance Education. Both studies concluded that the major challenges include teachers' inexperience and unwillingness to adopt ICTs in their teaching activities and the state of ICTs infrastructure in Zambia which was scanty and expensive.

The studies by Mtanga *et al* (2012) and Chaamwe (2012) are generally in line with what the current study will do. Thus they provide a back ground to this study.

However, the current study does not only look at the use of ICTs in education but largely focuses on the attitudes of the end users who are the teachers.

A study conducted by Khosla (2013) whose title was 'iSchool: Transformative learning in the Zambian classroom.' Studied iSchool a stand-alone company in Zambia founded in 2010 whose core business is the production and sale of e-learning products which are produced and distributed by the company and targeted at school children across all income levels. The study was basically gauging the use of the iSchool products (Tablet and projectors) in School. The conclusion was that though daunting challenges remain, through its e-learning programme, iSchool has ambition and potential to change the way education is delivered in Zambia.

Khosla's (2013) study was examining iSchool as a company, its business, prospects and the impact its products have in the education system in Zambia. This study is different from the foregoing study in that apart from investigating the available ICTs in iSchool's pilot schools, it also studied How ICT are used in the schools across the curriculum and also focused on the teachers' attitudes towards the integration of ICTs in the teaching of SS.

In conclusion, this chapter has discussed related literature on the topic and problem under study using the following headings: Global related Literature, African Studies and Zambian Studies. What has come out clearly in the literature are; the main arguments, deductions, conclusions and recommendations by various scholars and researchers. The literature has also been linked to my study by way of highlighting similarities, differences, meanings, relationships and gaps that exist. The next chapter will discuss the methodology of the study.

# CHAPTER 3

# METHODOLOGY

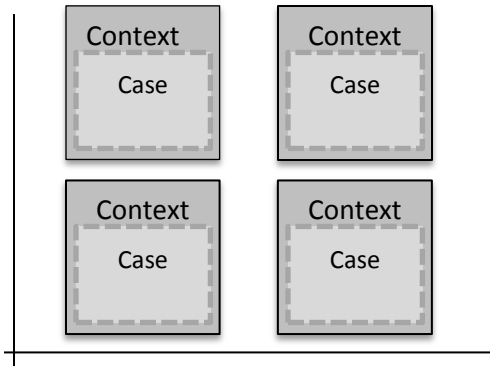
## 3.0 Introduction

The aim of this chapter is to describe the design and methodology that were employed in collecting, processing and analysing data for this study. It will also describe the research sites for the study.

## 3.1 Research Design

The study largely used qualitative methods and instruments of data collection, processing and analysis. This is so because the study focused on the way primary school teachers interpret and make sense of their experiences with ICTs in the teaching of SS. According to Atkinson *et al*. (2001), Qualitative research is an 'umbrella term' and a number of different approaches exist within the wider framework of this type of research. In this regard, a holistic multiple case study design as shown in Figure: 2 was employed in this study.

**Figure: 2 Holistic Multiple - Case Design**




Source: Yin (2003:46)

The reason for a multiple case study is not as the quantitative oriented researcher might assume that the sample is bigger. Instead as Yin (2009) notes the reason lies in other important aspects. First, the usage of multiple cases should be regarded as similar to the replication of an experiment or study. This means that the conclusions from one case should be compared and contrasted with the results from the other

cases. Secondly, the selection of cases for multiple cases is categorised into two types; the literal replications and the theoretical replication. The literal replications mean that the cases selected are similar and the predicted results are similar too. The theoretical replication means that the cases are selected based on the assumption that they will produce contradictory results.

The researcher chose multiple cases on the basis that the design would yield literal replications. Bengtsson (1999) espouses that in multiple case studies one goal is to build a general explanation model that fits each of the cases in the study even though the cases vary in detail.

Thus, in this study each study site was considered as a single case. It is imperative to note that in case studies, it is sometimes difficult to differentiate between the case and the context in which it is found. Cohen (2007) and Yin (2009) explain that a case is generally a bounded entity (a person, organisation, behavioral condition, event or other social phenomenon) however, as shown in Figure: 2 the boundary between the case and its contextual condition in both spatial and temporal dimensions may be blurred. Similarly, in this study, there appears to be a nebulous line between the teachers' attitudes towards ICTs integration in the classroom, which is the case under study, and the spatial context where the teacher operates.

Nevertheless, a multiple case study was found to be appropriate for this study because two different spatial contexts were selected that is urban and rural areas. The researcher purposely chooses these variables to enrich the findings.

The other reason for choosing a multiple case study design was that it treated teachers from different schools in the same way. Yin (2009) points out that if one studies two or more organisations in the same manner, he or she would have a multiple-case study. He adds that the multiple-case design is usually more difficult to implement than a single-case design, but the ensuing data can provide greater confidence in the findings.

### 3.2 Study Sites and Setting

Two schools in Lusaka district (SOS and Tico) and one school in Katete district (Waseka) were chosen as study sites for this study because some schools in these districts were chosen as pilot schools by iSchool and Impact Network for the e-learning programme. The researcher chose two schools from Lusaka and one school in Katete so as to establish whether or not there was a variation in the attitudes between urban-based and rural-based primary school teachers with regard to the integration of ICTs in the teaching of SS. Baxter and Jack (2008) point out that case studies also take into consideration how a phenomenon is influenced by the context within which it is situated. The contextual background of the three schools is provided in the subsequent paragraphs.

#### SOS Children's Village

SOS Children's Village is a non-governmental Child Welfare Organisation affiliated to SOS Children's Village International, which was established in 1949. The SOS Children's Village opened the first village along the Great North Road in Lusaka, the capital city of Zambia in 1999. Over the years, SOS Children's Village has been working to harness the potential of ICT for transformative change. As a result, it sought the assistance of a professional consultancy firm called Accenture, to help it re-align the programmes of the organisation to include the component of ICT for purposes of efficiency and effectiveness in its service delivery to the intended beneficiary, the child. Due to this interest, SOS Children's Village Zambia, has partnered with companies like iSchool with which they are running the e-Learning Project, and Camara Zambia which donated laptops and desktops computers. Both iSchool and Camara Zambia provide ICT training to the teachers at SOS. Consequently, SOS Children's Village Zambia has embraced ICT4D in order to score a numbers of successes, the main one being to create an enabling environment and provide equal opportunities to every child. SOS is a modern school that has primary and secondary school sections. Its teachers are well trained and hold certificate, diploma and degree qualifications from colleges of education and universities.

### Tico Community School

Tico Community School is located in Ng'ombe Township, a densely populated area in Lusaka. Tico began as an education centre for mothers that had malnourished babies. As these babies grew, the centre saw the need to open a nursery school and by 2004 it became a fully-fledged primary school. Later, like SOS, Tico became one of seven schools iSchool took on as a pilot school for the integration of ICTs (e-learning) in Zambia, making it one of the first schools to implement iSchool's innovative approach of integrating ICTs in the teaching and learning processes in education. Unlike SOS, Tico does not have many partnerships apart from its links with iSchool and only has a primary section (pre-school – grade 7). Distinct from SOS, Tico Community School has a mixture of trained and untrained teachers both integrating the use of ICTs in the classroom. Akin to SOS, Tico has integrated the e-learning programme by iSchool from grades 1-4 in the teaching and learning processes to ensure efficient and effective delivery of lessons.

### WASEKA Primary School

Waseka Community School is found in Katete district and was originally constructed by Care International. After the school fell into disrepair, Impact Network adopted it in 2013 and implemented the eSchool 360, a holistic solution that empowers teachers by providing them with daily lessons delivered through a tablet and projector (e-learning). Impact Network has partnered with iSchool in training and supplying the teachers with ICTs at the school. Waseka is located in Azele Guze village, which is about 490 kilometres away from Lusaka, and is along the Great East Road. It is among the ten schools in Katete rural that are running the eSchool 360 Project. Waseka is a relatively small school in size and capacity as it only runs from pre-school to grade 6. The programmes at Waseka are exactly as those at SOS and Tico. Waseka serves children from Azele Guze village and other surrounding villages and only has 3 teachers, the head teacher and the eSchool Project Manager. The three teachers are not trained teachers but grade 12 school leavers. The only training they have had after school is the use of ICTs provided by Impact Network and iSchool.

### 3.3 Population

Polit and Hungler (1999) refer to the population as an aggregate or totality of all the objects, subjects or members that conform to a set of specifications. In this study, the population consisted of all pilot primary schools, primary school teachers, primary school head teachers and pupils in Lusaka and Katete.

### 3.4 Target Population

All primary schools teachers, head teachers and pupils from SOS Children Village, Tico Community School, and Waseka Primary School in Lusaka and Katete, respectively, constituted the target population for this study. This target population was considered to be ideal because it was directly involved in the integration of ICTs in the teaching and learning processes in the primary school curriculum, including SS.

### 3.5 Sample Size

The sample size for the study included 29 respondents. These were drawn from 3 schools: 2 in Lusaka district and 1 in Katete district. Of the 29 respondents, 12 were pupils comprising of 6 girls and 6 boys, 14 were teachers comprising 5 males and 9 females, and 3 were head teachers comprising 2 females and 1 male. The breakdown of the sample was as follows: SOS School in Lusaka had a female head teacher, 5 teachers, (3 females and 2 males) and 4 pupils, (2 females and 2 males). Tico School in Lusaka has a female head teacher, 5 teachers (1 male and 4 females) and 4 pupils, (2 females and 2 males). Waseka Primary School in Katete had a male head teacher, 4 teachers (1 female and 3 male) and 4 pupils (2 females and 2 males).

### 3.6 Sampling Procedure

The researcher used simple random sampling and purposive sampling techniques. Purposive sampling was used to sample schools because the researcher only considered schools piloting the e-learning programme, especially those that were easily accessible. Head teachers and teachers teaching grades 1-4 in the e-learning pilot schools were also purposively sampled because they had the information the researcher wanted. According to Coyne (1997) the logic and power of purposeful sampling lies in selecting information rich cases for the study in depth. Head teachers

were included in this sample because they play the supervisory and administrative role in their schools. Their opinions on teachers' attitude towards the integration of ICTs in the teaching of SS were of great importance to this study. Similarly, teachers were selected on the basis of being directly involved in the implementation of the e-learning programme in their schools and thus in the integration of ICTs in SS. Simple random sampling was used to select the pupils so that each pupil in the classroom could have an equal probability of been selected. This tends to yield a representative sample (Teddlie and Yu, 2007). The pupils were involved because they are taught by teachers under study and were thus in a position to mention how the teachers use ICTs in the classrooms.

### 3.7 Data Collection Methods

Lesson observation, One to one interviews, and Focus group interviews, were used in this study.

#### 3.7.1 One - to - One interviews

Interviews are questions asked orally (Kombo and Tromp, 2006). One to one interviews were used to collect data from teachers and head teachers. One to one interviews were used on the basis that qualitative inquiry usually produces in-depth data. It is from the thick description that the researcher was able to understand primary school teachers' attitudes towards the integration of ICTs in the teaching of SS. The Structured interview was chosen by the researcher because of its reliability in eliciting quality information. Structured interviews are reliable and the quality of the information obtained is high because each informant is subjected to similar questions with the others (Kombo and Tromp, 2009).

#### 3.7.2 Focus group interviews (FGI)

Focused Group Interviews were used to collect information from pupils. Pupils' informed the researcher on the teachers' practices and use of ICTs in the classroom. The FGI were conducted at all the three schools. A total number of 12 pupils were interviewed. FGIs were used because they help in collecting the information quickly and are good for identifying and exploring beliefs, ideas or opinions. The FGI method

is designed to obtain information on participants' beliefs and perceptions on a defined area of interest (Kombo and Tromp, 2006). The rationale for choosing the FGI for pupils was to help the pupils feel comfortable to express their opinions in the presence of their peers were in this regard helped create a natural environment for them

### 3.7.3 Lesson observation

The researcher observed 2 lessons in grade 1- 4 classes in each school. This is because 'observations enable the researcher to see things that might otherwise be unconsciously missed, to discover things that participants might not freely talk about in interview situations' (Cohen, 2007: 305). Only grades 1-4 were selected for observation because it is in these classes that are targeted by the e- learning project. In the words of Cohen a structured observation will know in advance what it is looking for and will have its observation categorise worked out in advance.

## 3.8 Research instruments

The instruments used in collecting data were as follows: A structured interview guide for the one-to-one discussion with teachers and head teachers as per appendix 1, an interview schedule for the focused group interviews with the pupils as per appendix 2, and a structured lesson observation sheet as per appendix 3.

## 3.9 Research Tools

The tools used were a recorder, field note book, pens and pencils.

## 3.10 Data Collection Procedure

As stated above, data was collected through interviews, focus group interviews and lesson observations. Consent was sought from DEBS, iSchool e-learning Director, and head teachers before conducting research in selected primary schools in Lusaka and Katete districts. The researcher also sought the head teachers', teachers' and pupils' consent before interviewing them. All head teachers, teachers and pupils selected to be in the study agreed to be interviewed and observed. However, one head teacher refused to sign the consent form but this did not affect his participation in the study. The researcher did not use a research assistant.

### 3.11 Validity

Validity is important for effective research. If a piece of research is invalid then it is worthless (Cohen *et al*, 2007). Apart from ensuring that the instruments used in this study measured what they purported to measure, validity was addressed through member checking, the honesty, depth, richness and scope of the data. This was achieved by ensuring that, as much as possible, the researcher presented data as it was given and focused on the issues at hand. The researcher was as objective as possible and was supervised by an expert, who provided substantive guidance during the entire research. Bearing in mind that this was largely a qualitative study, the subjectivity of the researcher, her opinions, attitudes and perspectives as well as those of the respondents together contribute to a degree of bias. Therefore, validity then should be seen as a matter of degree rather than as an absolute state (Cohen *et al*, 2007).

### 3.12 Reliability

Reliability is essentially a synonym for consistency and replicability over time, over instruments, and over groups of respondents. For example, a reliable instrument for a piece of research will yield similar data from similar respondents over time. It is therefore concerned with precision and accuracy. However, it is imperative to note that while some features such as available ICT tools can be measured precisely, others such as ability to use ICT tools may not be measured precisely. For research to be reliable it must demonstrate that if it were to be carried out on a similar group of respondents in a similar context then similar results would be found (Cohen *et al*, 2007). This study tried to achieve reliability by employing a multiple case study and also by use of instrument triangulation. The study was conducted in three different places in the same way with the aim of replicating the data.

### 3.13 Data Processing and Analysis

The first stage in the data analysis was to give a detailed description of the setting and individuals involved in the study because it is a requirement for case studies analysis (Creswell, 2009).

Further data analysis was done by use of qualitative techniques. Qualitative techniques were used because the study largely employed qualitative methods and instruments of data collection which yielded thick descriptions and detailed information of the cases under study. The strategy the researcher used to analyse the data was a cross case synthesis or analysis because the study employed a multiple case design. This technique is relevant especially for two or more cases and the analysis is likely to be easier and findings likely to be more robust than having a single case (Yin, 2009).

The data obtained was analysed by reading through it repeatedly so as to code the data into themes and sub themes and then aggregating findings across individual cases studied. Further, as Yin (2009) advices, the researcher studied the outputs to determine whether any meaningful patterns emerged. In addition, after having a general sense of the information, Creswell (2009) suggest that the researcher should then reflect on the general meaning of the overall information. Finally, conclusions from one study were compared and contrasted with results from the other studies

In conclusion, this chapter, has discussed three major components of the study namely, research design, research methods and data analysis. The research methodology and procedures discussed in this chapter were applied in the collection and analysis of data for chapters 4 and 5.

# CHAPTER 4

# PRESENTATION OF FINDINGS

## 4.0 Introduction

Chapter 4 presents the findings of the study. The study employed a multiple case study design, which requires that data from each study site are reported independently. The different site names have therefore been used as headings under which responses to the research questions stated in chapter from participants will be given. Before concluding the chapter, results from the three sites will be compared and contrasted.

## 4.1 SOS Children's Village

The researcher presents details as observed and as availed from the head teacher, teachers and pupils pertaining to teachers' views towards ICTs integration in the teaching and learning of SS.

### 4.1.2 Head teacher

In order to understand primary school teachers' attitudes towards ICT integration in the teaching of SS, the head teacher who is the teachers' supervisor was interviewed.

In response to the question on what ICTs were available in the school? The head teacher said that the school had general ICTs which were used to teach children from grade 1 - 8. She further said that the school had a special programme under iSchool where the children from grade 1 - 4 learned through e-learning. She added that iSchool had provided the school with Ipads, projectors, speakers and earphones which were used for that purpose. She indicated that the school had also partnered with Camara Zambia, which had also donated about 90 computers and 20 laptops to the school.

On the question, what is the level of ICT usage across the curriculum in the school? Her response was that ICTs were used in the classroom to teach SS and other subjects. She said ICTs were a method the school was using to teach the content of the syllabuses. The ICT tools used by the school were those provided by iSchool which had lessons loaded on them for easy delivery of the lessons. She also said that both teachers and pupils use the Ipads during lessons. She further reported that as a school

they valued the used of ICTs and were using them in the curriculum to help them attain educational outcomes. The head teacher was also asked whether her teachers and pupils had undergone any training in the use of the available ICTs in the school. In response the head teacher said:

> "The teachers have been trained by iSchool on the usage of ICTs in the classroom. Every term when we open schools both old and new teachers attend workshops organised by iSchool which run for three to four days on the usage of ICTs in the classroom. We also have an ICT teacher who teaches the children about ICTs."

She added that the school had a programme called ICT4D which started in 2009 and would end in 2016. Under this programme, every member of staff undergoes ICT training. This has enabled all members of staff at SOS to be trained in this area. These trainings take place during holidays and the teachers determine which area they want to be trained in. The head teacher gave an example of the April 2014 holiday when the teachers decided to learn excel and spreadsheet.

In responding to whether the MESVTEE supports the use of ICTs in schools, the head teacher confirmed that her school was being used as a pilot project by iSchool and Camara Zambia under the authority of the MESVTEE. The head teacher further indicated that the MESVTEE had partnered with iSchool and Camara Zambia to ensure that teachers were knowledgeable in ICTs. It was her view that this clearly showed that the government was interested in ICTs integration in the schools.

As regards the question, what are the teachers' views on the use of ICTs in the teaching and learning of SS? The head teacher informed the researcher that teachers in both the primary and secondary school sections were very excited because they now use projectors to teach. She reported that teachers felt that it was faster and easier for them to use ICTs in the teaching and learning process than using the chalk board. In addition, she said that it was very important to integrate ICTs in the schools, as they made the world smaller and made research easy. She indicated that as a teacher, one was able to share with other teachers the knowledge that one got from other countries. She would thus encourage everyone to use ICTs. She was of the view that the teachers at SOS were very fortunate because when they went for meetings and were requested

to furnish the facilitators with their email addresses, they easily did so. With email addresses it is easy for them to communicate with whoever they want and can obtain any information sent to them through emails because of ICTs.

The researcher observed that the head teacher at SOS was knowledgeable about ICTs and conducted most of her work using ICTs. It was also evident that the rest of the school was stocked with ICT equipment that was used for teaching, learning and administrative purposes.

### 4.1.3 Teachers

As people who are directly involved in the integration of ICTs in the teaching and learning of SS, teachers were also interviewed in order to ascertain the existence of ICTs in the school as well as to capture their attitudes towards ICTs in the teaching and learning process.

In response to the question on what ICTs were available in the schools? The 5 teachers interviewed said that they had the e-learning programme which involved the use of electronic media and information in education. They reported that the equipment available in the school included Ipads which they also referred to as Zpads or Tablets, earphones speakers and projectors.

When asked to describe the ICT professional development programmes they had undergone, most of the teachers reported that they had been trained on Power Point Presentation, Microsoft Word and use of the projector by iSchool and Camara Zambia. They said that the first training was conducted by iSchool Zambia in 2012. In 2013 and 2014 they had a review of the training and were trained on the use of Ipads since they were changing from using the pupils' classmate (laptops) to using tablets or Ipads. One of the teachers said that Ipads worked better than classmates because classmates always required internet and in the absence of internet they became ineffective, thereby disrupting the teaching process. Responding to the question on training, another teacher (student) added that:

> "ICT is part of our course at Kitwe College of Education. It is part of the educational and professional studies; it is a module. Under that module we are

> taught on how to handle ICTs as a medium which we can use to teach learners."

In answering the question, what is the level of ICT usage across the curriculum in the school? Teachers confirmed that as a school, SOS had a planned programme where ICTs had been integrated in the curriculum. They said that ICTs were used as a method of teaching and learning not only SS but other subjects as well. ICTs were used as a method of delivering the content of the subject syllabuses. Teachers informed the researcher that both pupils and teachers used Ipads during class time and sometimes outside class time. One of the teachers alluded to the fact that all lessons, work plans and schemes of work were uploaded on the Ipads by iSchool thus making teaching and learning easy and interesting. Teachers reported that the use of ICTs helped them to achieve educational objectives and outcomes because after the introduction of ICTs, they produced shaper and better informed pupils. Yet another teacher confessed that he was now more informed due to the use of ICTs.

In praising, the efficacy of ICTs and elaborating the extent of their usage, another teacher had the following to say:

> "The teachers' tablets already have the lesson plans, the schemes of work, and the yearly overview installed in them. Therefore, there is no need for teachers to write lessons, or schemes on a daily basis. The teachers now use the teachers' tablets to check lessons which they need to teach."

Yet another teacher added that the content installed on the tablets where obtained from learning areas which were integrated. They included literacy and language with science or literacy and language with SS. She further said that when it came to teaching, the pupils in a class were divided into three groups and given three different tasks to be completed in a specified time. For instance, one group would be tasked to draw while the other group would be using the Zpad and the third would be writing. At the end of the stated time, the groups rotated and at the end of 40 minutes, all the groups would have accessed the tablets.

It was clear from the lesson observations that both teachers and pupils used Ipads, laptops, projectors, speakers, earphones and the internet for their lessons. Most importantly they were confident and enjoyed using ICTs in the classroom for teaching

and learning SS. The teachers and pupils worked with a lot of ease. The class was always divided in three groups, ensuring that attention was given to individual pupils. One lesson consisted of three activities while one group worked on a drawing activity, one worked on a writing exercise and one used the tablets. This drill was rotated until every child had had a chance with the tablet.

When asked whether the ICTs available in the school were relevant for teaching and learning SS, all the teachers informed the researcher that the ICTs available in the school were relevant for teaching SS. One of the teachers indicated that they were relevant for teaching SS because the subject had topics that affected the community such as gender based violence and HIV and AIDS. Therefore, the use of ICTs enabled teachers and pupils to gather more information pertaining to these issues affecting the community. One teacher further reported that ICTs were worth integrating in the teaching and learning of SS because previously when teaching the subject, teachers could talk about things that pupils would have no idea of. Currently, with the help of ICTs, pupils understood better. Another teacher gave the following example:

> "Right now, we are looking at living in a village community. The village set up comes on the tablet and projector. Even though some children have never been to the village, they will see it. As you are explaining, the pupils will see what you are talking about".

This teachers' view was that ICTs helped in the teaching process. She confirmed that prior to the introduction of ICTs teaching was abstract because even if teachers would put up chats, they would be semi-concrete and not very accurate.

Most of the teachers were of the view that the use of ICTs in SS was actually easy. It took away the load or burden of looking for many teaching aids. One of the teachers gave an example that if a teacher did not have a teaching aid of a clinic, the Ipads already had videos of the clinics which the teacher could simply project on the screen for the pupils to see and that teachers did not always have to take the pupils to the clinic. Thus with the use of ICTs, teachers did not run out of teaching aids. Teachers commended iSchool for its wonderful design of the Zpad and for making the lessons interesting. Another teacher added that ICTs had improved the management of the class. Yet another teacher said that absenteeism by pupils had significantly reduced

because pupils were always looking forward to going to school, so as to see and have the chance of using the tablet and accessing the lessons on their own.

All the teachers also observed that ICTs encouraged collaborative learning. One teacher said that in instances where some pupils understood something on the Ipads that others did not, those who understood would help their friends by showing them how the Zpad operated. Another teacher indicated that this was good because those pupils that had Zpads in their homes took the knowledge to schools and helped those who did not have the knowledge. They all added that ICTs encouraged higher order thinking as they enabled pupils to become critical thinkers, made them creative and helped them develop self-confidence. Yet another teacher said that learning domains such as the affective and cognitive domains were properly used by the pupils due to the use of ICTs in the classroom. He argued that using these domains, pupils were able to detect the emotions in the videos hence, refining their understanding.

Teachers confirmed that they benefited from the use of ICTs because ever since iSchool collaborated with their school, the teachers improved their pedagogical practices. One of the teachers informed the researcher that initially, some teachers did not want anything to do with ICTs because most of them never knew how to operate a computer. However, after the training with iSchool, their status quo changed. They confirmed that their attitudes towards ICTs were now positive and praised the integration of ICTs in schools.

Teachers were agreed that when used effectively, ICTs helped the pupils to socialise with the wider world through social media such as Facebook. One of them reported that all sectors of society needed to use ICTs as ICTs had the potential to provide information and most importantly, could change a persons' social life and overall development. He added that a person becomes politically and socially aware of issues through ICTs. For example, high level motivational speakers, business men and politicians used ICTs to disseminate information. Another respondent had the following to that:

> "It is important to train pupils on the use and usage of ICTs because if they are not trained, yet information is disseminated through ICTs, they will be uninformed and this could lead to attitudes such as voter apathy."

Furthermore, teachers said that ICTs had necessitated the realisation of globalisation an important topic in SS. They also argued that the gap between the rich and poor was caused by lack of information. However, ICTs had reduced the gap by making information available.

Commenting on their competences with ICTs, teachers said that they were competent and confidently worked with ICTs. One teacher added:

> "I am competent. However, ICTs keep changing hence there is need for me to keep abreast with the changes and not remain stagnant like the alphabetical order. Some teachers view ICTs with mixed feelings. This is most common among teachers who do not have much knowledge on the use of ICTs."

When asked to compare the traditional methods of teaching and the use of ICTs and suggest which one they would prefer, the teachers said they would prefer the use of ICTs. However, one teacher went on to say:

> "Both traditional methods of teaching and ICTs are good. There is no way you can only concentrate on the traditional methods or on ICTs when teaching a learner. You have to use an eclectic approach."

When asked why it was necessary to use an eclectic approach in teaching, the respondent said that the traditional aspect of teaching should never be neglected just because ICTs are appropriate for teaching. He argued that ICTs too had disadvantages such as requiring the use of electricity most of the time and may bring to much excitement among the pupils hence losing focus during lessons. In such cases, the traditional method came in handy. He added that some topics required that both the traditional method of teaching and ICTs be combined. For example, when teaching about the past, the teacher could first deliver the lesson by telling a story and then later show a video during the audio visual lessons.

Though teachers praised the integration of ICTs in the teaching and learning process, they said ICTs came with their own challenges and disadvantages. For instance, one teacher said that uncontrolled use of ICTs by pupils had certain disadvantages. She argued that pupils sometimes were tempted to navigate to web sites where they were

not supposed to go. Another teacher noted that in the absence of power, it was almost impossible to use ICTs as ICTs depended on power to effectively work. In addition, they all reported that the inadequacy in the number of Ipads available per class posed a challenge in necessitating each child's access to the Ipad during lessons. They gave an example that as at the time of this research, each class only had seven pupils' Ipads which had to be shared by the pupils during the lessons. Therefore, they suggested that there was need for the government to come on board, buy and distribute Ipads to schools as they did with text books.

Overall, teachers were excited about the use of ICTs and commended their integration in the teaching and learning process at their school. They encouraged those schools that were yet to integrate ICTs to do so because we were leaving in the computer age. Teachers confirmed that the new curriculum encouraged the use of ICTs. Thus, if schools did not think of having such advanced technology in education, they wondered how such schools would fair in the modern world.

### 4.1.4 Pupils

Interviews with the pupils were essential because they interact directly with the teacher in the classroom. As such their responses would help the researcher to further understand the teachers' attitude towards ICT integration in the teaching and learning of SS.

When asked to give examples of ICTs found in the school, pupils informed the researcher that they had Zpads which they also referred to as Ipads or tablets, projectors and earphones. Pupils were further asked how they used the ICT tools in the school they indicated that they used Zpads for learning and that they listened to lessons and answered questions asked on the Zpads. In response to the question, does your teacher use ICTs to teach SS and other subjects, they reported that their teachers used ICTs to teach them all the subjects. They were also asked whether they learnt better when using ICTs, their response was that they did. One of the pupils went on to say:

> "I enjoy learning with Ipads and Ipads are good for children because they have nice cartoons."

Pupils were equally asked whether their teachers teach SS and other subjects using ICTs. In response to this question, one pupil noted that the teachers use Zpads to teach SS and other subjects. Another added that they enjoyed learning SS using Ipads because the teachers also enjoyed teaching using ICTs.

The researcher's observations showed that pupils used ICTs with a lot of ease. They operated the Zpads with little help from the teachers. On the other hand, teachers closely observed the pupils as they used the Ipads during the lessons.

From the observations it was also clear that pupils also enjoyed learning SS and other subjects because of the use of ICTs. Not only did they enjoy the lessons, but they also easily understood every lesson as evidenced by their ability to recap what they had learnt with ease.

### 4.2. Tico Community School

As in the case of SOS Children's Village, actual data from interviews, observations and discussions with teachers, head teachers and pupils from Tico community school with regard to teachers' views on the use of ICTs in the teaching and learning of SS are stated in the subsequent paragraphs.

#### 4.2.1 Head Teacher

When asked what ICTs are available in the school? The head teacher said that teachers and pupils used computers during lessons and that they had integrated ICTs for four years as at the time of the research. She reported that pupils using computers were those from grade 1 – 4. They were yet to introduce ICTs to other grades.

Answering the question, what is the level of ICT usage across the curriculum in the school? The head teacher said that ICTs were used during the teaching and learning processes. She said ICTs were used to teach SS and other subject and that the lessons, pupils' exercises, lesson plans, schemes of work and weekly focuses were installed on the Ipads making teaching and learning easy. She further indicated that as a school

they allowed iSchool to pilot the integration of ICTs because they believe ICTs add value to the education they offer. In addition she said that ICT integration in the curriculum was a good idea because it changed education for the better. She indicated that her observation was that ICTs were beneficial to both the teachers and pupils. She reported that ICTs made the teachers' work easy and the pupils understood because they were able to see what the teacher was talking about. Responding to the question; have you and your teachers undergone any ICT training to be able to use the ICT equipment in the school, she said that her teachers were trained by iSchool and that training was on going as they occasionally attended workshops which ran for a week and sometimes a few days. In reference to herself, she indicated that she was an old timer hence did not use ICTs in her works.

The researcher observed that even though Tico used ICTs for teaching and learning processes, the head teacher had not adopted this technology for administrative purpose because she claimed that she was an old timer and born before computers.

In response to the question on whether or not the Ministry of Education, Science, Vocational Training and Early Education was in support of this integration, She confirmed that the Ministry was in support of the integration of ICTs in schools and that's the reason why iSchool was allowed to pilot ICT integration in schools.

With regard to the question, what are the teachers' views towards ICTs integration in the teaching and learning of SS? The head teacher noted that teachers enjoyed using ICTs because they found them easy to use and that ICTs had installed on them, everything they needed to use for the effective delivery of the lessons. Hence the school was privileged to have ICTs. She indicated that she had had discussions with some of her friends who also had ICTs in their schools, and they had also indicated that they liked it. She suggested that schools intending to integrate them should prepare teachers very well. She said that teachers who taught in towns were exposed to a lot of things thus it was easy for them to keep abreast with ICTs than those who taught in rural areas. It was her opinion that teachers in rural areas would take a longer time to catch up than those in towns. She even wondered whether ICTs would work for the rural areas.

### 4.2.2. Teachers

As people who are directly involved in the integration of ICTs, teachers at Tico were also interviewed.

In response to the question, what ICTs are available in the school? The 5 teachers reported that they had Ipads, projectors, laptops, speakers and earphones. As a follow-up question, they were asked to describe any ICT professional development programme they had done. One teacher responded that they had been trained by iSchool in the e-learning programme. They were taught on how to present the lesson and how to go about it. Another added that they were taught how to operate the Ipads.

With regard to the question, what is the level of ICT usage across the curriculum in the school? The teachers indicated that Tico community school is one of the pilot schools iSchool was using to implement the e-learning programme. One teacher indicated that iSchool had provided Tico with the e-learning system that is centered around providing lesson plans for teachers and online interactive multi-media learning content for the pupils. Another teacher said that the e-learning content is delivered through an Ipad that is loaded with lesson plans, schemes and tasks that pupils are supposed to complete. She added that during lessons, pupils were able to operate the Ipad and get instruction on what to do from an instructor installed in the Ipad. Yet another teacher said that as a school they were privileged to be part of a programme that had integrated ICTs in their curriculum she further said that ICTs were good because pupils could use them in class and outside class hours. This, according to her, enabled the pupils to understand issues pertaining to SS and other subjects better. However, one teacher who taught a grade 7 class had this to say:

> "I don't use ICTs in teaching SS because I am teaching a grade 7 class. ICTs in our school are used for grade 1- 4 only because the e-learning programme is still at piloting stage once it is launched, the programme will be extended up to grade 7. I would want to be trained to use ICTs so that I can incorporate them in my class."

It was clear from the observations that, at Tico, ICT integration was only from grades 1-4. Grade 5-7 had not yet integrated ICTs in the teaching and learning process. Teachers that taught grades 1-4 confirmed the claim by the grade 7 teacher.

The researcher also observed that the teachers were very confident and ready to welcome her in their classes without hesitation. They confidently showed the researcher around and engaged in the lesson with ease. The pupils easily adhered to the teachers' instructions. The class arrangement at Tico was the same as that at SOS where pupils sat in groups facing each other and not in rolls facing the chalk board. The teachers taught the lessons by power point using the projector. Next, they distributed the tablets to one group, while the two other groups did different activities based on the content of the lesson. The pupils rotated in doing these activities. Each class only had 7 Ipads provided by iSchool which pupils had to share, a similar situation as that at SOS. One teacher indicated that sometimes lessons were delayed because teachers had to share the projector form one class to another.

In response to the question on whether the ICTs available in the school were relevant for teaching and learning SS, the teachers indicated that ICTs were relevant because they changed the teaching of SS for the better. Among the teachers, one reported that they used ICTs to teach because ICTs provided them with the teaching resources they and the pupils needed. In addition another noted that they found ICTs easy to use and that they boosted the teachers' confidence. Yet another claimed that they enjoyed using ICTs to teach SS. They argued that the usage of ICTs enabled pupils to understand the lessons faster. In giving an example to how effective ICTs were, one of the teachers went on to say:

> "With ICTs, children are able to hear the sounds and see the words so it's easy for them to understand because they see and hear what the teacher is taking about."

Teachers confirmed that the use of tablets also made learning interesting. Additionally, they informed the researcher that when they compared the grade 4 pupils to the grade 7 at the time the grade 7 were in grade 4, those in grade 4 at the time of the research were doing far much better. One teacher noted that ICTs were relevant for teaching SS because a lot of activities and resources which had been installed on the tablets were initially not available in school. She further said that the technological advancement of ICTs had made preparation and delivery of the lessons a lot easier and the pupils understood faster. One teacher gave the following example:

> "Using ICTs is much better than teaching without them. For instance, when you are teaching about Jelita, the pupils see what Jelita is doing via the projector. If Jelita is dancing, or going to the market they will see Jelita doing that in the video."

Teachers further recalled that in the past, they could only teach by word of mouth, which some pupils found difficult to understand. They confirmed that ICTs had now changed the teaching of SS for the better.

Responding to the question on whether or not ICTs encouraged collaborative learning and higher order thinking, the teachers confirmed that ICTs did so. One of the teachers reported that the pupils interacted with each other and thought through what they learnt critically. They added that the pupils would easily narrate what they learnt and easily answered questions which they would have found difficult to answer in the past.

Teachers also reported that they were very competent with the use of ICTs because of the training they had undergone with iSchool. Observations confirmed that teachers confidently taught using ICTs as they did it without hesitation in the presence of the researcher.

When asked to compare the traditional teaching methods, and the use of ICTs, and state their preference, they told the researcher that they preferred ICTs because it was easier and teachers did not waste much time in preparing or delivering the lessons. One of the teachers indicated that slow learners in the use of traditional methods, never used to catch up easily, but with the use of ICTs, the slow learners easily caught up. In addition, another teacher said the following:

> "ICTs are better than traditional methods of teaching. For example, with technology it is easy for a person to prepare the work and also easy for someone to deliver the lesson. Unlike the way it was in the past. With technology, the pupils are able to know more things. They will not just learn the theory, but the practical as well."

In describing the challenges and disadvantages of ICTs, teachers informed the researcher that the ICTs available in schools were very few, thus children had to share. They further noted that ICT tools were expensive hence most schools could not afford them even if they would want to have them. One teacher added the following disadvantage:

> "Sometimes ICTs promote laziness because some teachers entirely depend on lessons installed on the Zpads, thereby not making individual contributions to the lessons."

However, all in all, the teachers appreciated the integration of ICTs in their school, and encouraged other schools to integrate ICTs as they could help the country to develop at a faster rate. It was their view that ICTs should be rolled out to rural areas especially in those areas where children did not see the value of education due to lack of exposure to information.

### 4.2.3 Pupils

When asked to give examples of ICTs found in their school, pupils said that they had Ipads, earphones, speakers and projectors. They were further asked how they used the ICTs in the school in response, pupils reported that they used tablets for learning in the classroom and that they enjoyed using Ipads because they could see what the teacher was talking about. In response to the question, do your teachers use ICTs to teach SS and other subjects, they confirmed that their teachers used projectors and Zpads to teach SS and other subjects and also that the teachers liked to teach SS using Ipads. One of the pupils had the following to say:

> "I like going to school everyday so that I can use the Ipad. My friends like using the Ipad too. Teacher teaches us using the projector. We see and hear different things on the projector for example, a hospital and market."

The researcher also observed that the interaction between the pupils and the teachers in the classroom was cordial. Both knew what they were doing and confidently used the ICT tools in the presence of the researcher.

## 4.1 Waseka Primary School

The researcher presents details as observed and as availed pertaining to teachers' views towards ICTs integration in the teaching and learning of SS from Waseka primary school.

### 4.3.1 Head Teacher

Like the other head teachers at SOS and Tico, the head teacher at Waseka primary school was interviewed.

Responding to the question on, what ICTs were available in the school? The head teacher indicated that Impact Network had provided speakers, Ipads, earphones and projectors which were used during audio visual lessons. He reported that Impact Network was an American organisation which was in Zambia to pilot the use of ICTs in teaching in 10 schools in Katete rural district. In addition, the head teacher informed the researcher that Impact Network had electrified the schools and provided solar panels so that tablets could be charged because ICTs need power for effective delivery of the lessons.

As regards the question what is the level of ICT usage across the curriculum in the school? The head teacher's response was that teachers used ICTs for teaching and learning processes. He indicated that all the lessons in SS as well as other subjects could be taught with the use of ICTs. This was because all lessons with their appropriate teaching and learning materials were available with lessons installed on the table. On whether his teachers had undergone any training in the use of ICTs, he said that the teachers had been trained in the use of ICTs and that the training was ongoing. He indicated that at the time of the interview there was a forthcoming joint training workshop to be organised by Impact Network and iSchool. He reported that the teachers had been taught the basics of the computer, such as power point, to enable them to use gargets effectively. He further suggested that there was need to use ICTs in teaching because failure to do so would hinder development. He argued:

> "If we do not use ICTs in teaching we will be lagging behind in terms of development because in the coming years, we will see most things computerised and if we are not acclimatised to ICTs, we will be facing a lot of problems."

The researcher observed that ICTs at Waseka Primary School were used for administrative, teaching and learning purposes.

In responding to the question, what are the teachers' attitudes towards ICTs integration in the teaching and learning of SS? The head teacher was of the opinion that the teachers attitudes towards ICTs varied depending on their ability. He explained:

> "The attitude towards ICTs will vary depending on the teacher's ability. But generally the attitude is good. The attitude changes after training. Before the training, most assumed it was difficult to integrate ICTs in teaching. Nevertheless, after the training there is an attitude change."

He further explained that the MESVTEE was in favour, and supported the integration of ICTs in schools because even the tablets had been approved by the Ministry. He indicated that the Ministry had actually acknowledged the integration of ICTs in the current syllabus.

The head teacher was of the view that all schools needed to come on board with regards to ICT integration because it was never too late to do so. He reported that the advantages of using ICTs outweighed the disadvantages, thus to save on time people should indulge in ICTs. However, he observed that before adopting the use of ICTs in schools, it was important to sensitize the community and enlighten it on the kind of education the school would be imparting on the learners so that the parents could appreciate it. In the case of Waseka Primary School, he said that the school did sensitise the community and the parents appreciated the use of ICTs and indicated that the usage was timely. The head teacher was of the view that the pupils who were taught using ICTs were sharper than those who were taught using traditional ways before the integration of ICTs.

### 4.3.2 Teachers

Since teachers were directly involved in the teaching of SS they were equally interviewed like their counterparts at the two other schools.

When asked what ICTs were available in the school? The teachers indicated that they had the pupils' tablets, teachers' tablets, a projector, earphones and speakers. The 4 teachers interviewed said that they were trained on how to use the tablets and how to prepare the lessons by the operations manager from Impact Network. At the time of

the research, the teachers reviewed that they would be attending a forthcoming ICT training organised by iSchool.

In response to the question, what is the level of ICTs usage across the curriculum in the school? The teachers informed the researcher that Waseka primary school was one of the 10 pilot schools in Katete rural district for the eSchool 360 programme by Impact Network. One of the teachers mentioned that the programme provided a tablet loaded with lessons and a projector to classrooms. He added that the programme seeks to empower local teachers with creative lessons, lesson plans and regular, ongoing training. Another teacher said that the result of such an education system was comprehensive solution to deliver high quality education year in and year out, in a cost effective manner. The teachers further indicated that the programme also had packages for the pupils. It provided them with a tablet that had lesson and tasks for them to complete.

The researcher observed that lessons at Waseka primary school were conducted in the same way lessons at SOS and Tico were done. The three schools had integrated the iSchool tablets in the teaching and learning process. Furthermore, the sitting arrangement for pupils in the classrooms was well thought out and designed in such a way that it promoted pupil centered lessons, interactive learning and the teacher as a facilitator. Pupils sat in rolls facing each other and not the traditional way facing the chalk board.

In answering the question on whether the ICTs available in the school were relevant for teaching and learning SS, the teachers said that the ICTs were relevant for the teaching of SS because they made their work easy. One teacher explained as follows:

> "ICTs make work easy, for instance, when learning about the market pupils are able to see pictures of how the people at the market move, behave and speak. This helps them understand the lesson better."

It was the teachers' view that ICTs were worth integrating in the teaching of SS in the sense that there was a surge in the use of technology in the country and there was need to move in line with it. Another teacher went on to say that the use of ICTs in schools encouraged collaborative learning and higher order thinking in that the pupils

interacted through discussions and sharing of the information they obtained via ICTs. He added that ICTs enabled pupils to discuss freely which in turn encouraged critical thinking.

Commenting on their confidence levels with regard to the use of ICTs, teachers said that they were confident and enjoyed teaching SS using ICTs. They said that lesson plans and weekly focuses were already installed on the teachers tablets so that, all the teacher did was just to summarise the lesson. Two of the teachers mentioned that ICTs were important because they motivated the pupils to go to school everyday. One of the teachers also explained that the integration of ICTs in the schools in the rural area was good because it enabled pupils to compete favourably with pupils in the urban areas.

In addition, one teacher explained that ICTs were relevant in the teaching of SS because they concretised what the teachers taught. He gave an example that if a teacher was teaching on the topic of the way people live in the community, pupils would be able to see how people lived in that community using the Ipads. Another teacher said that they enjoyed using ICTs because pupils were able to know and see things that were happening in the country by browsing the internet. It was their view that because of the usage of ICTs, teaching had changed for the better. One teacher explained as following:

> "Teaching has changed for the better especially the teaching of SS. Those past years we were just using books, pupils were not able to answer some questions but now by seeing pictures and videos on the Ipads and projectors they are able to answer several questions."

Teachers further informed the researcher that ICTs were better than the traditional methods of teaching because of the many benefits they offered to them and the pupils.

The researcher observed that tablets, speakers, earphones and projectors were used in the teaching of SS in the classroom. Both teachers and pupils showed confidence and enjoyed the use of ICTs in the classroom. Pupils were always eager to use tablets. The classroom was divided in three groups, with three different activities to be done by each pupil by the end of 40 minutes. Thus while one group used the tablets another would be drawing and the other discussing the lesson. The teacher acted as a

facilitator. Lessons were taught in the same way across the schools, regardless of the different environments and locations they were found in.

Though the teachers indicated that ICTs were very helpful, they also admitted that since the tablets were few, it was not possible for the pupils to have one each at all times. A number of pupils had to share Ipads. They further observed that in relation to the translation of the language from English to vernacular, the translations were inappropriate due to the incompetence of some translators. One teacher pointed out that the Nyanja translation on the Ipads, was the one used in the urban areas such as Lusaka and not the rural area like Katete.

Finally, the teachers suggested that schools that did not use ICTs should integrate them in their teaching and learning processes because pupils would really benefit from them. In addition, one teacher made the following suggestion:

> "When a programme is being piloted, I think they are supposed to send trained manpower. At the same time they are supposed to send enough teaching and learning aids so that it can be easy for those teachers who are implementing the project."

The researcher observed that despite being located in a rural area, teachers at Waseka Primary School were using ICTs to teach and confidently did so. They were also interacting with the pupils very well. The pupils also used the ICT tools with enjoyment. Like at both SOS and Tico pupils at Waseka had to share the Ipads because they were few in number and could not go round the classes.

### 4.3.3 Pupils

As in the case of SOS and Tico Community Schools, pupils interviewed at Waseka Primary School were those in grades 1-4. The questions asked to the pupils at Waseka Primary School were the same as those asked to the pupils at SOS and Tico schools.

When asked to give examples of ICTs found in the school, pupils told the researcher that they had Zpads, speakers, earphones and projectors. When asked how they used the ICTs in the school, they informed the researcher that the teacher used Zpads and the projector to teach SS and other subjects. In addition, one pupils explained that they

used Zpads to listen to the lessons and respond to questions that where on the Zpads. She further said that she enjoyed going to class everyday because of the Zpads.

Asked whether they enjoyed learning with Zpads, they reported that they did because they played everyday as they learnt. In response to the question do your teachers enjoy teaching using ICTs, pupils said that the teachers enjoyed using ICTs when teaching them. They noted that their teachers enjoyed teaching SS with a projector,

Observations showed that pupils were confident in the use of ICTs in the classroom, and they enjoyed using them because of the various teaching aids installed on the Ipads and also because the teachers were confidently interacting with them. Thus, both the teachers and pupils enjoyed working together with the use of ICTs.

### 4.4 Comparison of the findings from the three study sites

In line with the multiple case design, before concluding chapter 4, the settings, contexts and responses from the different study sites namely SOS Children's Village, Tico Community School, and Waseka Primary School will be compared and contrasted. Yin (2009) states that the aim of a multiple case study is to yield literal replications of the empirical data from the different study sites. To achieve this, results should be compared and contrasted.

With regard to the setting and context of the study sites, the following similarities and differences were observed. The study had three study sites, namely SOS Children's Village located in Lusaka urban, Tico Community School in Lusaka urban and Waseka Primary School in Azele Guze village Katete district. It was observed that all the three are community schools which are among other schools selected as pilot projects for the integration of ICTs in schools in Zambia. In terms of size and capacity, SOS is the largest school followed by Tico then Waseka. In terms of the number of classes, teachers and ICT resources available in the schools, SOS had more followed by Tico then Waseka Primary School.

The target population for the study included the teachers, pupils and head teachers. With regard the qualifications of the teachers SOS had well trained teachers with certificates, diplomas and degree qualifications from collages of education and universities. On the other hand, Tico Community School had a mixture of trained and untrained teachers while in the case of Waseka Primary School, all teachers were grade 12 school leavers without any tertiary education. The only trained person was the head teacher. Despite this, differences were only noticed in the way teachers expressed themselves and not in the substance or content of the information they gave. All the schools had integrated ICTs in grades 1 - 4. Data from the observations showed that the level of understanding and appreciation of ICTs by the teachers, head teachers and pupils was the same across the study sites.

On the first main question of the availability of ICTs in the school, all the three schools gave similar responses. They all reported that they were implementing the e-leaning programme by iSchool and Impact Network in the case of Waseka Primary School. They informed the researcher that these organisations had provided the schools with projectors, speakers, earphones and Ipads used during the audio visual lessons. Additionally, they said that they had undergone training for the use of the ICT tools they used in their schools. Across the schools, each class only had seven pupil Ipads. Teachers within and across the schools all said that the ICT tools in their schools were insufficient and that this was a challenge. However, one notable difference among the schools was that SOS had extended the use of ICTs to the rest of the grades including the secondary section and had a computer lab that was non-existent at Tico and Waseka Primary School.

On the second research question, what is the level of ICT usage across the curriculum in the school? Respondents from the three sites reported that ICTs were used for teaching and learning purposes in their schools. In the case of SOS and Waseka schools, it was clear from the observations as well as indications from the head teachers that they had extended the use of ICTs for administrative purposes. However, this was not the case for the head teacher at Tico who said that she was an old timer and hence did not use ICT equipment in her work.

With regard to the last research question, on the teachers' views towards the integration of ICTs in the teaching and learning of SS, the head teachers confirmed that their teachers enjoyed using ICTs especially after the trainings. Teachers also said that they enjoyed the use of ICTs in the teaching of SS because it had changed teaching of SS for the better. They all said that their pupils now understood issues faster with the use of ICTs because they were able to see and hear as they learnt. Evidence across and within the schools showed that because pupils performed better when they used ICTs as they learnt SS, teachers' morale was also boosted hence they were encouraged to continue using ICTs as they taught SS.

This chapter presented independently research findings from the three study sites namely, SOS Children's Village, Tico Community School and Waseka Primary School, in line with a multiple case study design. The presentation of findings was guided by the research questions as presented in chapter 1. Empirical data collected showed that there was a literal replication of findings within and across the schools, despite the fact that these sites are located in two different spatial settings, the rural and urban areas. The subsequent chapter discusses the research findings.

# CHAPTER 5

# DISCUSSION OF FINDINGS

## 5.0 Introduction

This chapter discusses the research findings as guided by the objectives of the study stated in chapter one. The objectives were: to establish what ICTs are available in the schools, to find out the level of ICTs usage in the school across the curriculum, and to find out teachers views on the use of ICTs in the teaching of SS.

## 5.1 ICTs availability in schools

There was evidence that the three schools had integrated ICTs in the teaching and learning processes under the e-learning programme piloted by iSchool and Impact Network. These two non-governmental organisations had provided teachers' and pupils' tablets, laptops, projectors and speakers. Teachers mentioned that the use of ICTs in education was the way to go because the world today is largely influenced by technology. In light of the above, technological changes in society have also affected education in as far as teaching and learning is concerned. This is in line with a study conducted by Mikre (2011: 1) who goes on to say:

> "ICTs are making dynamic changes in society. They are influencing all aspects of life. The influences are felt more and more at schools. Because ICTs provide both students and teachers with more opportunities in adapting learning and teaching to individual needs, society is, forcing schools aptly respond to this technical innovation."

Furthermore, findings revealed that availability of ICTs in the teaching profession was relevant because ICTs promote constructivist ways of learning which encourages pupils to become active knowledge seekers and influences all aspects of life. Sunal and Hass (2000) agree with these findings by stating that constructivism is a learning theory based on the notion that people are active knowledge seekers powered by innate curiosity. Thus constructivism challenges the traditional goals of education and proposes re-structured and innovative teaching approaches such as ICTs (Ayas, 2006). With this in mind, teachers viewed ICTs availability in the schools as an enhancement and not a hindrance to the teaching profession. It is imperative that teachers appreciate the relevance of ICTs available in schools because their appreciation of the available

ICTs will induce a positive attitude towards these technological innovations in the teaching profession.

Once the attitude is positive, teaching and learning become an enjoyable and worthwhile experience to both the teacher and the pupil. The outcome is that teachers produce well-informed citizens who are capable of making critical decisions and who are socially, politically and culturally informed. Leach (2008) in Tedla (2012) also agrees with these findings. He adds that the use of ICTs in schools is crucial for the development of economic and social change worldwide. Similarly, Kozma (2005) in Tedla (2012) further adds that ICT plays a major role in the developing countries to go through economic, political, social and cultural development. Thus the availability of ICTs in schools should be seen as an enhancement, not only of the teaching profession, but a nation's socio-economic development as well. As such, schools should embrace the technological innovation in education.

In this study, it was discovered that knowledge on the use of the available ICTs in schools is crucial for the successful delivery of lessons. In line with these findings, Rogers (2003:21) states that "the innovation decision process starts with the knowledge stage. In this step an individual learns about the existence of an innovation and seeks information about the innovation." In other words, understanding the innovation (ICTs) is crucial as this determines the teachers' attitudes towards it.

Another key thing the study disclosed was that teachers in the three schools acquired knowledge on ICTs available in the schools through training and have continued to do so because technology is dynamic. Training is an important aspect if ICTs integration in the teaching of SS is to be successfully adopted because it influences the attitude of the teacher either positively or negatively. In view of the above, Cavas *et al* (2009) adds that ICTs can have a useful effect on teaching and learning if it is used under right conditions including suitable sources, training and support. The findings above resonate with a study conducted by Peter and Rexwhite (2012:383) which found out that:

> "Professional development to incorporate ICTs into teaching and learning is an ongoing process and should not be thought of us one injection of training. Teachers need to update their knowledge and skills as the school curriculum and technologies change."

The study also revealed that at the point of training, that the teacher is persuaded to either integrate ICTs in teaching or not. Talking about persuasion in the innovation decision process, Sahin (2006) indicates that the persuasion step occurs when the individual has a negative or positive attitude towards the innovation. In other words, in order for the teacher to be ready to use ICTs he or she should be persuaded to do so. Similarly, Cavas *et al* (2009) suggests that to effectively use ICTs in the classroom, teachers' attitude toward technology should be positive and they should be trained in using the modern technologies in the field of education. In other words, training results in teachers having a positive attitude towards ICTs innovations in the classroom.

It was clear that teachers and pupils were knowledgeable in the use of the available ICTs. Unlike SOS which had a teacher employed specifically to teach ICTs to the pupils, both Tico and Waseka had none. So pupils at the two schools did not undergo specific training but instead they depended on their teachers and learnt through exploration. Nevertheless, observations revealed that in all the three schools, pupils used ICTs with ease. This implies that teachers play a major role in ensuring that their pupils become competent users of ICTs. The Teacher's active involvement in ensuring that pupils learn how to use ICTs may be used to measure his or her attitude. In this case, it shows how interested they are in ICTs integration in the classroom.

Although the ICTs were available in the three schools, they were not adequate to the extent that each pupil could have one Ipad and use at the same time during the lessons. Each study site only had seven pupil Ipads per grade. In this regard, the findings for this study are similar to those of other researchers who have investigated ICTs integration in education in Zambia. For example, Isaacs (2007) noted that the penetration and availability of ICTs in Zambian education institutions remains low. Similarly, MCT (2007) points out, among other challenges, that the Zambian education system, especially public schools, has a high opportunity cost of deploying

ICTs. Hennessy *et al* (2010) also indicate that integration of ICTs in education in developing countries generally is difficult due to limited technology infrastructure, especially internet access, bandwidth, hardware and software provision. As a result, it is difficult to justify spending scarce and limited resources on ICTs when many institutions are still lacking basic amenities and educational supplies. Due to this situation ICTs remain a scarce teaching resource in most primary schools in Zambia.

### 5.2 Level of ICT usage across the curriculum in the schools

The study discovered that ICTs are used across the curriculum in the three schools. Data from the head teachers and teachers revealed that experts from iSchool and Impact Network had provided lead out plans on how to integrate ICTs in the schools. Coupled with that experts trained the teachers on what should happen in the classrooms, hence implementing both the prescriptive and descriptive curriculum through ICTs. In light of the statements above, Ellis (2004: 4 & 5) indicates that:

> "The term curriculum can be defined as prescriptive, descriptive or both. He adds that the prescriptive curriculum provides us with what ought to happen and they more often than not take the form of a plan, an intended program, or some kind of expert opinion about what needs to take place in the course of the study. The descriptive definitions of a curriculum, go beyond the prescriptive as they force thought the curriculum, not merely in terms of how things ought to be, but how things are in real classroom situations."

Another key thing to mention is that the e-learning project implemented by iSchool and Impact Network have been designed for grades 1-7 only. A study conducted by Khosla (2013: 7) confirmed this in the following paragraph:

> "iSchool has created a total learning environment covering the 7 grades of primary school education with three components. The first are the detailed lesson plans for teachers installed on the Ipads for every one of the 5,000 lessons all subjects for all grades, covering the entire Zambian curriculum, and guiding the teacher towards interactive enquiry-based learning. Secondly, the ICTs provide an interactive audio-visual material for students for every other lesson. For early grades (1-4) all material is in 8 of the Zambian vernacular languages as well as English. The third is a one year teacher training course (face to face, then online and via remote mentoring) promoting active learning. All learning material (ICTs) has been approved by the Ministry of Education thus authenticating the ICTs in these schools."

Even though the e-learning programme was designed for grades 1-7, at the time of the research, e-learning in the three schools was piloted from grade 1-4. This resonates with Khosla (2013) who states that at the time of her research, iSchool's products (ICTs) were used in the lower grades. Even though this was the case, SOS and Waseka, unlike Tico, were attempting to integrate ICTs in other grades. This situation helped the researcher understand primary school teachers' views and attitudes towards the integration of ICTs because those teachers who were not using ICTs in their classes were envious of those that did and keenly wanted the project to be extended to their classes. This implied that their attitude towards ICTs integration was positive.

The study established that ICTs are used for teaching, learning and administrative purposes. With regard to the administrative usage, two head teachers those from SOS and Waseka confirmed the use of computers in their day to day work. On the contrary, the head teacher at Tico said that she was an old timer and thus did not use ICTs. Even though the head teachers at SOS and Waseka used ICTs for administrative purposes, only the head teacher at SOS convincingly spoke about how she used her email address, shared knowledge, and acquired new knowledge from friends via internet sources. At the time of the study only the head teacher at SOS seemed to extensively use ICTs in her work. This revelation could mean that despite passionately welcoming the integration of ICTs in their schools some head teachers are not actively involved themselves. This situation can change with more sensitisation and training specifically aimed at head teachers.

Since teachers across the three schools were trained by the same organisations (iSchool and Impact Network) their approach to teaching was basically the same. Research shows that teachers tend to teach the way that they were taught. The study provided evidence that in the three schools teachers teach using constructivist methods. Therefore, even though Tico and SOS are urban-based schools while Waseka is a rural-based school, both teachers and pupils benefit and appreciate ICTs integration in the teaching and learning of SS. It was also discovered that the quality of education offered through e-learning in the three schools seemed to be the same. In light of the above, Vrasid and McIsaac (2001) say that if we expect teachers to teach

in a constructivist way using technology, we need to be teaching and training them in constructivist ways using technology. In this case, it does not matter then, where the school is located whether rural or urban.

The integration of ICTs in teaching and learning is very efficient and effective and has revolutionised the education system. Evidence from the findings revealed that in all the three schools, ICTs have been integrated in the curriculum due to the many benefits they have. Teachers particularly highlighted that with the integration of ICTs the curriculum is more effective. Teachers confirmed that teaching with the projector and tablets enabled pupils to use most of their senses during the audio visual lessons. They were able to see, hear and feel. This is important because it equips pupils with the ability to be critical thinkers and problem solvers. The findings above are supported by Khosla (2013) who points out that ICT integration in the curriculum helps learners develop cognitive learning abilities and problem-solving skills by providing access to interactive enquiry- based learning resources. Secondly, it trains teachers to become facilitators of learning rather than sources of knowledge. Tedla (2012:199) is also in support of the findings above because he goes on to say:

> "There is substantial evidence that Information and Communication Technology promote a quality education and effective teaching- learning atmosphere for both student and teacher. Several research studies indicate that ICTs provides educational opportunities and environmental readiness for classroom instruction. More essentially, ICTs play a greater role in generating of knowledge and processing information for problem solving and further exploration."

Observations revealed that in all the three schools, the sitting arrangement in the classrooms was not the traditional one, where the pupils face the chalk board and the teacher's table in front. Instead, pupils sat in groups facing each other while the teacher acted as a facilitator. Like at Tico and SOS, the teachers at Waseka also first presented the lessons in SS on power point and then gave the three groups, three different activities allowing them to interact with the content. While one group listened to the lesson, watched videos and performed tasks on the Ipad, the other two groups were either writing or drawing. Each task took about 10 -15 minutes, after which pupils swapped activities. As a result, pupils at the three schools were kept busy

at all times, not with one long tedious task, but with three different interesting tasks that were not monotonous as a result, learning more in less time and raising the standards of teaching SS. A study by ("Primary Induction", n.d:8) is supportive of the findings of this study as it states that:

> "ICT contribute to raising standards across the curriculum by improving the effectiveness of teaching. Teaching materials that use ICTs allow pupils to engage with the content of the lesson in a variety of ways visually, with sound and movement, and with the ability to revisit and repeat learning as required. Pupils can be actively involved in their learning exploiting the interactivity and the potential for communication that ICT offers."

Albrini (2006) also agrees with the findings above by submitting that the integration of ICT into education has been assumed as the potential of the new technological tools to revolutionise an outmoded educational system. Additionally, Pelgrum (2001: 2) has noted that ICTs are "not only the backbone of the Information Age, but also an important catalyst and tool for inducing educational reforms that change our students into productive knowledge workers." Thus ICTs have changed the learning system from the outmoded one where the pupils were passive learners to one where they are more active and interactive. The implication for the teacher is that he or she is able to teach and manage the class more successfully. Almekhlafi and Almeqdadi (2009) argue that when used appropriately, technology integration in the classroom has become an important aspect of successful teaching because it allows students to learn more in less time and allows schools to focus on global learning environments.

Apart from teaching, ICTs are also used for research at the three schools. Since SS is a subject that deals with a myriad of information about the society, this information could be accessible by use of ICTs as they enable the users to search sources that would otherwise prove difficult to access without ICTs. Viitanen in Tedla (2012) echoes the finding of this research. He argues that ICTs provide opportunities to stimulate learning and increase motivation that enables teachers and students to interact productively with neighbouring communities and global economy in a wider and higher scope. To realize this opportunity, however, technologies need to be part of the curricula. The implication on both the teacher and pupils is that they become well informed citizens who are able to reason critically, solve problems and are capable of

contributing to the development of the country. This is also in consonance with the MCT (2007) which stipulates that ICTs are an enabler to build an information centred society where everyone can create, access, utilise and share information and knowledge. This would lead to greater productivity, greater competitiveness and sustainable economic growth, which is a pre-condition for poverty reduction.

It was clear that in all the three schools, ICTs were used for teaching, learning and office work. However, the use of ICTs could be extended to co-curricular activities such as clubs and sports which, at the time of the research was not the case in the three study sites. Haddad (2008) says that with advances in ICTs many schools have used computers and other technical tools to support curriculum and teaching in Asia. He further reports that Asia has developed guidelines for the use of ICTs in Physical Education sports and clubs. Among these guidelines, one is to ensure that sports associations, clubs, stadiums and other sports facilities manage knowledge and information more effectively using ICTs. The Zambian education system can learn from the Asian case and also incorporate ICTs in sports and clubs. As earlier stated, this study did not see any use of ICTs in sports and clubs in the three study sites.

### 5.3 Teachers views on the use of ICTs in the teaching of SS

The study found that the teachers' views had an influence on the teachers' attitude towards ICTs and that this had an implication on whether the teachers adopted or rejected the use of ICTs and further affects how ICTs are applied in the classroom. The findings of this study are in line with many studies that have investigated ICT integration in the classroom. For instance, Davis (1989) and Kellenberger & Hendricks (2003) mention that teachers' attitudes towards computers have significant implications for their behaviours in the use of computers for teaching. Additionally, other studies show that teachers' knowledge and attitudes function as major predictors of the use of ICTs in the educational context (Pelgrum, 2001; Zhang, 2007). Cavas (2009) adds that during the process of combining ICT with education, teachers' attitude towards using knowledge besides their talent and desire will be a crucial point affecting the results of application. In view of the above, the basic agent for establishing and working this system is the teacher. It is argued that successful

integration of ICT in education enables teachers to transform instruction from teacher-centered to student-centered where learners may interact with their peers and use the computers and Internet for their own learning needs. Tedla (2012: 201) supports the foregoing studies. He goes on to say:

> "Teacher attitude is one of the most critical factors that enhance or inhibit the integration of ICT into classroom instruction. Teacher attitude and competence ensure ICT implementation and guarantee further ICT innovation. They also help to promote approaches, standards and harmonization of ICT tasks, the awareness ICT equity, utilization and maintenance of ICT, implementation of ICT training, assessment and evaluation, development of ICT, dissemination of pedagogical knowledge and professional development."

During the study it was also discovered that knowing teachers' attitude towards ICTs integration in the classroom is imperative for Zambia, as Zambia tries to transform the education system by integrating ICTs in the curriculum. This discovery is vital firstly because in his study, Summers (1990) states that teachers' attitudes have a great influence on their acceptance, style of implementation and outcome of using ICTs for teaching. Thus, if attitudes are negative, teachers are less likely to contribute effectively to the integration of ICTs in the classroom consequently, compromising the teaching and learning of SS. Secondly, the study acts as a baseline study for future research on ICT integration in the Zambian education system. Without baseline data, it can be very difficult to plan, monitor and evaluate future performance. Baseline data helps to set achievable and realistic indicator targets for each level of results in a project (Borton *et al*, 2004).

As a way of measuring the teachers' attitude towards ICTs integration in the classroom, the study tried as much as possible to consider three domains that could be used to measure attitude which are affective, cognitive and behavioural domains. The affective element was captured through the one-to-one interviews. Through these interviews, the researcher was able to judge the emotions, passions and enthusiasm with which the respondents reacted and responded to the questions. For instance, most teachers were excited as they talked about how they used the tablets and projectors to teach. The cognitive element was captured based on the knowledge and skills attained

through training and on the abilities of the respondents to successfully execute the lessons. Here, teachers successfully used the tablet and projector knowing where to touch and press without difficulty. Similarly, the behaviour element was captured during the lesson observations. In these lessons, the teachers seemed confident and at easy even in the presence of the researcher. A consideration of the three domains showed that almost all the teachers indicated a positive attitude towards ICTs integration in the teaching and learning of SS. Talking about attitudes, Albrini (2006) points out that attitudes are thought to consist of three elements: affective, cognition and behaviour. The affective element is related to the individuals' emotional case, the cognitive element refers to the individuals' knowledge, and the behavioural element is the evident behaviour. On the other hand, Sahin-Kizil (2011) states that in order to have an adequate understanding of a person's attitude, all these elements should be taken into consideration.

There was substantial evidence from the findings that teachers' attitudes towards the integration of ICTs in the classroom were positive. For example, the head teacher from SOS stated that teachers were excited to use ICT in teaching. Similarly, the heads from Tico and Waseka said that teachers enjoyed using ICTs in teaching all subjects, including SS. Even though the responses from the three head teachers were basically the same, the head teacher for Waseka in particular said:

> "The attitude towards ICTs will vary depending on the teachers' ability. But generally the attitude is good. The attitude changed after training. Before the training, most assumed it was difficult to integrate ICTs in teaching. However, after the training there is an attitude change."

This statement is in tandem with the theoretical frameworks that guided the study. As may be recalled, Rogers (2003) states that a person goes through five stages while deciding on the adoption or rejection of an innovation, the first of the five being knowledge. Once teachers are knowledgeable about the new innovation, they are likely to adopt it. Evidence shows that after acquiring ICT knowledge through training, the teachers' attitudes at the three schools changed; they adopted the integration of ICTs with appreciation. Therefore, skepticism in integration of ICTs is usually due to lack of training.

The attitude of the teachers was also measured by the confidence levels and competencies of the teachers in the use of ICTs. Piper (2008) states that it is human nature for people to spend more time doing things they enjoy. People embrace things that they are good at. Likewise, people avoid those things that cause them worry. If teachers are competent in the use of ICTs, they will be confident and hence will use ICTs to teach whenever and however possible, thereby, exhibiting a positive attitude.

Results showed that at SOS most teachers confidently used ICTs although, others highlighted that despite been confident, ICTs were a dynamic phenomenon that required them to constantly update their knowledge. In comparison, teachers at Tico and Waseka stated that they were confident with the use of ICTs and the changes that come with it because they constantly received training pertaining to the changes. On the other hand, observations showed that teachers were confident and this was manifested in the way they handled their classes. These findings are resonated by Dania and Enakrire (2012) who mentioned that teachers need to update their knowledge and skills as the school curriculum and technologies change for the successful delivery of the lessons.

Determining the teacher's confidence levels and competencies in technological innovations in teaching was important as this helped the researcher identify the positive attitude in the teachers as they engaged in their audio visual lessons. As earlier discussed, attitude determine the success or failure of innovations in education. Thus before introducing new technological innovations in education, it is important to conduct baseline studies that will determine whether or not the innovation will be successful.

The study also established that teachers' attitudes towards ICTs integration in the teaching and learning processes were positive because, pupils were always excited and looked forward to going back to school because they wanted to use ICTs as they learnt. In addition, teachers said that pupils they produced now were sharper than those they produced before the integration of ICTs. Pupils from SOS, confirmed what their teachers said by mentioning that they enjoyed using tablets because they could see nice cartoons and they played as they learnt. Consequently, absenteeism among

pupils had reduced. Considering that these pupils were at grades 1 – 4 level the aspect of playing while learning is an essential one because it motivates pupils to go to school everyday. The motivation of learners in turn motivates the teachers to integrate ICTs in the teaching and learning processes. Given this expression of satisfaction teachers' attitudes towards the integration of ICTs in the teaching and learning process, especially of SS can be taken to be positive. These findings are in consonance with those of Selwyn (1999) who argues that integration of ICTs in education environment depends, to a great extent on the teachers and students attitude towards their use. This view is also supported by Barton (2007) in Omollo (2013) who indicated that ICT can motivate students in their learning by bringing variety into the lessons and at the same time sustaining teachers' own interest in teaching.

In addition, the study found out that teachers' attitudes were positive because of the realization that we are leaving in the information age which is characterised by technological innovations. As the world changes, Teachers do not want to be left out thus, they too, have embraced the changes that have come with the age. Windschitl (2002) observes that in the 21$^{st}$ century, the new vision of education is to make learning accessible to all, but it is hard to achieve this goal through the use of traditional methods. Hence, there is increasing demand for technology innovations in teaching and learning approaches. That is why pedagogies of school reform are now highly influenced by and built around constructivist theories of learning that assume the use of technology in education.

Generally, teachers at the three schools suggested that schools that had not yet integrated ICTs in the teaching and learning processes could do so, because ICTs are easy to use and timely, pupils benefit from the technology and it is effective and efficient. The fact that teachers from all the three schools were in a position to give positive advice to schools that have not yet integrated ICTs in the teaching and learning processes, is an indication that teachers' attitudes towards the integration of ICTs in the teaching and learning was positive. Otherwise, they would not haven recommended ICTs integration in the teaching and learning processes for other schools.

There is a universal recognition by teachers of the need to use ICTs in the educational systems including in the teaching of SS as we are in the era of digitalization where there is free flow of diverse information via satellite and the internet. This study found that integrating ICTs in the teaching of SS does not only improve pedagogical practices, but may also have an impact on the development and growth of our society. Due to this, teachers in the three study sites have adopted the use of ICTs in the teaching of SS and other subjects. This study is in consonance with Peter and Rexwhite (2012) who claim that the integration of ICTs in the teaching of SS as a subject in schools comes as part of a burning need on how to improve on the physical, social, political, cultural, scientific and technological environment that we live in.

Amongst the reasons for using ICTs in the teaching and learning of SS one was that it was compatible with existing teaching practices, and that it was not complex but easy. In his theory Rogers (2003) postulates that when educators' acknowledge that the new technological innovation in education is compatible with existing teaching methods and not complex, then they are likely to adopt the technology. It is imperative that teachers deem the new technological innovation to be compatible with the existing teaching methods, as this could also mean that their attitudes towards the new technological innovation is positive. It further shows that there is a smooth transition from old teaching methods to the new ones.

Although a few teachers maintained that both the traditional and new methods of teaching SS were good, the majority confirmed that due to its efficiency, they preferred the integration of ICTs in their work to the use of traditional methods of teaching SS. A study conducted by Arinze *et al* (2012:269) is supportive of this finding in the following paragraph:

> "SS lessons are commonly carried out in the classroom during school hours but at times entails going for an excursion or field trip to an environment different from the usual school environment. This enables students under the guidance of their teacher to discover the riches of a particular situation, site, surrounding, historic, and artistic features and the roles they serve. Visit to nearby areas may be easier but a trip to far places or another country to witness the heritage richness it possesses will be difficult. This is where information technology can come as help. All students can be given an opportunity to sample other ethnic groups and countries heritage through the

> effective power of interactive multimedia. Multimedia is the embodiment of text, graphics, animation, pictures, sound and video clips and it can be easily used in social studies."

Since teachers feel good about what ICTs are able to do for their SS lessons, they exhibited positive attitudes towards the integration of ICTs in their classrooms.

Another key point revealed during the study was that teachers enjoyed the use of ICTs in the teaching of SS and want to continue with this kind of teaching. The feeling was mutual across the schools regardless of the fact that one of the schools, Waseka Primary School is located in the rural district of Katete, and many people may consider it backward. The Aspect of integrating ICTs in rural schools is important because it puts the teacher and pupil in the rural area at the same level as those in the urban areas and also offers them the same opportunities and benefits. This is in line with Chikanta and Mweetwa's (2007) argument that there is great need to have internet at every school to improve on teachers output and expose pupils to internet at the early stages of their education. This will enhance the research component as it will cover wider and deeper areas of our rural communities. They maintain that development and exploitation of ICT supports rural development, community based initiatives and projects.

In addition, the study established that integration of ICTs in the SS lessons encouraged interactive and collaborative learning. Pupils were freely and actively interacting with the teacher and with each other. The teacher was a facilitator, who was there to facilitate the lessons and not to dictate them. In line with this, Arinze *et al* (2012) point out that making use of the internet in SS lessons could result in breaking down boundaries, getting young people to know each other and to appreciate each other' views and cultural backgrounds. Thus with the use of internet in SS classes, the role of the teacher changes from that of gatekeeper of knowledge to that of facilitator and manager of the learning environment.

Furthermore, the teachers' attitudes towards the integration of ICTs in the teaching of SS can be understood by the numerous reasons they gave for enjoying the use of ICTs in teaching SS. The reasons were the same across the cases, with the most common

response being that ICTs are easy to work with, they are efficient, have lesson plans and schemes of work installed on them. All a teacher needed to do was to summarise or enrich the lesson. The teachers explained that initially teaching aids in SS were problematic, but the coming of ICTs had made things easy. Whatever teaching aid the teacher needed, he or she could find it on the tablet and easily project it as he or she taught. ICTs were therefore an efficient and effective tool for the delivery of the SS lessons. These findings agree with those of most scholars and researchers who have investigated the integration of ICTs in teaching and learning. In like manner, Zhao (2007) states that teachers use technology for its efficiency, some have embraced it for the enhancement of their instructional practice and student enhanced learning.

Data from the study further revealed that ICTs in SS make children's global society smaller as it brings the globe into a small class. Similarly, the MCT (2007) indicates that ICTs can be used to bridge the digital divide within the context of globalization. By bridging the digital divide, the global society is made smaller. Teachers also explained that SS is a subject that deals with abstract concepts. Therefore, if ICTs enable pupils to see things, hear sounds, and concretise concepts, the new pedagogical practice is worth adopting. Findings also revealed that ICTs via the internet are a source of a vast amount of information that is essential to SS. Scholars such as Cooke (2010) in Arinze *et al* (2012: 270) agrees with these findings. As he reports that:

> "The net possibly is the largest store of information on this planet. Everybody can be part of it. It is one of the few places where races, creed, colour, gender do not prejudice people against others… communication is key… the net is people helping each other in a world-wide community."

In this description of the internet, there is already the basis for reaching several aims of SS as a subject designed to train young people in citizenship, democracy, human rights and respect for different cultures and to foster social integration and underline multicultural exchanges (Arinze *et al,* 2012).

Apart from the scarcity of ICT equipment in the schools, data collected highlighted other challenges and disadvantages of ICTs integration in the teaching and learning of SS. Sunal and Hass (2000) postulate that people are active knowledge seekers powered by innate curiosity. So the use of ICTs in the classroom can have

disadvantages. Pupils can navigate beyond the lesson to even access web sites they are not supposed to. It was clear that teachers always have to be alert when dealing with ICTs in the classroom to ensure that pupils use them for their intended purpose. This warning could be extended to parents whose children have ICT tools in their homes. They need to monitor their children as they use tools such as Ipads and the internet. Sharples *et al* (2008) confirm that the use of the internet poses certain risk to the young generation such as bullying (posting hurtful messages and pictures), unsuitable content (violent and pornographic material), and cheating (copy paste online material). This is a dilemma that has no simple solution. As such, teachers ought to be alert at all times.

Secondly, ICTs can be problematic if there is no electricity. Accordingly, after their study on ICTs in Sub-Saharan Africa, Hennessy *et al* (2010) argued that lack of reliable access to electricity was a major problem when it came to ICT integration in most developing countries. This is a potential challenge to schools that entirely depend on hydro-electric power. However, Waseka Primary School in Katete has overcome this problem by using solar panels for its power source. Schools intending to integrate ICTs could consider installing solar panels as a solution to power cuts. Other researchers have also explored other drawbacks in the use of ICTs in education. Singhal (1997) mentions technical problems such as lack of internet access and time consuming browsing on the internet.

In discussing the disadvantages of ICTs, a teacher from Tico school indicated that ICTs, could sometimes promote laziness because some teachers only rely on the lessons as they are installed on the tablets, meaning they neglect their role of research and planning because lessons and schemes of work are already prepared and installed on the Ipads. However, the use of ICTs requires analytical minds, minds that get information and decipher it without merely copying and pasting it. Hence it becomes imperative for head teachers to monitor how their teachers use ICTs in the classrooms. This finding is in consonance with the findings of Cano and Garcia (2013:78) who state and recommend that:

> "In any job, it is important to assess a person's performance in completing the tasks required by the employer. Business and corporations supervise and evaluate employee performance for a variety of reasons, including retention, promotion, and accountability for completing job related tasks. Education is no different, requiring supervision of classroom instruction to evaluate a teachers' effectiveness. This generally involves an administrator observing and evaluating lessons in a classroom, documenting the teacher's performance and sharing suggestions for improvements."

Bearing in mind that ICTs are new and still under pilot stage in many Zambian schools, administrators should take keen interest in supervising their teachers so that where necessary, suggestions for improvement can be given. This will ensure that the integration of ICTs in the curriculum does not promote laziness and lack of thinking among teachers.

The Zambian Education Curriculum Framework (2013) reports that the policy on education recognizes the use of familiar Zambian languages as the official language of instruction in pre-school and early grades (1-4). All the teaching and learning in all the learning areas at lower primary are to be instructed in familiar Zambian languages. This is because there is evidence that children learn more easily and successfully through languages that they know and understand. Following the policy direction, iSchool translated the curriculum installed on the Ipads in familiar Zambian languages. However, it was revealed that translation of the syllabus from English into the local languages was not done properly. Teachers suggested that only competent personnel should be involved in the translations. Even though this does not change the fact that teachers appreciated the use of ICTs in the teachings of SS, the standard of translation has the potential to negatively affect the teachers' attitudes towards Ipads provided by iSchool.

The forgoing chapter discussed the research findings and was guided by the research objectives as stated in chapter 1. It is clear that teachers appreciate ICT integration in the teaching and learning of SS, mainly because ICTs have proved to be efficient and effective and have changed the teaching and learning of SS for the better. Furthermore, it is clear that teachers' attitudes towards the integration of ICTs in the teaching and learning of SS are positive. The subsequent chapter will state the final conclusions and recommendations of the study.

# CHAPTER 6

# CONCLUSION AND RECOMMENDATIONS

## 6.0 Introduction

This chapter concludes and gives recommendations of the study. The conclusion will be made in line with the research objectives and theoretical framework as presented in chapter 1. Recommendations will be divided into general recommendations and recommendations for future research emanating from the gaps identified during this study.

## 6.1 Conclusion

On the first objective, it is clear that all the three schools have a number of ICTs in place. The ICTs found in the three schools were Ipads (also referred to as Zpads or Tablets), earphones, speakers, laptops and projectors. Even though SOS Children's Village had more ICTs infrastructure than Tico and Waseka, the three schools taught in the same way, using the e-learning programme supplied by iSchool and Impact Network. Data showed that the ICTs available across the schools were appropriate and effective because they have changed the teaching and learning of SS for the better. Due to the training received, both the teachers and pupils are competent users of these ICT tools.

With regard to the second objective, it is clear that teachers in the three schools confidently use ICTs in the teaching and learning of SS and other primary school subjects on the curriculum. Apart from teachers projecting lessons and guiding the pupils through their tasks on the tablets, ICTs are also used for administrative purposes. These ICTs are used in the schools because the teachers have adopted this new technology and way of teaching. However, the use of ICTs is only limited to teaching, learning and administrative purposes, hence there is need to extend this usage to co-curricular activities such as clubs.

Coming to the third objective, it can be concluded that teachers have a positive attitudes towards the integration and use of ICTs in the teaching of SS. Teachers in the three schools have embraced ICTs and enjoy using them because they find them to be

efficient and effective. Since SS is a subject that deals with a vast amount of information pertaining to the way people live and interact within society, teachers find it easy to obtain this information through ICTs. Similarly, since SS has many abstract concepts, teachers are able to use ICTs to clearly explain them to the pupils so that they understand them easily. This has led to a good and positive attitude towards the use of ICTs in the teaching of the subject among the teachers.

Despite being located in rural areas, provided with right knowledge (training) and persuasion, teachers can adopt new technological innovations in education such as the use of ICTs without difficulty. Thus the teachers at Waseka Primary School in rural Katete have positively integrated ICTs in the teaching and learning of SS due to the training they have undergone.

In line with the theoretical framework discussed in chapter 1, the findings of the study show that teachers instinctively submitted to the five main attributes of technology suggested by Rogers (2003) which determine its acceptance or rejection. All teachers interviewed, confirmed that ICTs have an advantage over the traditional method of teaching (relative advantage) because they are able to compare ICTs to the existing teaching practices and have realised that they have not completely departed from the traditional methods (compatibility). Across the three schools, teachers enjoy using ICTs in teaching SS because they have noticed positive change in the pupils they are teaching, which was not the case with those they previously taught without the use of ICTs (observability). Further, teachers find the use of ICTs in the teaching of SS, respectively was easy and not complex (complexity). Teachers are able to comment on the integration of ICTs in the teaching of SS because they have tried out the new technological innovation in their teaching (trialibility). All in all, the teachers have accepted and embraced the integration of ICTs in the teaching and learning of SS.

### 6.2 Recommendations

Arising from the foregoing findings and conclusions, the following recommendations are made.

1. The Ministry of Education, Science, Vocational Training and Early Education should enact or implement the ICT Draft Policy so as to guide schools and stakeholders on the Ministry's official position regarding the integration of ICTs in education.
2. The Ministry of Education, Science, Vocational Training and Early Education should subsidise the purchase of ICT tools in schools to ensure their wide availability in schools.
3. Since government cannot do everything by itself, individual school should find means of raising funds to enable them purchase some ICTs resources and material.
4. Universities and Colleges of Education should make the use of ICTs in the teaching and learning process part of their education curricula. This is something that cannot be ignored in the 21st century.
5. The Ministry of Education, Science, Vocational Training and Early Education should closely monitor pilot projects in schools to ensure quality.

### 6.3 Recommendations for future research

Due to the nature of the topic studied, it was not possible to deal with all problems or emerging issues around it. In view of this, the following aspects are suggested for future research:

1. Explore in detail the benefits and challenges of incorporating ICTs in the teaching and learning processes in primary schools.
2. Examine the effects of the Ipads and computer screens on the sight of the teachers and pupils
3. Explore ways in which schools can acquire ICT materials and resources more easily and cheaply.

## REFERENCES


Albrini, A. (2006). 'Teachers Attitudes towards Information and Communication Technology: The Case of Syria EFL Teachers.' *Computer and Education*. 47 (4): 373-398.

Almekhlafi, A. G., & Almeqdadi, F. A. (2010). 'Teachers' Perceptions of Technology Integration in the United Arab Emirates School Classrooms.' *Educational Technology & Society*.13 (1): 165–175.

Al-Zaidiyean, N.J., Mei L.L. & Foog, F.S. (2010) 'Teachers Attitudes and level of Technology use in classrooms: The case of Jordan Schools.' *International Educational Studies* 3 (2):211- 218.

Arinze, F.O., Okonokwo, E.N. and Iwunor, A.N. (2012). 'Information and Communication Technology (ICT) Application in Secondary Schools and Students' Academic Performance in Social Studies.' *African Research Review*. 6(4): 266-278.

Atkinson, P., Coffey, A. & Delamont, S. (2001). 'A Debate about our Canon.' *Qualitative Research*. 1 (1): 5-21.

Ayas, C. (2006). 'An Examination of the Relationship between the Integration of Technology into Social Studies and Constructivist Pedagogies.' *The Turkish online Journal of Education*. 5 (1): 14-25.

Ball, D. L. (1990). 'The Mathematical Understandings that Prospective Teacher bring to Teacher Education.' *The Elementary School Journal*. 90 (4): 449-466.

Baxter, P. & Jack, S. (2008). 'Qualitative Case Study Methodology: Study Design and Implementations for Novice Researchers.' *The Qualitative Report*. 13 (4): 544-559.

Bengtsson, P. (1999). *Multiple Case Studies: Not Just More Data Points*. Term Paper in Graduate course in Research Methodology. www.citeseerx.istpsu.edu Accessed 05/032014

Borton. J, Weir, C. and Roberts, J. (2004). *The role and design of Baseline studies in the Evaluation of English Language Training in the case of Nepal*. Evaluation report Retrieved on 16/03/2015 from www.gov.uk/.../the-role-and-design

Brändström, C. (2011). *Using the Internet in Education – Strengths and Weaknesses: A Qualitative Study of Teacher's Opinions on the Use of the Internet in planning and Instruction*. www.diva-portal.org Accessed 23/ 01/ 2015.

Cano, E.V. and Garcia, M.L.S. (2013). 'ICT Strategies and Tools for the Improvement of Instructional Supervision. The Virtual Supervison.' *The Turkish Online Journal of Education Technology*. 13(1): 77-87.

Cavas, B. Cavas, P., Karaoglan, B. and Kisla, T. (2009). 'A Study on Science Teachers' Attitudes Towards Information and Communication Technologies in Education.' *Turkish Online Journal of Education Technology*. 8 (2): 20- 32.

Chief Chikanta and Mweetwa, F. (2007). *The need for Information and Communication Technologies in Rural Areas*. Choma: LinkNet and Vision Communication Radio Macha.

Cohen, L., Manion, L., & Morrison, K. (2007). *Research Methods in Education*. London: Taylor and Frances Group.

Coyne, I. T. (1997) 'Sampling in qualitative research purposeful and theoretical sampling: merging or clear boundaries.' *Journal of Advanced Nursing*. (26) 623-630

Creswell, J.W. (2009). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Los Angeles: SAGE Publications, Inc.

Davis, D. (1987). 'Perceived usefulness, Perceived Ease of Use, and User Acceptance of information Technology.' *MIS Quarterly*. 13(13): 319-340

Doolittle, P. E., & Hicks, D. (2003). 'Constructivism as a Theoretical Framework for the use of Technology in Social Studies.' *Theory and Research in Social Education*. 31 (1): 71-103.

Ellis, A.K. (2004). *Exemplars of curriculum Theory*. Larchmont. NY: Eye on Education.

Fisseha, Mikre (2011). 'The Role of Information Communication Technologies in Education: Review Article with Emphasis to the Computer and Internet.' *Journal of Education & Science*. 6 (2): 1-16.

Haddad, C. (2008). *Innovative Practices in Physical Education and Sports in Asia*. Bangkok: UNESCO.

Harper, D.O. (1987). The Creation and Development of Educational Computer Technology. In R.M. Thomas and V.N. Kobayashi (ed.) *Educational Technology: Its Creation, Development and Cross-Cultural Transfer*. Oxford: Pergamon Press.

Hennessy, S., Harrison, D., Wamakote L. (2010). 'Teacher Factor Influencing Classroom use of ICT in Sub –Saharan African .' *Itupale Online Journal of African Studies*. 2 (1): 39-54.

Hennessy, S., Harrison, D., Wamakote L. (2011). 'An Investigation of Appropriate new Technologies to Support Interactive Teaching in Zambian Schools.' *Itupale Online Journal of African Studies*. 2 (1): 39-54.

Howley, A. & Howley, C. (2008). 'Planning for Technology Integration: Is the It Agenda Overrated or Underappreciated?' *Educational Planning*. 17 (1): 1-17

Isaacs, S. (2007). *Survey of ICT and Education in Africa: Zambia Country Report*. www.infodev.org Accessed 8/15/2013.

Ivan Kalas et al. (2012). *ICT in Primary Education: Analytical Survey*. Moscow: UNESCO Institute for Information Technologies in Education.

Jonassen, D. H. (2000). *Computers as Mind Tools for Schools: Engaging Critical Thinking*. Columbus: Merrill Prentice-Hall.

Kangwa, L. (2011*). Integration of Information and Communication Technologies (ICTs) in the Teaching Process in Selected colleges of Education in Zambia*. Masters Dissertation School of Education-Department of Education Administration and Policy Studies. University of Zambia

Kellenberger, D, and Hendricks, S. (2003) *Predicting Teacher's Computer Use for Own Needs, Teaching and Student Learning*. Paper Presented at Hawaii International Conference on Education.

Khosla, N. (2013). iSchool: *Transformative Learning in Zambia Classroom*. www.api.ning.com. Accessed 14/01/2015

Kombo D.K. & Tromp L.A. (2006). *Proposal and Thesis Writing: An Introduction*. Nairobi: Paulines Publication.

Lam, Y., & Lawrence, G. (2002). 'Teacher-Student role Redefinition during a Computer-Based Second Language Project: Are Computers Catalysts for Empowering Change?' *Computer Assisted Language Learning*. 15 (3): 295-315.

Lortie, D.C. (1975). *School Teacher: A Sociological Study*. Chicago: University of Chicago Press

Mason, C., Berson, M., Diem, R., Hicks, D., Lee, J., & Dralle, T. (2000). 'Guidelines for using Technology to prepare Social Studies Teachers.' *Contemporary issues in technology and teacher education*.1 (1): 107-116.

Mikre, F. (2011). *The Role of information communication technologies in Education*. Retrieved on 17/03/2015 from. www.ago.info/index.php/.../article.../624

Ministry of Communication and Transport, (2006) *National Information and Communication Technology Policy.* Lusaka, Zambia.

Ministry of Education, Science, Vocational Training and Early Education, (2012). *The Zambian, Educational Curriculum Framework 2012*. Lusaka: Curriculum Development Centre.

Monteith, M. (2004). ICT for Curriculum Enhancement. Portland: Intellect Publisher.

Mtanga, N., Imasiku, I., Mulauzi, F., Sitali, W. (2012). *Use of ICTs in Education: A Case Study of Selected Urban Based High Schools in Lusaka, Zambia*. The University of Zambia.

Mwale, M. Chilala, M. & Kumar, S. (2011). *African Leadership in ICT: Assessment of Environmental, Institutional and Individual Capacity needs for the Knowledge society in Zambia: A situational Analysis*. www.GESCI.org/Africa-leadership-in-ict-alict.html. Accessed 6/6/2013.

Omollo, D.O., Indoshi, F.C. and Ayere, M.A. (2013). 'Attitude of Teachers and Students Towards use of Information and Communication Technology in the Implementation of Biology Curriculum in Selected Secondary Schools.' *Research Journal in Organisation Psychology and Education Studies*. 2 (3): 76-83.

Pelgrum, W.J. (2001). 'Obstacles to the Integration of ICT in Education: Results from a Worldwide Educational Assessment .' *Computers and Education*. 37 (2): 163-178.

Peter, O.D and Rexwhite, E.R.T. (2012). 'The Utilization of Information Communication Technology (ICTs) for Effective Teaching of Social Studies in Secondary Schools in Delta State.' *Prime Research on Education*.' 21 (10): 378-389.

Piper, B.D. (2008). *Attitude, Conference, and Achievement of High-Ability Fith Grade Math Students*. Summative Project for Ma. Degree. www.digtalcommons.unl.edu./mathmidsummative/29. Accessed 28/01/2015

Polit, F. D. & Hungler P.B. (1999). *Nursing Research: Principles and Methods*. Philadelphia: Lippincott & Wilkins.

Primary Induction, ICT for teaching assistant trainers. (n.d) Retrieved on 16/03/2015 form www.education.go.uk/.../prim-induction.

Rice, M. L., & Wilson, E. K. (1999). 'How Technology Aids Constructivism in the Social Studies Classroom.' *Social Studies*. 90 (1): 28-33.

Roblyer, M. D., & Edwards, J. (2000). *Integrating Educational Technology into Teaching: Upper Saddle River*. New Jersey: Prentice-Hall, Inc.

Rogers, E. M. (2003) *Diffusion of Innovations*. New York: Simon and Schuster.

Sahin-Kizil, (2011) *EFL Teacher's Attitudes towards Information and Communication Technology (ICT*). International Computer and Instructional Technology symposium, 22-24 September, 2011, Firat University, ELAZIĞ-TURKEY. www.web.firat.edu.tr

Selwood, I. & Pilkington, R. (2005). Teacher Work Load: Using ICT to release Time to Teach. *Educational Review*. 57 (2): 163-174.

Selwyn, N. (1997). 'Student's Attitudes towards Computer: Validation of a Computer Attitude Scale for 16-19 Education'. *Computer and Education* 28 (1): 35 - 41.

Sharples, M. Graber, R., Harrison, C. and Logan, K. (2009). 'E-Safety and web 2.0 for children aged 11-16.' *Journal of Computer Assisted Learning*. 25 (1): 70-84.

Singhal, M. (2010). 'The Internet and Foreign Language Education: Benefits and Challenges.' *The Internet TESL Journal*. www.gse.uci.edu/ed168/resume.html/. Accessed 13/01/2015.

Summers, M. (1990). 'New student teachers and computers: An investigation of experiences and feelings.' *Educational Review*. 42(3): 261–271.

Sunal, C. S., & Hass, M. E. (2002). *Social Studies for the Elementary and Middle Grades: A Constructivist Approach*. Boston: Allyn & Bacon.

Teddlie, C. and Yu, F. (2007). 'Mixed methods sampling: A typology with examples' *Journal of Mixed methods Research*. 1 (1) 77-100

Tedla, B. A. (2012). 'Understanding the Importance, Impacts and Barriers of ICT on Teaching and Learning in East African Countries.' *International Journal for e-Learning Security*. 2 (3/4): 199 -207

Vrasidas, C. & McIsaac, M. (2001). 'Integrating Technology in Teaching and Teacher Education: Implication for Policy and Curriculum Reform.' *Educational Media International*. 38 (2/3): 127-132.

Windschitl, M. (2002). 'Framing Constructivism in Practice as the Negotiation of Dilemmas: An Analysis of the Conceptual, Pedagogical, Cultural, and Political Challenges Facing Teachers.' *Review of Educational Research*. 72 (2): 131-175.

Yin, K. R. (2009). *Case Study Research: Design and Methodology*. Los Angeles: SAGE Publications.

Zhang J. (2007). 'A cultural look at Information and Communication Technologies in Eastern Education,' *Educational Technology Research Development*. 55 (3):301-314.

Zhao, Y. (2007). 'Social Studies Teachers' Perspectives of Technology Integration.' *Journal of Technology and Teacher Education*. 15 (3): 311-333.

## List of Appendices

### Appendix 1: Interview Guide for Teachers

Topic: *Primary School Teachers' Attitude towards ICT Integration in Social Studies: A multiple case study of Lusaka and Katete Districts.*

1. What ICTs are available in your school across the curriculum?
2. Describe the ICT professional development programmes you have done in your school.
3. What is the level of ICT usage across the curriculum in the school?
4. Do you think the ICTs available in the school are relevant for teaching and learning Social Studies?
5. Do you use ICTs to teach Social Studies? If 'yes,' explain how. If 'no,' why not?
6. Do you think ICTs are worth using in the classroom?
7. Do you think ICTs can change the teaching of SS for the better? Explain
8. How confident are you about your ability to use ICTs in the classroom?
9. In your view, what are the advantages of using ICTs in teaching SS?
10. What do you believe are the disadvantages of using ICTs in teaching SS?
11. What would be you advice to schools that have not yet integrated ICTs in the teaching and learning processes?
12. How would you compare the use of ICTs with the use of Traditional Methods of teaching?
13. Is there anything else you would like to add to what we have discussed above?

## Appendix 2: Interview Guide for Administrators

Topic: *Primary School Teachers' Attitude towards ICT Integration in Social Studies: A Multiple case study of Lusaka and Katete Districts.*

1. What ICTs are available in the school?
2. What is the level of ICT usage in the school across the curriculum?
3. How important is the integration of ICTs in the curriculum in your school?
4. Have you, your teachers and pupils undergone any ICT training? If yes, how was it done?
5. How would you describe your teachers' attitude towards the integration of ICTs in the classroom?
6. In your view, is the Ministry of Education, Science, Vocational Training and Early Education supporting the use of ICTs in schools? Explain.
7. What support is iSchool Zambia giving the school in terms of ICT integration in your school?
8. Do you have anything else to add to what we have discussed above?

## Appendix 3: Focused Group Interview Guide for Pupils

Topic**:** *Primary School Teachers' Attitude towards ICT Integration in Social Studies: A Multiple case Study of Lusaka and Katete Districts.*

1. Give examples of ICTs found in your school.
2. How do you use ICTs in your school?
3. Does your teacher use ICTs in teaching SS?
4. Does your teacher use ICTs in teaching other subjects?
5. Do you learn better when the teacher uses ICTs in SS? Explain.
6. Do you think your teacher enjoys teaching you using ICTs?
7. Do you enjoy the lessons when the teacher uses ICTs? Why?
8. What else would you like to add to what we have discussed?

## Appendix 4: Observation checklist for Teachers and Pupils

Topic: *Primary School Teachers' Attitude towards ICT Integration in Social Studies: A Multiple case study of Lusaka and Katete Districts.*

| **ICT available in the SS Classroom** | **Available** | **Not Available** | **Comment** |
|---|---|---|---|
| Computes | | | |
| World wide web | | | |
| TV/ Videos based Lessons | | | |
| Audio based Lessons | | | |
| Smart board | | | |
| Digital Camera | | | |
| Others | | | |
| **Teacher and Pupils' use of ICT** | **Yes** | **No** | **Comment** |
| Teacher uses ICTs | | | |
| Teacher instructs pupils to use ICTs | | | |
| Pupils respond to teacher instructions | | | |
| Teacher interacts with pupils' | | | |
| **Teachers and Pupils attitude** | **Yes** | **No** | **Comment** |
| Teacher enjoys use of ICTs | | | |
| Teacher shows confidence in use of ICTs | | | |
| Teacher shows discomfort in the use of ICTs | | | |
| Teachers dislike the use of ICTs | | | |
| Pupils show confidence in the use of ICTs | | | |
| Pupils enjoy the use of ICTs | | | |
| Pupils dislike the use of ICTs. | | | |

## Appendix 5: Consent Form

**The University of Zambia,**

**Directorate of Research and Graduate Studies**

Dear Participant,

My name is Enala S. Lufungulo. I am a student at the University of Zambia in the Department of Primary Education. You are invited to participate in a research project entitled: Primary School Teachers' Attitude towards ICT Integration in Social Studies: A Multiple Case Study of Lusaka and Katete Districts. The purpose of this study is to find out primary school teachers' attitude towards integration of ICTs in the teaching and learning of SS. This study has been approved by the University of Zambia Directorate of Research and Graduate studies.

The following study interview which will be recorded and observation was developed to ask you a few questions regarding Primary School Teachers' attitudes towards ICT integration in the SS classroom. It is my hope that this information can contribute to existing literature on ICT integration in the classroom in Zambia, thereby helping in curriculum review and policy formulation. There are no identified risks from participating in this research.

The information you provide during the observation and interview is confidential. Participation in this research is completely voluntary and you may refuse to participate without consequence. The observation and interview will take approximately 40 to 60 minutes to complete. You will receive no compensation for participating in the research study. Responses to the study will only be reported in aggregated form to protect the identity of respondents .The results will be presented at the University of Zambia Post Graduate seminar presentations. Neither the researcher nor the University has a conflict of interest with the results.

Should you have any questions about the research or any related matters, please contact the researcher at enalalufungulo2006@yahoo.com or 0977946622.

If you have questions regarding your rights as a respondent, or if problems arise which you do not feel you can discuss with the Investigator, please contact the University of Zambia Directorate of Research and Graduate Studies at telephone; +206-1-290258. Or email; drgs@unza.zm If you would like to know the results of this research you can visit the University of Zambia Library Special Collection, thesis and dissertation section. Thank you for your consideration. Your help is greatly appreciated.

Your signature below indicates that you have read the above information and agree to participate in this study.

_____ _____

Signature Date



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