CHALLENGES AND SUCCESSES OF IMPLEMENTING E-LEARNING IN ORDINARY PRIMARY SCHOOLS IN DISTRICT 4, TSHWANE SOUTH

by

RAMATSIMELE CONNY KUPA

Submitted in fulfilment of the requirements for the degree

MASTERS IN EDUCATION

in

LEADERSHIP AND MANAGEMENT

in the

COLLEGE OF EDUCATION

at the

UNIVERSITY OF SOUTH AFRICA

SUPERVISOR: DR L.L. TOOLO

DECEMBER 2021

DECLARATION

I declare “CHALLENGES AND SUCCESSES OF IMPLEMENTING E-LEARNING IN ORDINARY PRIMARY SCHOOLS IN DISTRICT 4, TSHWANE SOUTH “is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

I further declare that I submitted the dissertation to originality checking software and that it falls within the accepted requirements for originality.

I further declare that I have not previously submitted this work, or part of it, for examination at UNISA for another qualification or other higher education institution.

…… DATE: 11/12/2021

Signature:

RAMATSIMELE CONNY KUPA

STUDENT NUMBER: 42250323

DEDICATION

I would like to dedicate this study to:

- The Lord Almighty for guiding and protecting me throughout the whole study process.
- The most important people in my life: my husband SEPHOROKO LIPSON, my beautiful two daughters, RAMATHABATHE MORONGWA and RAMADIMETSE LEHLOGONOLO KUPA for supporting me during my studies.
- My three sisters, MODIPADI MASENYA, HUNADI LESUFI and MELADI PHAKGADI, and their families, for having faith in me.

May the Lord God always guide and protect you all.

ACKNOWLEDGEMENTS

I express my sincere gratitude and appreciation to the following people and organisations for their valued contributions towards completing this study:

- Dr L. L. Toolo, my supervisor, for guiding me throughout the study.
- The Department of Basic Education for permitting me to conduct the research interviews at primary schools.
- The research participants from primary schools in District 4, Tshwane South, who provided the research information for this study.
- The UNISA Student Funding division, for granting me the funds for my dissertation.
- Mrs Pholile Zengele for the good and professional editing of the manuscript.

ABSTRACT

ELearning is a programme initiated by the Department of Education with the aim of improving teaching and learning in SA schools. The research study focused on the Challenges and Successes of implementing eLearning in ordinary primary schools in District 4, Tshwane South, since there were successes and at the same time challenges that I had observed in the implementation of eLearning. Qualitative method was used in the study because it is holistic; the study will look at relationships within a system of culture and focuses on understanding a given social setting, such as a school. Data was collected as semi-structured telephone interview from three eLearning schools. Participants were purposively selected from each school according to the role they play for eLearning implementation in their schools, for example the principal as the manager ensure that there are enough resources as well as eLearning implementer are fully capacitated. The study discovered that although there are successes experience by eLearning implementers and users, there are also eLearning challenges, among others, lack of trained eLearning educators and eLearning infrastructures. The study also found out that eLearning challenges impede the utilization of eLearning in primary schools. Based on the findings, some recommendations were suggested to solve eLearning challenges, such as: the project management should be in place at the beginning of the project, evaluation tools should bookend a project, managing eLearning project, training and preparation are needed, communication and information flow should be well managed. Detailed recommendations are discussed in detail in Chapter 5.

Table of Contents

LIST OF FIGURES

LIST OF TABLES

APPENDICES

LIST OF ABBREVIATIONS ……. vi

CD-ROM	Compact Disc Read Only Memory
COVID19	Corona Virus
DBE	Department of Basic Education
DoE	Department of Education
Dr	Doctor
EDUSA	Educational Satellite
ELRC	Instruction Work Relations Board
HOD	Head of Department
ICT	Information Communication Technology
IT	Information Technology
LTSM	Learning and Teaching Support Material
PC	Personal Computer
PDF	Portable Document Format
RSA	Republic of South Africa
SA	South Africa
SMT	School Management Team
SMS	Short Message Service
UNESCO	United Nations Educational Scientific and Cultural Organization
UNISA	University of South Africa

CHAPTER 1

1.1. INTRODUCTION

Educational plan change in South Africa is driven by the need to make the educational plan more receptive to the requirements of the nation and to be attributable to the reality "that the current educational program was described by prejudice, segregation and disparities" (Tshiredo 2013:2). As a component of educational programme change, the Department of Basic Education (DBE) in the Republic of South Africa (RSA) presented eLearning in 2015. The government in SA funded schools to improve the nature of instruction in schools (DBE 2015:2). Hussain clarifies eLearning as an apparatus that is utilised to alter the learning interaction by use of ICT assets. It is largely used in distance education. However, it can also be used to up close and personal learning (Hussain, Wang & Rahim 2011:1). The Department of Basic Education in RSA alludes to e-Learning as an "educational plan administration that offers schools an assortment of online courses and projects that can upgrade instructing and learning" (DBE 2015:3).

In this chapter, I have discussed the background about the challenges and successes of eLearning implementation in District 4. I have also discussed “The problem leading to the study, aims and objectives of the study, research design and methods including chapter division of the dissertation.

1.2. BACKGROUND TO THE STUDY

Even though there is no single, widespread meaning of eLearning, the term is for the most part acknowledged to mean all gadgets, organizing segments, applications and frameworks that join and permit individuals and associations to connect in the computerized world. eLearning likewise makes better approaches for educating and learning for educators and students by empowering them to take part in data choice, assembling, arranging and examining. Furthermore, “eLearning can possibly improve the administration and managerial limits of schools (DBE 2015:5).

For the purpose of this study, eLearning is defined as a method of teaching and learning where learners and teachers teach and learn face-to-face through the use of Information and Communications Technologies (ICTs) using either computers, desktops, laptops or even tablets. Teaching and learning in eLearning happen differently than in traditional learning in the classroom and can present new challenges to both the instructors (teachers) and learners. The Department of Education in the South African government seized the opportunity and introduced Learning to support teaching and learning in schools.

eLearning has been conceptualized by the Department of Education (DoE) to improve teaching and learning in SA schools (DoE 2004:.5) As an educator, I considered this a decent chance that will improve teaching and learning in our schools. This sort of learning is of critical significance as it improves instructive frameworks in schools. Nonetheless, notwithstanding the achievements of eLearning, some difficulties hinder the execution of it particularly in customary schools. The principal point of this research is to recognize the difficulties, appreciate the achievements of eLearning and furthermore propose appropriate methods of executing eLearning in conventional schools.

eLearning is the foundation that empowers current knowledge acquisition. As indicated DBE, the point of acquainting eLearning in schools is with change learning and educating. eLearning additionally makes better approaches for educating and learning for instructors and students by empowering them to take part in data choice, assembling, arranging and investigating. eLearning also improve the administration and regulatory limits of schools (DBE 2015: 5). Moreover, Hussain clarifies eLearning as a device that is utilised to reform the learning cycle by utilization of ICT assets. It is largely utilized in distance learning; however, it can also be utilized in face-to-face learning (Hussain, Wang & Rahim 2011:1). Nayak and Kalyankar (2010: 208) add that "ICT offers new freedoms to reinforce numerous parts of youth instruction practices like a chance to help and upgrade kids' learning and play encounters(Nayak and Kalyankar 2010: 208).

Despite the successes of eLearning, some challenges hinder its implementation, especially in ordinary schools. The main aim of this study was to identify the challenges,

appreciate the successes of eLearning and suggest proper ways of implementing it in ordinary primary schools.

1.3. THE PROBLEM LEADING TO THE STUDY

The main problem that led to this study is that there are a number of challenges that prevents smooth eLearning implementation, such as shortage of eLearning infrastructure, which involves the following: ICT design and planning, ICT operation management and ICT technical support (Du Toit 2015:3). The management of school infrastructure can be one of the biggest impediments in the implementation of Computer Science education (Lockwood & Cornell 2013:3). Without the right support and information, school IT infrastructure cannot deliver the processing power and networking facilities that learners need for a proper process of e-Learning implementation. The DBE has not met its obligations to schools. For example, according to the Teacher Laptop Initiative (TLI) that was launched in 2009 by the Minister of Education, Naledi Pandor, “every teacher was supposed to receive a laptop” (ELRC 2009:5). The purpose of this initiative was for teachers to use the laptop to improve learning and teaching in schools. Having laptops in and out of school was going to give teachers skills on how to use computers. However, up to this day, this has not been materialized.

Based on the above problem I wanted to conduct a research in order to understand the challenges and the successes of eLearning implementation in primary schools.as a contribution towards resolving such challenges and to use successes as guidelines for implementers.

a) **Research question**

The research question of this study was “What contribution can be made towards resolving challenges of eLearning implementation and guidelines that can be learned from successes? The above research question was answered by responses to the following research sub-questions:

1. What are the challenges of implementing eLearning?

2. What are the successes of eLearning execution in schools?

1.4. PURPOSE OF THE STUDY

Given the problems mentioned under the above heading (problem leading to the study), the purpose of this study was to explore eLearning implementation, discuss its challenges and successes in ordinary primary schools in SA. Furthermore, stayed that a lot is written about eLearning internationally especially in rural Indian schools (Kumar 2012:2, Hussain, Wang & Rahim 2010:08). However, there is limited research that looks at how eLearning is implemented, and the challenges and successes faced by schools.

1.5. PRELIMINARY LITERATURE REVIEW

Out of South African educators 413 067, a mere 134 884 has been prepared in essential PC abilities and eLearning hardware. As indicated by the Department of Basic Education's report, the execution of eLearning plans was "excessively sluggish" (Ngubeni 2014:17). Barely any educators got eLearning preparation, which hampered the execution. Ongoing exploration discoveries report "poor or inappropriate use and the executives of eLearning in the study hall may bring about underperformance in instructive results" (Du Toit 2015:18).

In terms of training teachers in the use of eLearning, this has not happened in any meaningful way. Literature tends to highlight, amongst others, the following obstacles to successful eLearning integration: lack of teacher confidence and lack of teacher competence. The statement is supported by the Via Africa Content Manager Michael Goodman, in his statement that “there is overwhelming positivity towards the idea of eLearning, but most teachers aren`t equipped yet to use digital education tools” (SAPA, South Africa 2014: 13 June).

Community engagement in eLearning planning, implementation and monitoring is crucial for the formation, maintenance and security of an e-school. Moreover, community members aspired to develop community–based small, medium and microenterprises to provide maintenance support services for hardware and connectivity to the e-school (DoE

2004:32). This is but one contributory factor as to why schools are not yet ready for eLearning. In addition, the findings revealed that there is a scarcity of ICT resources available in the schools that delay the implementation of eLearning (Mathevula 2015:4).

The steady changing of the educational programme in schools has prompted a reconfiguration of instructing and learning in schools. The principal point was coordinated with the norm of training both broadly and universally. The Department of Education presented eLearning. This is a device used to improve the way towards learning and instructing in SA schools (DBE 2015:2). A lot was written about this problem both internationally and nationally. Additionally, statistics have been provided, however, there was limited research that looks at how eLearning was implemented focusing on its challenges and successes in schools.

1.5.1. Challenges of implementing eLearning

Literature highlighted, amongst others, the following as being the common obstacles to successful ICT integration: lack of teacher training, lack of confidence, resistance to change, lack of ICT and eLearning infrastructure, financial constraints, lack of affordable and adequate internet bandwidth (Tarus, Gichoya & Muumbo 2015:20, Sskakubo, Suleman & Takalani 2011:10, Mathevula 2014:10, Beyers & Hlala: , Celik & Kalinga 2010:2).There are some challenges experienced during the implementation of eLearning. Amongst others, there are inadequate ICT and e-learning infrastructure, financial constraints, lack of affordable and adequate internet bandwidth, lack of teacher training and lack of operational eLearning policies as highlighted by different researchers (Mathevula: 2015, Tarus, Gichoya & Muumbo:2015 , Beyers & Hlala: 2015).

a) Teacher training

Teacher training arises as one of the challenges of implementing eLearning. Just like any other innovation, eLearning requires new skills for teachers so that they are able to

implement and intergrade them into teaching and learning (Mathevula & Uwizegimana 2014:1090).

The government partnership with private ICT sectors such as Vodacom on the project named “Train the Trainer Course. The main aim of this project was to train teachers and provide them with ICT skills so that they would be able to utilize them during eLearning implementation in the classroom. The project was a failure as some schools were” under-resourced”. However, the issue of lack of teacher training gave rise to teachers’ negative attitude to eLearning adoption that results in resistance to change (Mathevula & Uwizeyimana 2015: 1090).

b) Digital division

Higley highlighted the digital divide as one of the challenges of eLearning implementation which is marked not only by physical access to computers and connectivity but also by access to the additional resources that allow people to use technology as well (Higley 2014: 66).

Likewise, computerized barriers in South Africa are a result of politically sanctioned racial segregation. The primary obligation of our majority rule nation was to overcome any issues between the kinds of schools and guarantee that there are instructive uniformities.

c) Lack of eLearning infrastructure

The absence of eLearning frameworks was another consuming issue that forestalls eLearning execution. As indicated by an investigation conducted in Nigeria, absence of an eLearning foundation kept on being a significant test.

The study discovered that there was an absence of qualified educators to show eLearning in the schools, absence of PCs, costly PCs, absence of web or moderate availability and robbery in schools.

In South Africa, the eLearning framework is costly and furthermore far from numerous schools and colleges. Dr Ramphela illustrated this in her discourse during the thirteenth

International Conference and display on ICT for schooling and Training (Kigotho 2019:4). Another South African study discovered that educators know about the significance of eLearning execution in the school, yet there are difficulties such as absence of instructor preparation, absence of eLearning foundation and absence of organization inclusion particularly in rural areas (Beyers & Hlala 2015:17).

Furthermore, language was another challenge for eLearning implementation. Dr Ramphele highlighted that language of instruction is also a problem in eLearning since African languages are absent as modes of delivery tools in eLearning. Her main concern is “How can you expect students to learn effectively in languages that they don’t understand properly? Ann-Therese Ndong Jatta, Director of the UNESCO Regional Office for Eastern Africa in Nairobi highlighted the historical dominance of colonial languages in education systems, which had stunted students’ natural learning abilities and lifelong learning. She suggests that they must create convergence in learning processes and strategies by promoting and adopting languages understood by learners (Kigotho 2018:4).I recommended that for South African children and Africa overall, an official language ought to be utilized as a vehicle of guidance during eLearning execution. Therefore, students had to be competent in the language that they know and understand better, and simultaneously knowing and valuing their way of life and language. Educators ought to keep at par with eLearning innovation by going to gatherings, eLearning occasions, reading articles, writing and in any event, attending eLearning courses and workshops.

In addition, there ought to be a balanced eLearning spending plan. Before commencing with eLearning execution, there ought to be eLearning funds assigned for eLearning costs such as purchasing eLearning foundations and furthermore making security-protected eLearning study halls not neglecting taking instructors to eLearning courses. Schools can gather funds by doing fundraisings, or using the cash provided by The Department of Education (as our school is a common school that gets assets from the office), asking for gifts from organizations or even neighbourhood organizations.

1.5.2. Successes of implementing e-learning

a) Sharing of data

Besides the challenges of eLearning implementation, coming up next are the successes that were brought about by eLearning. The point of carrying out eLearning is to clear the way towards instructing and learning by taking into consideration the creation and capacity of learning materials, and making them accessible. Students are likewise ready to impart information to learners from different schools across the country (Kalinga 2010:89).

Besides, Dr Ramphele expressed that eLearning is interfacing Africa by setting out open doors in schooling as well as getting Africans ready for development and mechanical take-off (Kigotho 2018:4).

b) eLearning permits the use of mixed learning

Beyers and Hlala considered eLearning to be a device that can assist students with information application, development and at last the upper hand of an association or scholastic establishment. ELearning foundation can permit mixed learning of both customary learning and eLearning. Educators can utilize mixed media instruments to make intuitive introductions through the association of text pictures and sound to work with basic reasoning. As per Beyers and Hlala (ibid), students can learn in a wide range of styles, and this can improve their learning potential and furthermore empower students and educators to grow their learning (Beyers & Hlala 2015:16).

c) eLearning used for teacher development.

In any case, as indicated by Jamil (2018:7), coordination of eLearning can improved instructor advancement, which can work within credible expert learning experience for educators. The investigation discovered that financial conditions, learning, organizations and work environment conditions assist with revealing insight into the attainability of innovation – improved educator advancement (Kigotho 2018:4).

d) eLearning utilized to improve African dialects

The utilization of eLearning is not merely to associate Africa as a mainland, yet it is a vital wellspring of expectation for Africa as Africa is abandoned in receiving the rewards of the Fourth Industrial Revolution (Kigotho 2018:4).

e) eLearning as a social apparatus

Petterson considered eLearning to be a social learning apparatus that empowers students to pose inquiries, find solutions straightforwardly from different clients including topic specialists, and furthermore assist them with shared information across the association, which is the school. Petterson recommends that if instructors can give up control of educating and picking up during eLearning, there will be a significant mentality shift which will create important outcomes (Petterson 2018: 3). This was possible in the type of educating and learning style known as PEER TEACHING where students were divided into little gatherings to discuss and as such, students learn and simultaneously teach one another.

1.6. AIM AND OBJECTIVES OF THE STUDY

The aim of this study was to explore the challenges and successes of the implementation of eLearning in SA ordinary primary schools, in order to contribute towards resolving such challenges and using successes as guidelines for implementers. Based on the aims the following were objectives:

1. Find the challenges of eLearning implementation in SA schools
2. Explore some of the successes of implementing eLearning in ordinary primary schools in SA.

As already mentioned above, some challenges are encountered by the implementation of eLearning in schools such as lack of eLearning infrastructure, lack of teacher training, language barrier and digital division between low and high socio-economic ideals of schools (Mathevula & Muumbo: 2015, Beyers & Hlala : 2015 and Kigotho: 2018).

To solve the above-mentioned problems of implementing eLearning in schools, the Department of Education should ensure that there is sufficient eLearning infrastructure. Furthermore, educators should be given sufficient eLearning training and permits the eLearning framework to utilize various dialects found in SA.

1.7. RESEARCH DESIGN

Research design assists the specialist with arranging and carrying out the investigation so that it helps him/her to get expected outcomes by expanding the odds of acquiring data that are identified with the investigation. Creswell upheld this thought by alluding to exploring plans as kinds of enquiry inside subjective, quantitative and blended techniques for an approach that gives guidance for methodology in the plan (Creswell 2015:200). This study utilised a qualitative research design to plan the research study, which was presented in detail in Chapter 3, under 'Research methods'.

1.7.1. Research Design

The examination configuration alludes to an arrangement for choosing subjects, research site and information assortment methodology to address the exploration question. It is a bunch of legitimate courses of action that assist the research cycle. Furthermore, it shows the members that will be considered (McMillan and Schumacher 2010:102). The accompanying sub-headings were examined, as well as the research design, research approach and research methodology.

1.7.2. Research paradigm

The emphasis in the cognitive perspective is on learners' cognitive processes, and on the critical role, that memory plays in helping them to translate new information into a meaningful form that they can remember and use. Jean Piaget was an early psychologist who specialized in child development from the 1920s. Piaget developed his theories by watching children and making notes about their progress. The emphasis on the cognitive

perspective is on learners' cognitive processes, and on the critical role, that memory plays in helping them to translate new information into a meaningful form that they can remember and use. Jean Piaget was an early psychologist who specialized in child development from the 1920s. Piaget developed his theories by watching children and making notes about their progress.
The core idea of Piaget's theory is that children develop by acting as "little scientists" who explore and interact with their world to understand people, objects, and concepts. They do this naturally, even without the help of an adult.

This study was based on Piaget`s third stage and fourth stages of cognitive development which is "The concrete operational stage and the formal operational stage. The stages start when children are 7 to 11 + years. According to Piaget, children learn logical rules to understand abstract concepts and solve problems. They use schema for learning. Piaget was the first to include the idea of a schema in a theory of cognitive development. A schema is a category of knowledge, or a mental template, that a child puts together to understand the world. In addition to creating new schemas, children can adapt their existing schemas based on new experiences. Two key concepts related to schemas are assimilation and accommodation:

a) Assimilation is where a child uses a pre-existing schema to understand a new object or situation.

b) Accommodation is where a child adapts a pre-existing schema to fit a new experience or object. This process is more mentally challenging than assimilation.

Cognitive learning theory has always focused on how students process information, and the best educational strategies educators can use to promote student understanding of learning materials. It was up to us, as teachers, to vary our teaching strategies with the understanding that individual students process information in unique ways. Students can process limited amounts of information at any given point in a class, but that information was far more likely to be retained in long-term memory if the information presented was paired with a unique experience or relies upon multiple sensory inputs during the

presentation (Becker 2017:20). Furthermore, educators applied intellectual hypothesis systems during instructing and learning:

Meaningful learning method

The educator can utilize old data to present new data.

Dual coding

The instructor utilize various assets for showing writings, pictures or even sounds as they allow students to recollect and encode data.

Cognitive theory was very crucial as far as implementing eLearning in the classroom is concerned. eLearning should be implemented in the primary years of learners because during this time, children`s minds are still developing. If teachers can follow Piaget`s cognitive theory, then learners can adapt their existing schemas based on new experiences.

1.7.3. Research approach

This study utilised a research methodology. Subjective examination tried to comprehend a phenomenon by zeroing in on the all-encompassing picture and profundity for understanding that phenomenon. It permits members to communicate their own emotions and it permitted them to raise points and issues that may be basic to the exploration. Research methodology was chosen to investigate the difficulties and accomplishment of executing eLearning in common elementary schools in Tshwane South. The strength of subjective exploration was its capacity to give complex text-based portrayals of how

individuals experience a given research issue. A more detailed discussion was presented in Chapter 3.

1.7.4. Research strategy

The research study followed a descriptive method. Descriptive research is based on a concept that the researcher knows something about the topic and wants to describe what he/she has found. In most cases, it involved qualitative, quantitative or mixed-methods (Creswell 2015:50).

1.8. RESEARCH METHODS

Research design helps the researcher to plan and implement the study in such a way that will help him/her to obtain intended results by increasing the chances of obtaining information related to the study. Creswell supported this idea by referring to research design as types of enquiries within qualitative, quantitative and mixed methods of approach that provide direction for procedures in the design (Creswell 2015:200). This study utilised a qualitative research design.

Moreover, information was gathered from three-member schools that have effectively executed eLearning. The investigation utilized purposive/critical testing to select members. This theme was examined in detail in Chapter 3 of this study.

1.8.1. Sample size and participant selection

1.8.1.1. Selection of Sampling

The selection of sampling for this study was discussed under the following sub-topics: population and sampling, eligibility criteria, sampling procedure and the size of the population.

Population and Sampling

McMillan defines a population as a group of elements or cases, whether individuals, objects, or events that conformed to a specific criterion and to which we generalise the research results (McMillan et al. 2010:166). The population for this study was three primary schools in Pretoria, Gauteng Province, South Africa. From the population, the researcher chose the sample. Sampling was the most appropriate for qualitative research where few cases were studied in-depth to yield insights about the topic (McMillan & Schumacher 2010:245). Sampling was discussed in detail in chapter 3. Participants were selected according to the role they play in eLearning implementation at school. The study also utilised purposive random sampling to select participants. In random purposive sampling, researchers use their own judgement in the selection process. Based on the researcher's knowledge of the population, a judgement was made about which subjects should be selected to provide the best information (McMillan 2010:175). Schools were selected randomly, provided they were implementing eLearning in the classroom.
For the purpose of this study, participants were members of the School Management Team (SMT), namely: the school principal, two Head of The Department (HOD) and one Level 1 teacher that represented any teachers' union such as SATDU, NAPTOSA or any other teacher union, utilising face-to-face interviews.

The number of the school, SMT members and teachers determined the sample size. The sampling rationale helped because, it was more economical to choose a sample from one school unlike using many schools that use eLearning in D4 Gauteng Province (McMillan et al 2010:177).

1.8.1.2. Data collection

This study employed two methods of data collection, which are semi-structured interviews and document analysis.

a) Semi-structured interview and document analysis

Data are define as information obtained in a course of a study (Ary et al. 2010: 167). In this study, data were collected using semi-structured interviews and document analysis. In a semi-structured interview, the interviewer had certain questions to ask all participants but also allowed the respondents to raise issues and questions during the interviews (McMillan & Schumacher 2010:180).

The questions and hypotheses associated with the research study were identified by avoiding both the inclusion of useless items and the omission of necessary items. Data are from documents and interviews. The documents were both personal and official.

This is any first-person narrative that describes an individual's actions, experiences, and beliefs. They included diaries, personal letters and anecdotal records. Official documents include school memos, minutes of meetings, working papers and policy documents from the Department of Education, schools' management plans and newsletters were used as a source of information.

During the data collection process, there were preparations for conducting the interviews. These procedures involved the following: Standardization of questions, time, obtaining participants, cooperation of the respondents, and data-recording being efficiently structured. I standardized the procedure so that all respondents received a consistent and identical interview as possible. As far as time was concerned, I arranged with the participants to find a mutually convenient time for them to conduct the interviews. If they were not available during the day, the interviews were conducted during the evenings or even on weekends. A good rapport between me, as the researcher, was created by establishing a friendly business-like relationship with the participants. A laptop was used for data recording.

A semi-structured interview was used for the study whereby some identical questions were utilised for the three schools even though some questions may have emanated from the interview, and related to a particular school. The interviews were face-to-face to recognise facial expressions and body language.

Furthermore, during the semi-structured interviews, I had a list of themes and open-ended questions to be covered. Questions were asked of participants in a form of an interview

to gather in-depth information. In using a case study, I was able to listen to the participants' different explanations, while practically observing the real context of the phenomena. It also helped me to contextualize the participant`s point of view against the observed reality. The semi-structured interview questions are included as one of the Annexures of this dissertation.

b) Document analysis

The following school documents were used for this study: School documents about eLearning, staff meetings, letters and emails related to eLearning, Memorandums from the Department of Education related to eLearning. Proper procedure were followed to request permission from the school principals, the School Management Team (SMT) and the School Governing Body (SGB) (Creswell 2015:200) for the schools to be part of this study.

1.8.1.3. Data analysis

In data analysis, data is organised into categories and patterns and relationships among the categories are identified (McMillan & Schumacher2010:367).The interview was transcribed verbatim, the transcripts coded. (Ary et al. 2010: 250). The details of the research design and methodology was presented in Chapter 3.

a) Trustworthiness

Reliability and validity in quantitative studies were evaluated based on trustworthiness and authenticity, which involve credibility, transferability, dependability and conformability (Kuanda 2012:101). Trustworthy was discussed in detail in Chapter 3.

b) Ethical considerations

Teachers face an ethical dilemma in their daily duties, so researchers have to protect the participants, especially if participants are humans. The following ethics were considered (UNISA 2016:12-13): Respect and protection of the rights and interests of participants including privacy, anonymity and confidentiality, informed consent, justice and fairness, as well as the relationship between researcher and participants.

1.9. CHAPTER DIVISION

The study is divided into the following chapters:
Chapter 1: Introduction and background to the study

The first chapter introduced the study and the background to the study, the research problem, the rationale, the research questions, the aims and the objectives of the study are presented. The research design and the methodology were also outlined.

Chapter 2: Literature Review. The second chapter reviewed literature related to the research study. It outlined the framework suggested by previous researchers. It also provided detailed challenges and successes of implementing eLearning in schools.

Chapter 3: Methodology

This chapter introduced the research methodology that was utilised in collecting data for this study. The qualitative research method was used for this study. Thereafter, the population and sampling strategies employed for this study were discussed.

Chapter 4: Data Analysis

The fourth chapter deals with the findings gathered from Chapter 3 under methodology. The findings were organised according to the themes identified.

Chapter 5: Conclusion

This final chapter presented the findings into an integrated picture. It provided a conclusion to the research problem.

1.10. SUMMARY

The chapter presented an outline of the execution of eLearning in normal grade schools in District 4, Tshwane South. It portrayed the reasoning, research question, points and targets for the investigation and procedure and furthermore an outline of the chapters. The following chapter examined the study's literature review.

CHAPTER 2

LITERATURE REVIEW

2.1. INTRODUCTION

eLearning is defined as a PC based instructive apparatuses or framework that empowers students to adapt anywhere and whenever. It assists clients with sharing materials in a wide range of arrangements such as recordings, slideshows, word archives and PDFs. Moreover, White Paper clarifies eLearning as an adaptable avenue utilizing Internet Communication Technology (ICT) assets, devices and applications, and zeroing in on connection among educators, students, and online climate utilising synergistic learning. eLearning may likewise include the utilization of the web, programming and other media such as broadcast communications (e-schooling White Paper 2014:15).

eLearning is more than creating PC proficiency and the abilities important to work with different sorts of data and correspondence innovation. Coming up next were the upsides of utilizing eLearning: applying ICT abilities, examining, assessing, intergrading, introducing and imparting data. eLearning likewise upgrades educating and learning through correspondence and cooperation by utilized eLearning infrastructure. It makes information and new data by adjusting, applying, planning, imagining and creating data (White Paper 2014:14). This section then zeros in on the accompanying subjects: contextual system, theoretical structure, conceptual structure and priorities for experimental examination.

2.2. CONTEXTUAL FRAMEWORK

2.2.1. Challenges of e-learning implementation

Writing was generally featured among others the accompanying regular hindrances to fruitful eLearning execution in schools: absence of instructor preparing, absence of

certainty, protection from change, absence of ICT and eLearning framework, monetary limitations, absence of moderate and satisfactory web transfer speed (Tarus & Gichoya, Muumbo 2015:8, Sskakubo & Suleman 2011:5, Takalani & Mathevula 2015:8, Beyers & Hlala 2015:6, Celik 2012:12).

The previously mentioned discussion stated that there are a few difficulties experienced during the execution of eLearning. Among others, there are insufficient ICT and e-learning frameworks, monetary requirements, absence of reasonable and satisfactory web transmission capacity, absence of educator preparation and absence of operational eLearning approaches. The difficulties were discussed below:

a) Teacher training

Very much like some other development, eLearning requires new abilities for teachers to want to carry out and intergrade it in education and learning (Mathevula & Uwizegimana 2014:1090). Another investigation finding showed that instructors could not utilize PCs to instruct because of the absence of assets and abilities (Mahapelela 2015: 15).

To tackle the previously mentioned challenge, educators ought to have appropriate eLearning preparation. They ought to attend eLearning courses and workshops so they keep abreast with innovation. The Department of Education in SA ought to collaborate with private institutions. The public authority organisation with private ICT areas, for example, Vodacom designated the "Train the Trainer" programme. The fundamental point of this venture was to prepare educators and give them ICT abilities so they would actually want to use them during eLearning execution in the classroom. The task was a disappointment as certain schools were under-resourced. In addition, the issue of absence of educator preparation brought about instructors' negative mentality to eLearning selection, which brought about resistance to change (Mathevula & Uwizeyimana 2014: 1090).

Another partnership is with Telkom South Africa. Telkom`s projects such as the mobile library, science laboratories and ICT projects, that included eLearning, were launched to help the education sector in its implementation of eLearning. Furthermore, in 2010

Telkom funded 150 e-schools in the Western Cape. It has also supplied 1000 schools with one computer each (Souter 2011:20).

Other than the previously mentioned associations, there have been various enormous activities in SA that gave schools eLearning frameworks and web access, for example, the Thintana I-Learn project, the School Net SA activity and Gauteng Online. Even though those undertakings were fruitful, numerous schools could not keep up with the eLearning framework due to inadequate resources. Conradie's study further managed real factors and goals with regard to eLearning in SA. The investigation additionally centred on the difficulties confronting eLearning professionals in rural and impeded spaces of the country (Conradie & Roodt 20015:1).

Besides, the investigation, additionally discovered that there was a distinction between eLearning goals planned by South African strategy producers and the real factors that face eLearning specialists, particularly in provincial regions. At that point, they gave the appropriate conditions under which country e-activities were more powerful (Conradie et al. 20015:1).

I suggested that instructor preparation is the primary centre of eLearning execution. The preparation needs to go past basic PC abilities. It needs to furnish educators with abilities and information that will empower legitimate execution of eLearning in the classroom. It should also give educators support by providing projects that will assist them with using ICTs towards instructing and learning. Another arrangement is that, public authority should extend its organization with more private areas that will afford serious eLearning foundations such as PCs/PCs/tablets, web and projectors, to schools and colleges, which need them. Furthermore, if they likewise made their administrations low so everybody would have the option to bear its costs.

I additionally suggested that the division of schooling in SA should ensure that instructors get enough workshops that furnished them with the abilities to utilize innovation in the study hall. The Department of Education ought to have a programme on the best way to oversee eLearning execution in schools. They ought to guide impact and rise proficient educator improvement by presenting more workshops about eLearning and increase the

pay rates of those instructors who, as of now, are in a position of eLearning capabilities. Therefore, most instructors will begin to focus on their expert improvement on eLearning and simultaneously improve the execution of eLearning in the school.

b) Poor or lack of eLearning infrastructure

Tarus, Gichoya and Muumbo (2015:8) conducted an investigation about the difficulties of eLearning execution in Kenyan state-funded colleges. As per the examination, there are various difficulties to overcome while carrying out eLearning in colleges. It incorporates innovative and instructive difficulties, for example, insufficient ICT and eLearning framework, monetary requirements and absence of operational eLearning arrangements. The examination discovered those colleges that intended to execute eLearning ought to be readied to react to the difficulties that are probably going to emerge throughout execution by focusing on preparing the mechanical highlights of the eLearning framework. The exploration likewise discovered that most Kenyan colleges are as of now utilizing eLearning, however in mixed modes vis-à-vis educating (Tarus, Gichoya & Muumbo 2015:8).

Exploration has tracked down that the utilization of eLearning for instructing and learning gives the accompanying benefits. In a bid to settle the difficulties of carrying out eLearning in Kenyan colleges, these accompanying ways were suggested: the development of eLearning frameworks to work with admittance to eLearning by replacements, instructors and other instructive partners, prioritization of eLearning in budgetary designation, network access supplier bringing down their expenses. The definition of eLearning arrangements, coordinating efforts and the organization with other effective eLearning collaborators (Tarus, Gichoya & Muumba 2015:1).

eLearning in Nigeria did not have a lot of effect in creating educating and learning as the implementation of eLearning experienced difficulties. For example, the absence of instructors in ICT schools, absence of PCs, and absence of power in certain areas of the nation, thievery and absence of web or moderate availability Mahapelela (2012:15)

In light of the fact that South Africa is an agricultural nation, a portion of its territories is provincial zones. As per Mojapelo (2008:12) rural regions are far off towns that are upheld by their own networks. The population in most areas is under-resourced since the state simply payed for compensations, course readings, and furthermore experience helpless assistance conveyance from the public authority. The present circumstance does not change, as those networks were poor and have no assets for school improvement (Mojapelo 2008:10). Besides, as indicated by the discourse presented by Dr Ramphela at the thirteenth Worldwide Meeting and Show on ICT for Instruction, Preparing and Abilities Advancement in Kigali, Rwanda, data and correspondences innovation (ICT) foundation is costly and far from numerous schools and even universities (Kigotho 2018:2).

To tackle the previously mentioned issue, the former Minister of Education Naledi Pandor launched a venture called "Instructor PC Activity" to increase the number of PCs in schools. The principal point of this venture was to expand the number of PCs at schools and advance PC utilization abilities in educators.

They accepted that if instructors have workstations, they will actually want to utilize them at school and furthermore at home. Therefore, it will give them sufficient opportunities to acquaint themselves with innovation and furthermore increase the number of PCs at school. The venture additionally furnishes educators with a month-to-month stipend to cover the instalment costs. Those PCs will be educators' property towards the completion of the credit term (Instruction Work Relations Board (ELRC) Yearly Report: 2010/11).

Moreover, Beyers and Hlala (2015:10) upheld the absence of an eLearning foundation. The investigation was directed to assess the significance of eLearning in South African schools. They discovered that respondents know about the significance of eLearning however there are enduring difficulties, for example, training of instructors and absence of eLearning frameworks and organization inclusion, particularly in provincial zones. The investigation recommended that the Department of Education in Limpopo should ensure that the expense of the web are decreased, and IT ought to be important for educator preparation (Beyers & Hlala 2015:10). In another investigation, Kalinga (2015:18) conducted research to evaluate e-preparation in Tanzanian schools. They discovered that

numerous schools need eLearning foundations including PCs and the web. As indicated by the examination, Tanzanian secondary schools, and rural zones are topographically and socially confined. The absence of instructing and learning materials and quality instructors brought about inadequate training. The examination discovered that the schools should utilize accessible ICT materials. The Public ICT Strategy of Tanzania planned to utilise the accessible ICT, which envelops broadcast communications administrations, PCs and related peripherals, internet providers, email, fax, broadcasting and television and other media to improve the nature of instruction in schools. Another arrangement the College of Dar-es-Salem utilizes, a school of Designing and Innovation to consider an exploration venture to build up a device to empower ICT support with training materials to work with self-learning and data sharing (Kalinga, Burchard & Trojer 2010:108).

The previously mentioned data showed that the issue of poor/absence of eLearning frameworks existed both broadly and globally. I imagined that it was the obligation of the Public Division of Training in SA to guarantee that there was sufficient eLearning foundation before the venture is permitted to be carried out in schools. There ought to be a group that screened the conveyance and supported of those devices to schools in each of the nine provinces of SA. Then again, the division can request donations all through South African organizations.

c) Language barrier

Another test for eLearning execution is language. South Africa is a rainbow nation that is comprised of an assortment of cultures from the nine provinces. Each culture communicates in its own language. English is a predominant language; however, it is not the first language. The challenge was that PCs and the data from the web are written in English (Mdlongwa 2012:4). In any case, educators communicate in English, regardless of whether it is not their first language, students whose first language was not English experience some PC guidelines as excessively troublesome or too confusing to even consider understanding. Subsequently, language may turn into an obstruction for such students (Mdlongwa 2012:4).

In addition, Dr Ramphele also raised the issue of languages of instruction, pointing out that African languages are absent as modes of delivery tools in eLearning. Her concerned question was “How can you expect students to learn effectively in languages that they don’t understand properly?” She believed that African students needed to understand their worldview, culture and history and then apply those values to face the future with courage and confidence (Kigotho 2018:6).

To tackle the language issue, instructors in the school can utilize the methodology of multi-Bilingualism. As per this methodology, it permits students to utilize Home Language (HL) orally in the study hall through the same language and peer connection, close by the language of instruction (English).

The educator decided how and when to go through the HL and afterwards wraps the learning focus for all in the normal language. The instructor utilized peers as the entirety of their dialects as additional learning assets in the home teaching and learning (Owen-Smith 2018:34).

d) Poor Management of eLearning infrastructure

Poor administration of the eLearning framework is a consequence of inadequate monetary assistance. Subsidizing is accommodated at each school; however, it is inadequate since China’s huge populace region and imbalanced dissemination of school reserves (Wang, Liu and Zang 2018:205).

South Africa is a vote-based country that sponsors a few schools to permit the smooth running of educating and learning in government schools. Very much like China, SA has a huge populace that encounters a lack of resources. In a vote-based school, each partner takes an interest in the dynamics of the school; one of them is the School Governing Bodies (SGB). The SGB is a school group that comprised of the principal, educators and guardians. A portion of the SGB was to sort out and oversee school reserves. The SGB needed to comprehend the legitimate information on monetary administration (Dibete 2015:3).

I suggested that the SGB team should use proper management skills to ensure that there was planning, monitoring, budgeting and spending of school funds in their schools. The SGB followed some of the management strategies by Passian (2015:200) have a management structure that clearly stipulated the role of each member of the SGB team in relation to eLearning, they also ensured that there was enough eLearning infrastructure for the school. They asked for contributions from their local businesses to improve the school infrastructure, provided good communication relationships between members of the SGB by updating them through meetings, newsletters or even through social media (Pasian, Woodill, Sankaran & Boydell 2015: 1-2).

Furthermore, I perceive that there should be a balanced eLearning budget before eLearning implementation in schools. The School Management Team (SMT) should have finance allocated to eLearning, which will include expenses such as buying eLearning infrastructure and creating a safe place for the eLearning infrastructure. The money be collected in the form of fundraising at schools, and also use the money donated by the Department of Education, or even ask for donations from companies and local businesses.

2.2.2. SUCCESSES OF IMPLEMENTING ELEARNING

The use of eLearning is not only to improve teaching and learning but also introduces the following themes: skills and knowledge improvement, especially in learners, and lowering administrative work for both school staff and educators by making it easier for them to keep records (White Paper 2004:21).

a) eLearning improves global communication

eLearning improves and build up the country by empowering members to fit in the worldwide economy and empowering them to be fully informed regarding various nations that utilise eLearning, make it conceivable to be part of a worldwide economy. It expands instructive freedoms by giving clients instructive freedoms accessible on the web.

eLearning additionally changes the conventional method of educating and learning approach that was utilized as a single direction strategy for instructing and figuring out how it could be a more beneficial technique. eLearning supports students who do not react well to a 'conventional' study environment by giving them diverse learning opportunities. While for talented and gifted students, it creates autonomous learning abilities through a customized mastering experience (Boulton 2008:11). The significance of eLearning is examined in detail under the section of the significance of eLearning in educating and learning.

Furthermore, Wang, Liu (2018:6) believes that the use of eLearning enhanced learning and improve students' achievement by using the new emerging technologies. According to the study, the Chinese government has attached great importance to the development of eLearning since the 1990s. A series of policies were implemented for the eLearning project, which leads to greater achievement of eLearning in terms of infrastructure construction, production of resources, academic and non-academic education. The use of those technologies leaded to the transformation of sources' knowledge from teachers to computers, networks, multimedia, learning websites, e-libraries and online courses.

The research found that as eLearning in China continues to grow, major research areas such as students and teachers' perspectives on developments in eLearning settings should taken into consideration, as they became challenges in the nearest future. As such, there was continuous professional development for teachers and the production of more convenient and useful eLearning resources for the future China (Wang, Liu & Zhang 2018:196).

b) eLearning improves computer skills

Moreover, ITJ (2017:14) found that the utilization of eLearning for educating and learning provides the accompanying: simple data entry, and the potential for intelligence among students and educators. It additionally builds admittance to learning and preparing opportunities. The utilization of eLearning likewise empowers instructors to work with,

deal with students' records, and monitor their development. At that point, the students and educators improved their abilities in PC use (ITJ 2017:10).

c) eLearning as a tool for child development

Most international studies conducted in India (Nayak & Kalyankar: 2010:4, Kumar & Hussain 2012:8) focused on eLearning as a tool for child development and eradicating the digital divide amongst rural and urban schools (Wang & Rahim 2013:1). According to Nayak and Kalyyankar (2010:4) eLearning is an approach that facilitates and enhances learning employing personal computers, which included CD-ROMs, audio-visual aids and the use of the internet. They also see it as a combination of learning services and technology to provide high value of learning and teaching. As a result, eLearning plays an important role in the creation and development of knowledge that gave children skills to meet the demands of our global economy (Nayak & Kalyyankar 2010:209).

d) eLearning as a tool to solve educational issues

Kumar (2012:1) accepted that eLearning can be utilized as an apparatus that will settle numerous instructive issues, particularly the advanced division among the provincial and metropolitan nations in India, which is brought by a deficiency of Information Technology (IT) labour. The principal point of the examination was to improve the nature of specialized instructive frameworks among provincial and metropolitan schools.

Furthermore, the study found that eLearning could be used in future to develop and solve many educational issues, especially in rural schools to reduce the digital divide and to provide education to all Indian children. To achieve this goal, the Indian president announced the project Educational Satellite "EDUSAT". This project installed 150, 000 ground terminals in the country and the e-Government policies and encouraged the usage of technology in all sectors of the economy, including education, especially in eLearning (Kumar 2007:1).

Moreover, as per Mahapelela (2015:16), the utilization of PCs for instructing and learning has improved the quality and standard of training in numerous nations, particularly in Namibian schools. The way that the quality and standard of training in Namibian schools failed to meet expectations, directs the exploration. The examination intended to discover ways or methodologies that can assist the country with improving its quality and standard of instruction (Mahapelela 2015:16).

The researcher feels that PC innovation can provide an answer for Namibian's helpless training given the accompanying reasons: innovation can be utilized to show significant ideas in every branch of knowledge. It can also assist students with making associations with their own reality and make them fully aware of various thoughts, it can also added to practically any exercise and make learning more fun. The study further featured the accompanying advantages of utilizing the PC and the web: students finished their schoolwork in various subjects, surf the web for data; it is a simple and timesaving control of information (Mahapelela 2015:15).

Moreover, in South Africa, Beyers and Hlala (2015:9) consider eLearning to be an information sharing cycle, which incorporates the part of staff advancement and the utilization of eLearning to work with instructing and learning. The study evaluates the effectiveness of eLearning usage in Limpopo Province. It was discovered that the participants are aware of the importance of eLearning and that there are pressing issues such as educators' training in eLearning usage (Beyers and Hlala 2015:9).

The study also found that there was a significant lack of eLearning equipment and network coverage, especially in rural areas. According to the participants, a successful eLearning implementation of the institution should be knowledge organisations that is manage by knowledge workers, qualified trained teachers, so that they will be able to provide solutions to the challenges brought by eLearning in the classroom. The study further found that teachers were aware of the importance of eLearning but the challenges were lack of teacher training, lack of eLearning equipment such as computers, internet and projectors especially in rural areas (Beyer's & Hlala 2015:1).

I consent that eLearning assumed a significant part, considering everything. Learners communicated with other learners from different schools in and around South Africa. They were also able to share ideas. By using eLearning technologies, they were also able to access different resources.

2.3. THEORETICAL FRAMEWORK

Theoretical framework is the structure that hold or support a theory of a research study. It introduce and describe the theory that explains the existence of the research study. Theoretical framework shows how the researcher defines his/her study philosophically, epistemologically, methodologically and analytically (Grant & Osanloo 2014:185). Epistemology is a philosophical study of nature, origin, and limits of human limits. Whereas Ontology refers to a set of concepts and categories in a subject area or domain that showed their properties and the relations between them. Furthermore, Axiology is the study of value or, or more adequately, theory on the nature of value. Theoretical framework is also a blueprint that contains the theoretical principles, constructs, concepts and tenants of a theory (Creswell 2015:240).

This study utilised Piaget's hypothesis of Intellectual turn of events. Jean Piaget was an early analyst who had practical experience in child improvement from the 1920s. Piaget built his hypotheses by watching children and making notes about their progress. The accentuation in the cognitive point of view is on students' intellectual cycles, and on the basic occupation, that memory plays in assisting them with making an interpretation of new data into a significant structure that they can recall and utilize. Piaget's Intellectual hypotheses give a clarification of the advancement of contribution from the earliest stages to adulthood.

Piaget' provides the answer to the epistemology of children`s cognitive development when he said that children create by going about as "little researchers" who investigate and interface with their reality to get individuals, articles, and ideas. They do this normally, even without the assistance of a grown-up. As indicated by Piaget, the organic development that people go through causes particular stages in the psychological turn of

events. Every one of these stages is consecutive, reliant on each other. The table below represents Piaget `s stages of cognitive development (Woolfolk 2015:31).

Table 2.3: Piaget `s stages of Cognitive Development

Piaget`s Stages of Cognitive Development		
Stage	**Appropriate Age**	**Characteristics**
Sensorimotor	0-2 years	Children begin to realise that objects do not cease to exist when they are hidden
Preoperational	2-7 years	Children gradually develops use of language and ability to think in symbolic form
Concrete operational	7-11 years	Children are able to solve problems in a logical way, they are hands on.
Formal operational	11- adults	Children are able to solve abstract problems logically

This study depends on Piaget's third stage and fourth phases of intellectual improvement, which is "The solid operational stage and the formal operational stage". The stages start when children are seven to 11 +. As per Piaget, children learn sensible principles to comprehend dynamic ideas and take care of issues. Intellectual improvement alludes to a psychological cycle by which information is obtained, put away and recovered to tackle issues. Subsequently, it clarifies psychological exercises that add to students' scholarly advancement to learn and take care of issues. Piaget contends that during these stages, students procure information through absorption and convenience. Absorption implies a sort of coordinating between the students' intellectual design and the actual climate. While convenience is a cycle that adjusts the psychological design, both absorption and convenience ought to be available to increase the scholarly development of the student (Woolfolk 2015:29).

Furthermore, the study focused on the key theoretical principles of Piaget`s Cognitive Developmental Theory which are Schema, Assimilation, Accommodation and Adaptation

(Woolfolk 2015:30) that correspond with the following theoretical principles of eLearning implementation such as challenges of eLearning implementation such as insufficient skills for educators, lack of eLearning infrastructure. The following principles emerged during literature review of eLearning implementation: knowledge development, eLearning is used as tool to solve educational issues, insufficient teacher training and lack/insufficient eLearning infrastructure (Nayak & Kalyankar 2010: 6, Wang Liu 2018:10, Mathevula & Uwizevimana 2015:1090).

Knowledge development

According to Piaget `s Theory of Cognitive Development, Schemas are defined as building blocks of knowledge (Woolfolk 2015:30), so learners will use eLearning, schema, to acquire and build new knowledge during eLearning. eLearning can be used as a tool for child development and eradicate digital divide (Nayak & Kalyankar 2010: 6). Furthermore eLearning can also be used enhance learning and improve students` achievement (Wang Liu 2018:10). I suggest that teachers also require knowledge development. Moreover, an on-going training should be provided to teachers so that they can develop skills that they can use during eLearning implementation in the classroom. The issue of lack of teacher training escalated to teachers` negative attitude to adopt and implement eLearning (Mathevula & Uwizevimana 2015:1090).

Insufficient eLearning infrastructure

Literature review turned to highlight insufficient eLearning infrastructure as one of the challenges that hinder eLearning implementation. In addition, children in the Concrete Operational Stage (7-11 years), they are 'hands-on' in their thinking. This means that they learn more by touching and experiencing things. Therefore, the Department of Basic Education needs to ensure that there is enough eLearning infrastructure such as computers/laptops or tablets for children to be 'hands on' and know how to use them while their brains are still developing before attending secondary schools. According to Piaget

Accommodation happens when the existing schema does not work and needs to be changed to deal with new objects or situation (Woolfolk 2015:30). eLearning infrastructure such as internet and CD-ROM were used by the teacher in the classroom to introduce new topic or to provide more information. Teachers utilises the Piagetian learning concepts to increase the existing operational students (primary learners) to the formal operational stage (secondary students) and at the same time help students in the formal operational stage (adult) when they are facing an in-equilibrium situation.

Piaget explained Adaptation as principle that occurs when assimilation and accommodation is achieved and permits the transition from one stage to the next (Woolfolk 2015: 30). In my point of view, eLearning can be effectively implemented in the classroom if teachers can use and understand Piaget stages of Cognitive development to guide them in order to teach learners according to their level of cognitive development.

2.4. CONCEPTUAL FRAMEWORK

The following concepts were used in this study: eLearning, Information Communication Technology (ICT), management, challenges, success.

2.4.1. eLearning

Another study describes eLearning as a tool that was used to revolutionize the learning process by the usage of ICT resources. It was generally used in distance learning, but it can also be used in conjunction with face-to-face learning (Hussain et al. 2011:1).

Moreover, Nayak and Kalyankar see “eLearning as a combination of learning services and technology that provided high values” (Nayak et al 2010:1). This study see eLearning as a tool that is used to improve teaching and learning in schools. Information and Communication Technology (ICT) tools such as computers/tablets or even laptops and the internet are used to facilitate the process of teaching and learning in schools.

2.4.2. ICT

Information Communication Technology is broadly defined as “technologies used to convey, manipulate and store data by electronic means, including e-mail, Short message Service (SMS) text messaging, video chat and online social media” (Mathevula & Uwizeyimana 2014:1). However, this research considered ICT as a component that includes modern computing of improving teaching and learning in SA schools by using computers/tablets, projectors, internet and the mouse in the classrooms. In our modern world, eLearning meant online knowledge acquisition through the internet or offline through Compact Disc Read only Memory (CD-ROM) and more.

The above information shows that the relationship between ICT and eLearning was intertwined because ICT tools such as computers/laptops/tablets; internet, projectors and CD-ROMS enable the implementation of eLearning in the classroom. That is why repeatedly the study refers to ICTs.

Nonetheless, with the end goal of this research study, eLearning is viewed as the utilization of ICTs which incorporate ICTs PCs/workstations/tablets and organizations as apparatuses that created instruction and learning in South Africa. The study also looked at barriers for implementing eLearning in schools then changes those obstacles into advantages by providing different ways on how to manage eLearning in schools. The obstacles and the way of changing them into advantages were discussed later in this study.

2.4.3. Management

The word management is a Latin “Manu agere” meaning to lead by the hand. Leading by hand means giving directions. It means that management is a process of accomplishing work with the help of other people. Management is a process of planning, guiding, organising, leading and controlling people`s actions within a group aiming to reach the goals of an organisation. The above definition explains that management includes setting objectives, planning and managing resources of an organisation (Shied 2010:20).

For the purpose of this study, management is a specific kind of work consisting of the following activities: planning, problem-solving, decision-making, policy making, organizing, coordinating, leading and controlling of eLearning in schools.

2.4.4. Challenges

The Cambridge dictionary (Walter: 2005) defined a challenge as a situation of being faced with something that needs great mental or physical effort. This study considers challenges as things that hindered the implementation of eLearning in ordinary schools.

2.4.5. Successes

The Cambridge dictionary Walter defined success as a degree or measure of succeeding (Water: 2005: 200). The study looked at the benefits of implementing eLearning in schools.

2.5. PRIORITIES FOR EMPIRICAL INVESTIGATION

eLearning has emerged as the new modern tool for improving teaching and learning in schools. eLearning implementation has developed both nationally and internationally. This study identified the following themes from the literature review: Challenges of eLearning implementation and Success of eLearning implementation. Telephone interviews were conducted in three participating primary schools around District 4, Tshwane South, to investigate the challenges and successes of implementing eLearning in schools. The literature review suggested the following different effective tools for the management of eLearning implementation: (Boulton 2012:1, Doherty 2010:1, Nasser and Abir 2010:01, Pasian, Woodill & Chapter Authors 2015: 1-2, Mathevula & Uwizeyimana 2014:108).

2.5.1. Management of eLearning using different tools

According to Boulton (2012:1), the management of eLearning should be carried out at the school level before introducing it to the curriculum. Boulton identifies the following issues that schools may want to consider when embracing eLearning: students need training in using eLearning materials, planned parental involvement for students working from home and teacher training (Boulton (2012:1).

Doherty further stresses that eLearning can be managed by implementing project management techniques using the following key factors: maintaining a clear educational focus in eLearning projects and ensuring that the process, which they used, matched with the collegial nature of an institution (Doherty 2010:1).

However, according to Nasser and Abir (2010:01) eLearning managed by using the most recent technologies and methodologies, a project named Al-Nahrain Open eLearning project was used. The project was designed in such a way that it meets the Iraq educational requirements, and it also depended on the Open-Source platforms to give the chances to the later developers and researchers to make use of its codes and techniques. It also dealt with the aims, benefits, and planning to determine the best results for the project (Nasser & Abir 2010:01).

According to Passian the management of eLearning includes both the strategic organizational issues as well as those at more tactical project levels, which are: the processes, methods, techniques, rules, principles, language and resources. Furthermore, strategic vision and commitment along with accurate and professional day-to-day execution go hand in hand (Passian 2015:18).

The project management involves the following themes: Project management process should be in place at the beginning, evaluation tools should bookend a project, relationships are key to managing eLearning projects, training and preparation are needed for the faculty and learners, project leadership is important, risk needs to be managed, particularly for relationships, communications and information flow must be well-managed and managing project change.

The above literature concurred that eLearning can be managed using systematic project management. This means that there must be phases or procedures that followed each other in chronological order to ensure that successful project management takes place.

2.5.2. Managing content in eLearning

Another study argues that the use of eLearning has an impact on the way content is developed and managed. As such, both teachers and students have to re-adapt the way they prepare access and engage with educational matter. As such, there is a need for developers of educational technology to involve technical, information, and educational specialists when handling issues relating to managing and distributing educational content in an eLearning environment (Pasian, Woodill & Chapter Authors 2015: 1-2,). Then they used the Activity Theory (Mwana & Engestrome 2005:454).

This study utilised the Pasian, Woodill and Chapter Authors' project management plan to manage eLearning in schools. According to these authors, to manage eLearning in schools, there ought to be a project management plan followed using the following issues (Pasian, Woodill & Chapter Authors 2015: 1-2):

a) Project management process should be in place at the beginning of the project;
b) Evaluation tools should bookend a project;
c) Relationships are key to managing eLearning projects;
d) Training and preparation are needed for faculty and learners;
e) Project leadership is important;
f) Communications and information flow must be well managed; and
g) Managing change.

a) The project management process should be in place at the beginning of the project

Planning and accountability of eLearning should be in place from the start. This involves the goals and objectives for the project as well as the management structure that clearly stipulates the individual role of each member. The goal of eLearning, to improve teaching and learning in schools, should be always kept in mind.

b) Evaluation tools should bookend a project

"Project management tools and mechanisms can be very useful in keeping the project grounded and closely tied in the initial objectives as set out in the project plan" (Pasian et al. 2015:1). There should be enough eLearning tools provided for each school to enable easier implementation. Some of the tools for eLearning are computers/laptops/tablets, the internet and projectors.

c) Relationships are key to managing eLearning project

Relationship between members of the project management structure is one of the main themes for managing the project. All project team members and stakeholders should be kept updated.

d) Training and preparation are needed for faculty and learners

Training for the entire stakeholders is very important so that they can be familiar with the eLearning environment. Furthermore, another study stress this idea by stating that eLearning requires far more than a mere introduction of computer hardware in the classroom. "Teachers must be "conversant in utilizing them to implement an integrated approach in ICT" (Mathevula & Uwizeyimana 2014:108).

e) Project leadership is important

"Leadership in eLearning project is dominated by two roles: the project sponsor and the project manager" (Pasian et al. 2015:2). Their relationship is important as their roles define the vision and mission of the project. Their role is to articulate the project vision to the rest of the team and motive them.

f) Communications and information flow must be well managed

Communications and expectations have to be managed throughout the project life. I suggest that there should be a transparent and consistent, all eLearning updates and developments should be communicated to all eLearning managers and implementers

g) Managing change

ELearning is not a curriculum change, but a tool used to improve teaching and learning in South African schools. However, there is a change in how teaching and learning occurred. According to my view, as a teacher and a researcher, the Department of Education in SA together with the eLearning project management team should provide proper training for both teachers and learners about eLearning so that they will be able to solve problems that they encounter during eLearning implementation.

I believe that although adequate training was provided to teachers by attending professional training, it was not the number of professional development programmes that matter, but the quality of such programmes in helping them to address the challenges they come across. This can be done if teachers can be provided with ongoing in-service training.

2.6. SUMMARY

This chapter featured the difficulties and triumphs that arise out of the literature of eLearning implementation in primary schools. It also showed that even though there are difficulties that frustrate eLearning execution both nationally and internationally, there were a few advantages that emerge from utilizing eLearning in schools (Boulton 2012:1, Doherty 2010:1, Nasser and Abir 2010:01, Pasian, Woodill & Chapter Authors 2015: 1-2, Mathevula & Uwizeyimana 2014:108). I accepted that legitimate methods ought to be followed while carrying out eLearning in schools to guarantee that education and learning are improved in South African schools. The following chapter presented the approach that was carried out in this research.

CHAPTER 3

RESEARCH DESIGN, RESEARCH METHODS AND POPULATION

3.1. INTRODUCTION

In the previous chapter, a literature review of the study was presented to respond to the research question ‘what are the difficulties and triumphs of executing eLearning in conventional schools'. This chapter details the exploration plan, the examination techniques, and the participants under investigation, the testing strategy, and the strategy that was utilised to gather information of the study.

3.2. RATIONALE FOR EMPIRICAL RESEARCH

Herein I presented the two interrelated reasons why this subject was of interest to me. South Africa is an agricultural nation with schools that are yet battling with essential foundations such as PCs and work areas (Mathevula 2015:1). Under politically sanctioned racial segregation, there were instructive imbalances among highly contrasting individuals whereby Whites alone fully benefitted in the schooling system. Since 1994, after South Africa turned into a democratic state, the country confronted the test of building non-racial and non-discriminatory state-funded schools. Therefore, the experience of politically sanctioned racial segregation has left the country with a colossal responsibility to meet completely those instructive imbalances (Kader & Wilmot 185-220).

Moreover, eLearning challenges delayed the implementation of eLearning in educating and learning exercises as a whole in South Africa. Among all challenges such as the absence or insufficient eLearning infrastructure and the absence of educator training (Mathevula 2015:1). Furthermore, Tarus, Gichoya and Muumbo (2015:10) conducted a study about the difficulties of eLearning execution in Kenyan state-funded colleges. They discovered that there are various challenges to confront while executing eLearning in colleges. This incorporates mechanical and instructive difficulties, for example, deficient

ICT and eLearning frameworks, monetary limitations and absence of operational eLearning arrangements.

The research discovered that those colleges that intend to carry out eLearning ought to be ready to confront the difficulties that are probably going to emerge throughout execution by zeroing in on preparing in the innovative highlights of the eLearning framework. The research concentrated on and additionally tracked down that most Kenyan colleges are as of now utilizing eLearning, however, in a mixed mode with up close and personal education.

Exploration has likewise discovered that the utilization of eLearning for instructing and learning presented the accompanying benefit. In request to settle the challenges of carrying out eLearning in Kenyan colleges. The accompanying ways were suggested: the development of eLearning framework to work with admittance to eLearning by students, instructors and other instructive partners, prioritization of eLearning in the budgetary assignment, web access suppliers should reduce their expenses, the definition of eLearning approaches, cooperation and organization with other effective eLearning accomplices (Tarus, Gichoya & Muumbo 2015:1).

The motivation behind why I suggested that South African schools can utilize eLearning for educating and learning is a direct result of the accompanying reasons: eLearning can conquer imbalances in schools regarding Learning and Teaching Support Materials (LTSM) in all schools. Students will actually want to get a similar educational programme whether they are in White or Black schools. I additionally accept that any difficulties that may thwart the way towards instruction and learning was addressed. For instance, in Mach 2020 there was a breakout of the CORONA VIRUS EPIDEMIC (COVID19) whereby schools had to close down ahead of schedule. Furthermore, the schools opened late because our South African government feared higher infections between individuals.

During pandemics as such, the Department of Education ought to utilize eLearning in all schools whereby the instructor can record a video, edit it, send it to the students, and furthermore send notes and appraisals. By utilizing that strategy, students were not pass up any major instructing and learning opportunity. Other than that, we are living in a

mechanical insightful country where customary/old methods of educating have been supplemented with PCs or innovation to make things simpler and quicker.

The truth of the matter was all fragments of society have changed drastically because of data innovations and will keep on changing. Later on, they cannot be disregarded. Schools should be part of these progressions and exploration ought to continue with the expectation that innovation is and will keep on being a developing component inside the schools.

3.3. RESEARCH DESIGN

Research design helped the researcher to plan and implement the study in such a way that will help him/her to obtain intended results by increasing the chances of obtaining information that was related to the study. Creswell supported this idea by referring to research design as a type of enquiry within qualitative, quantitative and mixed methods approaches that provide direction for procedures in the design (Creswell 2015:200).
The end goal of this research outlined implies an arrangement for choosing subjects, research locales, and information assortment methods to address the research question. The fundamental objective of doing a research configuration is to give tenable results. The believability of the exploration alludes to the degree to which the truth of the outcomes is dependable and sensible. This examination utilized a subjective exploration plan to design the exploration study. The subjective research strategy was talked about in detail under the topic qualitative techniques.

3.3.1. Research Paradigm

The emphasis in the cognitive viewpoint was on students' intellectual cycles, and on the basic role, that memory plays in assisting them with making an interpretation of new data into a significant structure that they can recollect and utilize. Jean Piaget was an early therapist who represented considerable authority in child improvement from the 1920s. Piaget built his hypotheses by watching children and gaining notes about their development. The centre thought of Piaget's hypothesis was that children create by going

about as "little researchers" who investigate and associate with their reality to obtain articles, and ideas. They did this normally, even without the assistance of an adult.

3.3.2. Research Approach

This study employed a qualitative research method. The characteristics of qualitative research assisted me to understand the following:

1. Natural setting: The natural setting of schools in Gauteng Province, which experience problems during eLearning implementation.

2. Type of data collection: Three forms of data collection were used which are semi-structured interview, observation and documents analysis.

3. The researcher: The researcher collected data from the participants.

4. Participants' perspective: Subjective research grasps the member's perspective.

5. In view of the previously mentioned attributes, various reasons are laid out to clarify why subjective exploration was the most suitable for this research. The natural setting was in primary schools in D4 where there are challenges and successes of implementing eLearning. Data were collected from principals and teachers from the selected schools.

The researcher collected the data from the participants using semi-structured interviews, observation and document analysis. This study focused on the participants' understanding, descriptions and meaning of eLearning implementation.

3.3.3. Research Strategy

The research study followed a descriptive method. Descriptive research was based on a concept that the researcher knew something about the topic and wants to describe what he/she has found. In most cases, it involved qualitative, quantitative or mixed-methods.

Unlike in experimental research, I could not control or manipulate any of the variables, but only observe and measure them (Creswell 2015:50).

3.4. RESEARCH METHODS

Qualitative research

This study utilised qualitative research. Qualitative research seek to understand a phenomenon by focusing on the holistic picture and goes in-depth to understand that phenomenon. It allowed participants to express their own feelings and it also allowed them to raise topics and issues that might be critical to the research. I chose qualitative research because of its characteristics that are relevant to my study. Research methods for this study included a selection of the sample, data collection, data analysis, measures for trustworthiness and ethical issues.

Characteristics of a qualitative research

The following characteristics of qualitative research were employed in this study:

1. Qualitative design is holistic it looks at relationships within a system of culture and focuses on understanding a given social setting.
2. Theory can be developed during data are collected called ‘grounded theory’, which channels the researcher to see issues through the lens of particular theories.
3. The researcher-collected data themselves in the natural setting and first-hand information was recognised.
4. There are multiple methods of collecting data than quantitative research.

3.4.1. Selection of sampling

The selection of sampling for this study was discussed under the following sub-topics: population and sampling, eligibility criteria, sampling procedure and the size of the population.

3.4.1.1. Population and Sampling

McMillan defines a population as a group of elements or cases, whether individuals, objects, or events that conform to a specific criterion and to which we generalise the research results (McMillan et al. 2010:166). In addition, Creswell also defines population as “all members of any well-defined class of people, event, or subjects (Creswell 2014: 46). The population for this study were three primary schools in Pretoria, Gauteng Province, South Africa. From the population, the researcher chose the sample. Sampling is the most appropriate for qualitative research where few cases are studied in-depth to yield insights about the topic (McMillan & Schumacher 2010:245). Sampling was discussed in detail under the topic ‘The sampling procedure’.

3.4.1.2. The eligibility criteria

Participants were selected according to the characteristics that they had, to be included in the study (Creswell 2015:47). I chose purposive sampling, used prior knowledge from the literature review and the research question to decide which participants to select. In this study, the participants were South African principals and teachers in the Gauteng Province, District 4 who use eLearning for teaching and learning in the classroom.

3.4.1.3. The Sampling procedure

From the population, a portion was selected to represent the entire population, and this is known as a sample (Creswell 2015:48). In this study, teachers from the focused schools were selected from the population as samples. The study also utilised purposive random sampling to select participants. In random purposive sampling, researchers used their own judgement in the selection process. Based on the researcher’s knowledge of

the population, a judgement was made about which subjects should be selected to provide the best information (McMillan 2010:175). Three schools that were situated in District 4 Tshwane South were randomly selected, provided they were implementing eLearning in their schools. Participants were selected according to the characteristics of the position they had at school.

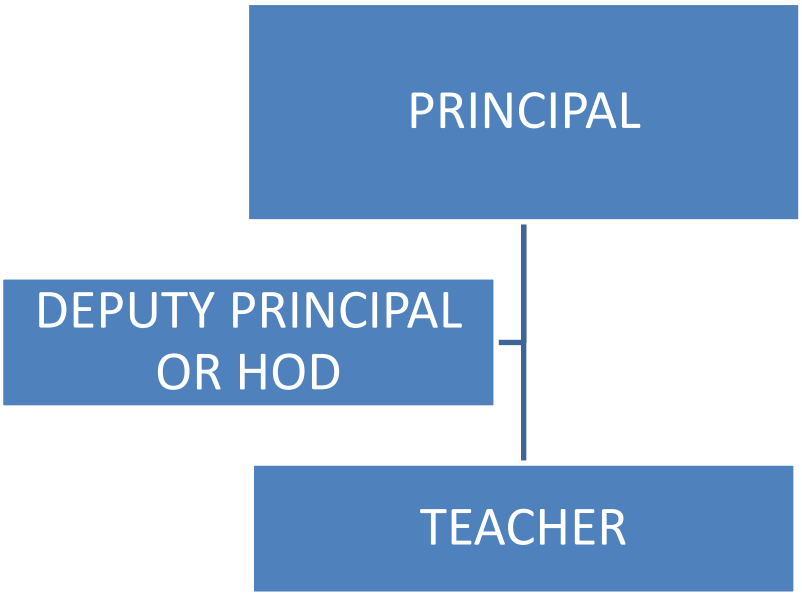
For the purpose of this study, participants were members of the School Management Team (SMT), namely: the school principal, one Head of The Department (HOD) and one Level 1 teacher that represented any teachers' union such as SATDU, NAPTOSA or any other teacher union, utilising face-to-face interviews.

3.4.1.4. Size of the population

In each school, there were one principal, one Head of Department (HOD) and one level 1 educator from any Union. This implies that there will be three members per school, totalling twelve participants (four principals, four HODs and four-level one educators).

3.4.1.5. Participants

Figure 3.4.



The sample size was determined by the number of the school SMT members and teachers. The sampling rationale was crucial because: It is more economical to choose a sample from one school unlike using many schools that use eLearning in D4 Gauteng Province (McMillan et al 2010:177).

3.4.2. Data Collection

This study employed two methods of data collection, which were semi-structured interviews and document analysis.

3.4.2.1. Semi-structured interview

Data is defined as information obtained in the course of a study. In this study, data were collected using semi-structured interviews and document analysis (Creswell 2015:49). In a semi-structured interview, the interviewer had certain questions to ask all participants but also allowed the respondents to raised issues and questions during the interviews. The questions and hypotheses associated with the research study were identified by avoiding both the inclusion of useless items and the omission of necessary items.

Data came from documents and interviews. Documents such as personal documents and official documents formed part of the data in this study. This was any first-person narrative that described an individual's actions, experiences, and beliefs. They include diaries, personal letters and anecdotal records. Official documents include school memos, minutes of meetings, working papers and policy documents from the Department of Education, schools' management plans and newsletters (McMillan & Schumacher 2010:180).

During data collection process, there were preparations for conducting the interviews. This procedure involved the following: Standardization of questions, time, obtaining respondents' cooperation, and data recording being efficiently structured (McMillan 2010:189). I standardised the procedure so that all respondents received as consistent and identical interviews as possible. As far as time is concern, I arranged with the

participants to find a mutually convenient time for them. If participants were not available during the day, the interviews was conducted during the evenings or even on weekends. A good rapport between me, as the researcher, was created by establishing a friendly business-like relationship with the participants. A laptop was used for data recording.

Furthermore, during the semi-structured interviews, I had a list of themes and open-ended questions covered. Questions were posed to participants in a form of an interview to gather in-depth information. In using a case study, I was able to listen to people`s different explanations, and the real context of the phenomena was observed. It also assisted me to contextualise the participants' point of view against the observed reality. The semi-structured interview questions included as one of the Annexures of this dissertation.

3.4.2.2. Characteristics of interviews

The following characteristics of the interviews were recognised (MacMillan & Schumacher: 2010:267)

1. Interviews involved direct interactions between individuals;

2. The interview technique is flexible and adaptable;

3. It can be used with many different problems;

4. It can also be used with different types of people such as illiterate or too young to read and write;

5. Responses can be probed to allowed further elaboration, clarification and explanation of responses; and

6. It also validates what was observed.

3.4.2.3. Limitations of the interview

Although interviews are common data collection methods in qualitative research, they also had the following limitations (MacMillan& Schumacher 2010:267):

1. The interview is expensive and time-consuming;
2. Lack of anonymity;
3. Depending on the training of the interviewer, respondents may be uncomfortable and unwilling to report true feelings; and
4. The interviewer's perception of the response may be inaccurate.

   However, to eradicate bias during research interviews, I was a neutral medium through which information was exchanged. The interview was conducted telephonically, so there were no physical presents of the interviewer.

3.4.2.4. Document analysis

According to McMillan and Schumacher, official documents describe functions and values and how various individuals define their organisations. In addition, those internal official documents can reveal the official chain of command and provide clues about a particular organisation (McMillan & Schumacher 2010:278).

The following school documents were used for this study:

1. School documents about eLearning;
2. Minutes from staff meetings;
3. Letters and emails related to eLearning;
4. Memorandums from the Department of Education related to eLearning; and
5. Diaries.

3.4.2.5. Limitations of document analysis

The researcher needs to be cognizant that sometimes:

a) It was difficult to get access to certain documents;
b) Other documents needed authorisation; and
c) Whereas others were not relevant to the research question.

However, permission was obtained from the principal for any notes and memos for personal documents such as diaries; permission was requested from the person in charge. I picked report investigation as another technique for information assortment to gain data about eLearning implementation at schools. The previously mentioned reports assisted me with finding the difficulties and accomplishment of eLearning execution and attempted to discover answers to the research questions.

3.4.3. Data analysis

According to MacMillan (2010:490), the process of data analysis is time-consuming and difficult. It involves reducing and organizing data, synthesizing, searching for significant patterns, and discovering what is important. The interviews were transcribed verbatim, the transcripts were coded and codes were grouped to form categories. For the purpose of this study, the researcher used Ary's stages of data analysis method, which are: familiarization, coding and recording, and summarizing and interpreting (Ary et al. 2006:499).

3.4.3.1. Familiarization and organization

In this stage, the researcher familiarized and organized the data by reading notes and transcripts, reviewing videotapes and listening repeatedly to audiotapes. This stage involved dividing the data into segments. A data segment was comprehensible in itself and contained one idea that was relevant to the research.

The following steps were employed to develop and organise data (Ary et al 2010:499): Read each data set by set and write down ideas for each data as you read. This gave the researcher ideas about individual pieces of data. In this study, the following data collection media tools were used to collect data, a computer, and recorder and notebook.

3.4.3.2. Coding and recoding

This was the second stage, which included the identification of categories and themes and their refinement. Coding was done to recognize differences and similarities in the data by sorting it into different categories and gave them names (McMillan& Schumacher 2010:5541). In this study, coding was categorized according to the following: setting/context, the definition of the situation, subjects' ways of thinking about people and objects, process, activity, event, strategy, relationship and social structure and methods (MacMillan 2010:494). This was done by identified the meaning for each segment and then gave it a topic.

3.4.3.3. Discovering Patterns

A topic that occurred in most of the data sets was placed in one list then another list of unique topics that were important for the research topic was made.

Furthermore, patterns can take different forms depending on the purpose of the study (Ary et al. 2010:499). Data from the three schools were collected and grouped according to their similarities.

3.4.3.4. Summarizing and interpreting

"Once all data were sorted into major and minor categories," I looked at the range of categories to see whether some fit together into themes" (Ary et al. 2010:499). Then summarised by trying to find the relationship and themes in the data. For example, in this study, the researcher first coded the data into categories of dealing with teachers` attitude, description of behaviour towards eLearning and their school setting.

3.4.4. Measures for Trustworthiness

Reliability and validity in quantitative studies were usually evaluated based on trustworthiness and authenticity, which involve credibility, transferability, dependability and conformability (Kuanda 2012:100).

3.4.4.1. Credibility

Kuanda defines credibility as a dimension that examines the extent to which one has to follow the accepted procedure when conducting qualitative research (Kuanda 2012:100). When conducting the research, I increased the credibility of my research by making participants understand the research question. During the interviews, I listened attentively and gave participants enough time to respond to the questions.

3.4.4.2. Transferability

Transferability is a dimension that requires the researcher to provide a detailed account of the context within which the study is conducted (Kuanda 2012:101).

3.4.4.3. Dependability

It requires the researcher to keep detailed records of all phases of the research process, which include problem formulation, selection of research participants, fieldwork notes, and interview transcripts (Kuanda 2012:101). To show dependability, my research kept all my detailed records as evidence for future reference.

3.4.4.4. Conformability

Furthermore, conformability requires the researcher to demonstrate that they have acted in good faith throughout the research process (Kuanda 2012:101).

To ensure conformability prevailed throughout the process, my investigations was fair, included all relevant people and their views and also provide opportunities for those

involved to improve their insight into their own situation. Trustworthy in this study explained the purpose of this study to the participants.

3.4.5. Ethical measures

Teachers face ethical dilemmas in their daily duties so as the researchers. Researchers have to protect the participants especially if participants are humans. The following ethics were considered as stipulated in UNISA's Ethics Guidelines (UNISA 2016:12-13): Respect and protection of the rights and interests of participants including privacy, anonymity and confidentiality, informed consent, justice and fairness, the relationship between researcher and participants.

3.4.5.1. Confidentiality, respect and protection of the rights and interests of participants

Confidentiality implies the privacy and anonymity of the participants (UNISA 2016:12-13). Anonymity for this study was difficult to maintain, as teachers who work at the same school knew each other. However, I ensured that participants maintained confidentiality. As the researcher, I protected the dignity, privacy and confidentiality of participants by making sure that their personal information is anonymous; hiding their faces in cases of video recordings and pictures. Confidentiality was maintained as all personal information and records provided by the participants was kept. I also respected their rights of withdrawal from the study at any stage without demanding reasons.

3.4.5.2. Informed consent

Assent structures ought not to have any exculpatory language that may make subjects practice their lawful rights. They should consent to the legitimate laws and guidelines of the nearby, state or even government laws. Informed consent also involves the procedure in which participants chose whether to participate in an interview or not (UNISA ETHICS 2016:51). This study did not include any minors or vulnerable participants. I gave and disclosed the agreed structure to the participants and furthermore gave a choice to

participate or not in the study. The participants offered time to go through the consent form and requested clarity if necessary before signing it.

The reason and the strategy of the study were attended to. The members were additionally educated regarding the length of the interviews and their important responsibilities and furthermore they were given my contact details should any inquiries emerge. All participants were given a copy of the interview guide a week before the interviews so that they could read and understand it. An official application letter was sent to the principal of each participating school to request interviews from participants.

3.4.5.3. Justice and fairness

Criteria for the selection of participants should be fair (UNISA 2016:12). In this study, all teachers were represented because participants were selected from each unit of teacher representatives using purposive sampling.

3.4.5.4. Relationship between researchers and participants

Participants should be seen as valuable members and partners of the research (MacMillan & Schumacher 2010:421). Because human participants were involved in this research, I reviewed and followed UNISA's ethical rules and procedures and acknowledged their contribution. I also ensured that the aim and objectives of the study was clearly explained to participants. Furthermore, I ensured that participants were treated with care and respect.

3.4.5.5. Fairness

Some researchers feel that a sense of caring and fairness must entered into the researcher`s thinking and actions (MacMillan et al. 2010: 422). I gave participants the assurance that they were protected against any physical and emotional harm. I also used open discussions and negotiations to promote "fairness" to the persons and to the research inquiry.

3.5. SUMMARY

The section zeroed on the exploration plan that was sustained in this research, the participants, inspecting methodology, information assortment instruments and information assortment techniques. The legitimacy and unwavering quality were assessed based on dependability and validity. Research ethics considerations were regarded and secured the privacy, protection and anonymity of the participants.

Chapter 4 presented the information investigation and conversation of the information obtained from directing semi-organize interviews with instructors from three of the schools in the District 4 , Tshwane South. The motivation behind this overview was to recognize challenges, which can hamper the implementation of eLearning in South African schools and discover the best way to oversee them.

CHAPTER 4

DATA ANALYSIS

4.1. INTRODUCTION

The study utilised qualitative research, as already explained in detail in Chapter 3. This part portrays the investigation of information followed by a conversation of the research discoveries. The findings identified with the exploration that guided the research. The research followed a subjective exploration. A sum of three members were met from the three schools about their responsibility of executing eLearning at the schools. Information was investigated to recognize the challenges and the successes that schools experience during eLearning implementation. All four participants from the three schools responded. The findings were presented according to the following research sub-questions:

1. What are the challenges of eLearning in ordinary primary schools?

2. What are the successes of eLearning in primary schools?

In addition, this chapter also included sample demographics; using tables to complement the summary. This chapter also discusses the following sub-headings: research process, data analysis, data interpretation, summary and concluding remarks.

4.2. RESEARCH PROCESS

A subjective exploration measure was utilized for this study. I chose subjective exploration due to the accompanying qualities that apply to my investigation: theory can be created as information is gathered and this is called 'grounded hypothesis', which stations the specialist to see issues through the viewpoint of specific speculations. The researcher gathers information himself or herself in the regular setting to get direct data and furthermore various strategies for gathering information in the examination were utilised (Creswell 2010:110).

Reliability and validity are concepts used to evaluate the quality of research. They indicate how well and accurate the method and technique used was during the research. Validity is the extent to which a concept is accurately measured in a quantitative study.

Reliability or the accuracy of an instrument is the extent to which a research instrument consistently has the same results if it was used in the same situation on repeated occasions. Reliability and validity in quantitative studies were usually evaluated based on trustworthiness and authenticity, which involve credibility, transferability, dependability and conformability (Kuanda 2012:100). Measures to ensure the validity of research include, but are not limited to the following points: a) appropriate methodology was chose, taking into account the characteristics of the study. b) the most suitable sample method for the study has to be selected. d) the respondents must not be pressured in any way to select specific choices among the answer sets.

In addition, the methodology of this study was discussed in detail in Chapter 3. Semi-structured telephone interviews were used as a tool to collect data. Furthermore, to ensure reliability and validity in my study, permission from the Department of Education was granted. Requests to conduct interviews in schools were made by email. Interview questions were emailed to the schools a week before the interviews so that they could familiarise themselves with them. During the interviews, I listened attentively and gave participants enough time to respond to the questions while taking notes. Participants were also asked to introduce themselves and the personal information given by participants was compared to the one provided by the principal to ensure the trustworthiness of participants. Credibility during the research was followed, by making participants understand the research question; explaining the aims and objectives of the research study to participants. The respondents were not pressured in any way to select specific choices among the answer sets; participants used their own answers. To show dependability, my research has kept all my detailed records as evidence for future reference.

However, initially, data were supposed to be collected by the researcher from primary schools, but because of the Coronavirus restrictions, rules that forbid people`s movements, I was advised to conduct the interviews telephonically.

It was difficult for me as a researcher to collect data because I could not see the facial expressions of the participants and even make eye contact with them. I also had to repeatedly ask for the relevant documents as my study also includes document analysis. Despite all of that, I managed to conduct the telephone interviews, get the required documents and have cooperative participants.

4.2.1. Population and sampling

Participants were selected according to the characteristics that they have in order to be included in the study (Creswell 2015:47). In this study, the participants were principals and teachers in Gauteng Province District 4 whose schools use eLearning for teaching and learning in the classroom.

Data were collected from three primary schools around Pretoria. Three eLearning primary schools around Tshwane/Pretoria were randomly selected. A random sample of respondents was drawn from the schools to include 12 staff, 1 principal, 2 Heads of Departments (HODs), and 1 level 1 teacher from any teacher`s union. Therefore, the total participants were 4 principals, 4 HODs and 4 level 1 teachers for refinement and improvement of the research instruments.

Given the previously mentioned articulation, semi-structured telephone interviews were utilized to gather information, as COVID19 limits an individuals' movements. As an analyst, I called the three partaking schools and organized phone interviews with members. A letter of consent to direct the phone meetings and interview questions were emailed to the partaking schools. The head of each school recognized members as I was precluded to visit the schools as specified by COVID19 guideline limitations. Seven days was given for members to acclimatise themselves with the research questions. After certain days, schools were reached telephonically. Notes were taken during the meeting and furthermore, talks with records were utilised in this research.

4.3. DATA COLLECTION

4.3.1. Semi-structured interviews and document analysis

Data are defined as information obtained in the course of a study. In this study, data were collected using semi-structured interviews and document analysis (Creswell 2015:49). In a semi-structured interview, the interviewer has certain questions to ask all participants but also allows the respondents to raise issues and questions during the interview.

It is a type of interview in which the interviewer asks only the predetermined questions while the rest of the questions are not planned. It combined both structured and unstructured interviews and offered the advantages of both structured and unstructured interviews. Semi-structured interviews allow interviewers to prepare questions beforehand and this guided the conversation and keeps respondents on course. Another reason I used semi-structured interviews is that it allows for open-ended responses from participants for more information. Furthermore, I chose semi-structured interviews because both interviewer and respondents engaged in a formal interview. The interviewer develops and uses an interview guide. This is a list of questions that need to be covered during the interview. During the Corona virus pandemic and lockdown in South Africa, I was unable to do schools' visits because of the lock-down restrictions. However, I was able to communicate telephonically and through emails. As result, the interviews were conducted telephonically.

a) Interview schedule

Interviewing as a data-gathering method was included to obtain data, permit further exploration of the research topic and expand on the qualitative findings and yielded more in-depth experiential accounts of the extent of the challenges and successes of implementing eLearning in primary schools. The telephone interview schedule of this study was divided into three sections: Section A, opening, Section B, body and Section C, closing as indicated in Appendix F. The recording of the interview data took place utilising note-taking. Schools were consulted telephonically to ask permission to conduct the interviews from three schools, four participants who were: the principal, 2 HODs and 1 level 1 teacher. To ensure the reliability and validity of data, the transcribed interviews

were emailed to respondents a week prior to the interviews. Professional assistance such as guidance of the interview was given to the participants.

In addition, Section B of the interview formed part of the interviews. Schools were numbered as A, B and C. Participants, were numbered from 1-12 according to the time they were interviewed, not using their names. The purpose of the semi-structured interview was to identify related themes during the interpretation process that would contribute towards the development of an instrument for the quantitative phase of the research. The semi-structured interview was discussed in detail in Chapter 3. Section C was the last section of the interview where I concluded by thanking the participants.

4.3.2. Document analysis

Document analysis was another method utilised for collecting data. A list of documents was requested from the schools. School documents about eLearning, staff meetings, letters and emails related to eLearning, memorandums from the Department of Education related to eLearning were utilised.

Document analysis in this study was used to acquire information about the challenges and the successes they encounter during eLearning implementation in schools. According to McMillan and Schumacher (2010), official documents describe functions and values and how various individuals define their organisations. In addition, those internal official documents can reveal the official chain of command and provide clues about the leadership style and values of the organisation (McMillan & Schumacher 2010:104).

Documents such as personal documents and official documents, Department of Education memorandums were supposed to be analysed, unfortunately, most participants denied me access to their personal documents and diaries. This is any first-person narrative that describes an individual's actions, experiences, and beliefs. Official documents include school minutes of meetings that were used as a source of information. It was difficult for some principals to send staff meeting minutes to the researcher as they were worried about the privacy of their schools. Additionally, participants' confidentiality

was explained to the principals and a summary of the minutes were emailed to me. The semi-structured interview questions are included as Annexure F of this study.

The following school documents were analysed in this study:

1. Memorandum from the Department of Education related to eLearning;

2. Minutes and agendas of staff and parents' meetings; and

3. Management plan about eLearning implementation.

Memorandums from the Department of Education related to eLearning implementation were used as they contain updated information that helps schools on how to overcome problems that they encounter during eLearning implementation in their schools. The memorandum also contains dates for online workshops about eLearning. Minutes and agendas of staff and parents' meetings about issues related to eLearning implementation were also used as they have problems, solutions and updates of eLearning in their schools. The schools' management plan clearly stipulates different ways on how to manage eLearning in their schools.

Furthermore, permission to analyse the above-mentioned documents was obtained from the school principals, School Management Team (SMT) and the School Governing Body (SGB). However, some documents were prohibited to be seen by the researcher such as some of the staff meetings and some of the letters from the school to the Department of Education.

The following template was used to record information:

Table 4.3.1 Template used to record information

Document title Description of Document	**Date Author**	**Summary of information found in the document**	**What did I learn about the document**	**Schools**
District Memorandum 234 of 2020	09 September 2020	ICT COMMITTEE online training that will be rolled out to Schools.	I have learned that the Department of Basic Education is	

		The committee must include 1 educator, 1 champion educator. 1 SMT member and other members	trying to provide training for teachers so that they can be equipped with skills and knowledge about eLearning implementation	C
Minutes and agendas of staff and parents meetings	12 February 2020 & 11 March 2020	The staff meeting was held at schools to discuss challenges that teachers encounter during eLearning implementation and to find solutions to the problems	I learned that eLearning is a programme that needs teamwork	A
Management plan about eLearning implementation	Term 1-4	In each term, the MANAGEMENT PLAN clearly stipulates the dates of computer updates and also any advice to staff about any eLearning updates in the school and from the DoE	I learned that eLearning is a programme that needs to be updated each and every time	C

4.4. DATA ANALYSIS

Qualitative data were summarised into similarities and differences then analysed qualitatively. The telephone semi-structured interviews were made up of 12 participants, from three schools. The interviews were analysed in batches of four participants per school allowing analysis time before moving on to additional participants. Each batch was coded and analysed for themes. Details of interview questions are in Appendix F. Coding

was divided into three parts (a) open coding, which includes the results from an interview that were manually coded, (b) Selective coding, the researcher searched to find categories emerging from the similarities in the open codes, and (c) theoretical coding, the researcher took all the vignettes resulted from the relationship between open codes and selective codes, mapped them into a mind-map that resulted in different themes.

a) Personal information about participants

Although personal information about participants was not part of the purpose of the study, this set of data were intended to describe the demographic variables of the sample and to assess for any influence on the research findings. I chose people who were in the School Management Team (SMT) as they had enormous amounts of knowledge about their school.

b) Age ranges of the participants in the sample

All the participants responded to this question, two participants were between 25-34 years and 10 participants were ages 35 and above. On one hand, the statistics showed that most of our teachers at the primary level are 35 years and above which tells us that most primary teachers are matured enough to teach and take care of learners. On the other hand, the results also showed that most primary teachers are not part of the millennial generation, people who use technology more often. **Table 4.4.1: Age of participants**

Age range in years	Number of participants
25<	1
26-34	1
35-45	3
46-50	3
Other	4

c) Computer experience

Computer experience in this study was very important as it determined teachers' skills and knowledge in using computers. Based on the findings we identified that (2%) of the teachers used computers more often whereas another 5% used computers sometimes. It gives us the impression that if only seven teachers out of 12 use computers most of their time, five participants use computers sometimes. This challenge regarding computer experience was a common issue in most primary schools because not all teachers have computer experience. The word "sometimes" gave us the impression that only a few number of teachers at primary schools can use computers more often.

Table 4.4.2: Computer experience

Computer experience	Participants
More often	2
Often	5
Sometimes	5
Never	0
Other	0

Table 4.4.3: Computer profession:

Computer profession	Participants
Certificate	1
Diploma	2
Degree	1
None	8
Other	0

Table 4.4.3 above showed that out of 12 participants, one has computer certificate, two have diplomas and one possesses a degree in computers, whereas eight out of 12 have no computer professional qualifications.
It clearly showed that most teachers did not have any computer qualifications; they merely use their knowledge to implement eLearning at schools.

Table 4.4.4: Academic position at school

Academic position at school	Participants
Principal	3
Head of Department (HOD)	6
Level 1 teacher	3

According to my research, participants were randomly selected according to their purpose in eLearning implementation. Most participants were in the School eLearning Management Term and as such, they have more information about the eLearning implementation of their schools.

4.5. DATA INTERPRETATION

Data interpretation involved answering a series of questions related to the research. The presentation of research results was done according to the findings from the school principals, HODs and level 1 teacher.

Themes were identified to substantiate each category and its sub-categories. During the analysis of data from the three schools, a total of two themes, 12 categories and 12 sub-categories emerged as follows:

4.5.1. Theme 1: challenges of implementing eLearning in schools

Theme one related to exploring and describing the challenges of implementing eLearning in primary schools which included the following: lack of transparency and openness between the Department of Basic Education and teachers, lack of teacher training, teachers unable to use technology devices, lack of eLearning infrastructure, wrongful usage of computers and tablets by learners, load shedding(cutting off electricity during school hours), technology is expensive and theft of eLearning infrastructure.

However, the findings of this research revealed that even though the Department of Basic Education in SA used eLearning as a tool to develop learning and teaching, there are still some challenges facing the implementation of eLearning in primary schools. During data analysis and interpretation from principals, HODs and teachers, the following categories emerged, with the participants' verbatim quotes presented in italics:

Category1.1

a) Lack of transparency and openness between the Department of Basic Education and teachers

The study found a lack of transparency and openness between the Department of Basic Education (DBE):

"We do not have a top down support from the Basic Department of Education. After the introduction eLearning in our eLearning staff management and the department officials. We do not know whom to contact when we come across eLearning implementation challenges."[Teacher 5 School B]

The idea was further supported by principals from the two participating schools. When they mentioned the none participation of the Department of Basic Education officials:

"There is no effective support from the DoE officials. Sometimes we experience slow internet service and we do not know whom to contact. I think that the DoE should have call centres that we can contact when we experience any eLearning implementations problems" [Participant 4].

"Proper support from the government is not provided but instead, we as educators and school management team of eLearning support each other and provide solutions to some of the problems we come across during eLearning implementation". [Participant 7].

b) Excluding of teachers' opinions and views in eLearning implementation and development

South Africa is a democratic country where everyone is involved in the decision-making process of the country; however, there is still no transparency between the DBE and teachers.

What I have realised is that there is a line of demarcation between teachers and the Department of Basic Education. Teachers still feel out sided by the government. As teachers are part of the educational stakeholders [Teacher 1, School B].

Category1.2 Lack of teacher training

Just like any other innovation, eLearning requires new skills for teachers so that they will be able to implement and integrate them into teaching and learning (Mathevula & Uwizegimana 2014:1090).

I received self-initiated training, which enables me to train other teachers on how to use compujectors and projectors [Teacher 2, School A]

I did not get any eLearning training but I was toughed how to use Microsoft office in University and this has assisted with making Power Point [Teacher 6, School B]

No training was given to teachers; we are just using our technology skills and knowledge to implement eLearning in the classroom [Teacher 11, School C]

Yes, I received training, just a little with regard to the apparatus we are using at school and I was once off session for 2 hours, which was not enough [Teacher 1, School A]

The statements of some participants clearly show that there is a need for teacher training in eLearning usage to obtain skills and knowledge that will make them have teaching confidence in the class. However, some participants received insufficient training, which they feel is not enough for them. I also support the idea of teacher training opining that sufficient workshops are still needed for the eLearning programme. Ongoing teacher training is required to provide enough computer skills for teachers.

Category 1.3 Unable to use computers

Another category that emerged from the study is that teachers were unable to use more computer techniques to teach due to a lack of resources and skills.

Some teachers do not know how to use technology devices properly and this is disturbing because I have to leave my class and go to help them, proper training is needed for teachers to make sure that there is smooth implementation of eLearning in the classroom[Teacher 7, School B] supported by (Mahapelela 2015: 15).

Furthermore, the idea of teachers being unable to use a computer is also supported by Table 4.3. Table 4.3shows that five of the participants used computers often and other five used computers sometimes. It gives us the impression that if only seven teachers out of 12 use computers more often, 5 participants would use computers sometimes. The word “sometimes” gives us the impression that only a few teachers at primary schools are capable of using computers more often.

Category 1.4 Lack of eLearning infrastructure

Another category that emanated from Theme 1 is the lack of eLearning infrastructure.
As indicated by the phone interviews, most schools encounter a lack of eLearning infrastructure. The sub-categories that emerged were: insufficient eLearning infrastructure, theft and outdated computers.

During the interview with participants, they mentioned that: *Some of our computers were damaged which resulted in shortage of computer. Another challenge that our schools are*

facing is theft, especially this year 2020 during Covid19 lockdown. Our school were vandalized and numerous things including eLearning foundations were taken [Participant 9].

Our computers are outdated and this makes teaching and learning process to be slow, as we have to wait for our technician to come at the beginning of every month.

The above-mentioned statements showed that there is lack or insufficient eLearning infrastructure that resulted in school being vandalized, theft and outdated computers. According to Piaget `s theory of Cognitive Development, children from 7-11 years are able to solve problems using the available schema (Woolfolk 2015:30). This makes it possible for primary learners to use eLearning and eLearning infrastructure as schema to improve learning in the classroom. In addition, it is believed that primary children are hands-on; this means that they learn best by touching and experiencing things. I suggest that eLearning can be productive if the department of Basic Education and the school management (SMT) can make sure that there is enough eLearning infrastructure that is used for eLearning implementation.

Category 1.5 Load shedding (cutting off electricity during school hours)

South Africa is a developing country that is experiencing an electricity shortage. In order to solve this problem, the government has divided the country into sections where they allocate time to switch off the electricity as a way of saving electricity. However, the whole process of load shedding disturbs eLearning in schools because computers cannot operate without electricity.

I can become very reliant on using my projector and when load shedding or a power outage occur, I have to adjust my teaching strategies accordingly and this disturbs teaching and learning and also disorganises computer information[Participant 3].

Technology is an expensive investment and does not last. It becomes outdated quickly and needs expensive ongoing repairs. It also relies heavily on electricity. Although

electricity is advantageous because it makes things simpler and quicker, it is disadvantageous when experiencing load shedding, lessons are interrupted and we lose some of the unsaved information on our computers [Participant 4].

Table 4.5.1 Theme on the challenges of implementing eLearning

THEME 1	CATEGORIES	SUB-CATEGORIES
Challenges during eLearning implementation	1.1 Lack of transparency and openness between the Department of Basic Education and teachers	Excluding teachers' opinions, and views in eLearning implementation and development
	1.2 Lack of teacher training	-Little workshops or no workshops -Teachers unable to adapt to the implementation of eLearning
	1.3 Unable to use technology	Some teachers are unable to use technology
	1.4 Lack of eLearning infrastructure	-Insufficient computers, laptops provided to the school -computer theft - outdated tablets and computers
	1.5 Load shedding (cutting of electricity during school hours)	-disturbing teaching and learning -disorganizing computers and tablets information

4.5.2. Theme 2: successes of implementing eLearning

Although there are some challenges to eLearning implementation in primary schools, this study also discovered the following successes for using eLearning in the classroom.

Category 1: Using different resources during learning and teaching.

4.4.2.2 THEME 2: SUCCESSES OF IMPLEMENTING ELEARNING

Table 4.5.2 Successes of implementing eLearning

THEME 2	CATEGORIES	SUB-CATEGORIES
SUCCESSES OF IMPLEMENTING ELEARNING	1 Using different resources during learning and teaching	Teachers using internet to get different teaching materials Learners liked it because it is a different way of learning
	It adds interest and makes learning more vibrant and interactive	It connects learners to real world using Google. Both learners and teachers are able to participate during the lessons Encourages learners to be self-motivated

Despite the challenges, theme two explored the following successes of implementing eLearning in schools: Using different resources during learning and teaching, adds interest and makes learning more vibrant and interactive as indicated by Table 4.7 above.

Category 2.1 Teachers using internet to get different teaching materials

I like to use eLearning in the classroom because it bring a different dimension to teaching and learning, further more learners like to use technology[Teacher 8, School C]

One more success identified by the participant was that *eLearning adds revenue in educating and getting the hang of making it livelier. Students can speak with different students in and outside the country, really it interface students in genuine this present reality* Teacher 12, School C].

ELearning can be more intelligent because the instructors and students at this point do not have to depend on their restricted information and experience.

It furnishes students with duty since they can take in with a little assistance from their instructors [Teacher 10, School C]

These quotes showed the importance of using eLearning in the classroom. During the collection of data from principals, HODs and teachers, the successes of eLearning were also identified.

4.6. CONCLUSION

This chapter presented the challenges and the successes of implementing eLearning in ordinary primary schools in District 4 Tshwane South. Data was collected through telephonic interviews and documents 'analyses were discussed.
Numerous challenges and successes of implementing eLearning in primary schools were also identified. The study results show that despite some of the successes of eLearning, some challenges hinder the smooth implementation of eLearning in most primary schools. The next chapter discussed the solution to the implementation of eLearning in ordinary primary schools.

CHAPTER 5

ANALYSIS AND CONCLUSION

5.1. INTRODUCTION

This chapter provides a summary of the findings as well as the conclusions and recommendations arising from the study. The reason for this subjective research was to recognize the challenges and successes of carrying out eLearning in ordinary primary schools in District 4, Pretoria. I close this investigation by contending the discoveries of the exploration.

Moreover, the study contains the outcome and future research prospects to help answer the study's sub-questions:

1. What are the challenges of eLearning in ordinary primary schools?
2. What are the successes of eLearning in primary schools?

The literature review revealed that the use of eLearning is not only to improve teaching and learning but also introduced the following themes: skills and knowledge improvement, especially in learners, and lowering administrative work for both school staff and educators by making it easier for them to keep records.

5.2. SUMMARY OF RESEARCH FINDINGS

Previously, researchers established that there are challenges that hinder the implementation of eLearning in primary schools. My research complements those studies by suggesting ways to overcome the challenges. The study found out that most teachers do not have ICT qualifications and Table 4.4 supports this, with little or no ICT training that they received from the Department of Education; they only used their general ICT skills and knowledge to implement eLearning in the classroom.

One of the most noticeable differences in the findings of this research is the different explanations of eLearning by both participants and the literature used in this research study. eLearning is defined as electronic learning using various electronic devices such as computers, laptops, tablets, cell phones. The idea was supported by defining eLearning as the usage of technological devices in the classroom for the purpose of teaching and learning. eLearning is also a combination of learning services and technology to provide high value of learning and teaching.

Furthermore, eLearning was depicted as an information-sharing cycle; the part of staff advancement and the utilization of data and correspondence advances to work with development in the school. The previously mentioned clarification of eLearning, showed that there is no reasonable clarification of eLearning; it is characterized by the particular job that it plays either at school or in the business.

In light of answers to the inquiries, most participants communicated that eLearning has undergone a massive improvement in education and learning when contrasted with the old customary method of instruction.

5.2.1. Teacher training

As noted from the theme found in the interviews, data indicated that schools experience some challenges during eLearning implementation. For the purpose of our discussion, challenges were grouped into the following three themes:

a) Insufficient or lack of teacher training;
b) Insufficient eLearning infrastructure; and
c) Lack of money for eLearning framework substitution and update.

a) Insufficient or lack of teacher training

eLearning requires new skills for teachers so that they will be able to implement and integrate them in teaching and learning. There is a major concern about teacher training concerning eLearning implementation in the classroom. The finding of the study revealed

that some participants received training even though it was not sufficient, whereas others did not receive any training; they are just using their computer skills to implement eLearning in the classroom.

I suggest that instructors ought to have appropriate eLearning preparation. They ought to go to eLearning courses and workshops so they keep up-to-date with innovation. The Department of Education in SA also ought to associate with private organisations to receive computer donations. There have been various huge activities in SA that furnished schools with an eLearning framework and web admittance.

For example, these are the Thintana I-Learn project, the school Net SA activity, Gauteng Online. Even though those undertakings were effective, numerous schools could not keep up the eLearning framework in view of inadequate abilities.

Furthermore, the study also revealed that out of 12 primary teachers 1 of them have computer certificate, 2 diplomas and 1 degree in computers, whereas 8 out of 12 have no computer profession qualification. It clearly shows that most teachers do not have any qualifications concerning computers; they merely use their knowledge to implement eLearning in schools.

I suggest that the DoE should provide continuous in-service training for teachers, where teachers will receive eLearning training monthly so that they can improve and update their eLearning skills. Each school should also have an eLearning committee that will take care of eLearning issues in their schools then communicate with other schools and district officials for further clarity.

Everyone at school should be involved in this process of eLearning implementation so that they can be emotionally ready to deal with eLearning challenges. In addition, the DoE should also provide every teacher with a laptop/tablet. It will give them enough time to familiarise themselves with technology while increasing the number of laptops at school.

b) Insufficient eLearning infrastructure as a result of lack of finance and outdated computers/laptops/tablets

eLearning infrastructure plays a vital role in the success of eLearning implementation. Infrastructure provides easy access to eLearning systems whereas technology allows the use of software and hardware for required effectiveness in the teaching-learning process. According to the findings, there was a shortage of eLearning infrastructure. The participants indicated that the shortage of eLearning infrastructure makes it difficult to implement eLearning in the classroom. Although there are computers at schools, they are not enough, sometimes learners have to share one computer as some of our computers are damaged others are out-dated. This shortage of computers is a result of damaged computers and others are outdated. In addition, according to participant principals, most eLearning infrastructures were brought from the school finances that are not enough to buy ad service computers, alternatively, they asked for donations from people and neighbouring businesses. It would be acceptable if the Department of Basic Education (DBE) also adds finances to the school budget so that the schools will be able to maintain eLearning infrastructure.

The previously mentioned data plainly presents either that the DBE gave inadequate or no eLearning foundation to grade schools. It would be acceptable if the department can extend its association with more private associations that will provide eLearning foundations such as PCs/workstations/tablets, web, and projectors, to schools and colleges that need them. Moreover, the private companies ought to lower their data costs with the goal that everybody affords the cost of data.

Despite the challenges of eLearning implementation in schools, the study also discovered some benefits of using eLearning in the classroom. The use of eLearning is not only to improve teaching and learning but also introduces the following themes:

THEMES

1. eLearning is used as a tool to provide more opportunities for teaching and learning
2. It can also improve learners' achievement by using the new emerging technologies

1. **eLearning is used as a tool to provide more opportunities for teaching and learning**

eLearning additionally improves and builds up the country by empowering members to fit in the worldwide economy and empowering them to be fully informed regarding various nations that utilize eLearning. This makes it conceivable to compete in a worldwide economy. Students and educators can get answers for various sources both broadly and universally" Furthermore, students can be in depended and learn all alone. Additionally uphold this thought, that eLearning is a methodology that works with PCs like CD-ROMs, general media and the web.

eLearning makes it simpler for students to picture what you are instructing, to draw in with the work and comprehend it in a more solid way. Brilliant pictures are particularly useful for second language students who need obvious signals. eLearning is dynamic – one can make and change PowerPoints continuous.

eLearning, PowerPoints, can also help educators to make banners as educational tools for learners. Teachers also use projectors to make pictures and words to cater for learners with visual problems.

Furthermore, eLearning also leads to the transformation of sources knowledge from teachers to computers, networks, multimedia, learning websites, e-libraries and online courses. In addition, eLearning also provides more opportunities for teaching and learning for both learners and teachers and simultaneously improves their computer knowledge and skills.

2. **eLearning can improve learners` achievement by using the new emerging technologies**

eLearning brought new and exciting ways to communicate with learners using technology to make the learning experience visually fun and interesting. Most participants argued that eLearning use plays a major role in the creation and development of knowledge that can be used to solve different problems that they encounter during their lives. Furthermore, the use of technologies during eLearning implementation makes it possible

for the teacher to use different sources like videos, downloaded pictures that make learners be more focused and interact during the lesson.

In the present globalized world, the Internet is the driving vehicle for content conveyance frameworks. ELearning and the web have dispensed with the language and geological hindrances and worked within the foundation and development of global instruction.

The huge advancement of eLearning has influenced the training environment. It has gotten instructive innovation learning conditions and gave new freedoms to get acquainted with new horizons. The full advantages of e-Learning can be investigated via cautiously planning and executing e-learning climate. ELearning gives a synergistic learning climate to students, expands their commitment, inspiration, and assists them with turning out to be self-coordinated and free students. Powerful eLearning can help in spreading current instruction, improve the quality and furnish students with abilities that lead them to add to better financial outcomes.

Furthermore, the use of computers for teaching and learning has improved the quality and standard of education in many countries, especially in Namibian schools. The fact that the quality and standard of education in Namibian schools are still underperforming, prompted this research. eLearning adds interests and makes learning more vibrant.

I believe that learning can be more interactive as both teachers and learners no longer need to rely on their limited knowledge and experience. In addition, eLearning implementation brought a different dimension to the classroom. Learners like it because it is a different way of learning than the usual: As a teacher, my lesson can be more visual, colourful and interactive.

The findings of this study concur with Beyers and Hlala that through eLearning implementation, learners can share information with their peers, contribute their ideas worldwide and at the same time be independent in their own learning. The study also found that teachers know and understand the importance of eLearning; they are merely discouraged by the challenges, discussed previously, about eLearning implementation.

5.3. RESEARCH SUMMARY

It was evident from the literature audit of this research that even though there are achievements of eLearning execution, there are additional difficulties that ruin the interaction of eLearning implementation as discussed in detail in Chapter 2 of this study. In looking for the appropriate response on the best way to defeat the difficulties to guarantee that there is successful eLearning execution, my excursion let me decide eLearning to be the most essential apparatus for eLearning execution in grade schools.

In attempting to oversee eLearning implementation, I went over Pasian's thoughts regarding the project executives' plan. The administration plan ought to follow the technique underneath: there ought to project for the executives' cycle that ought to be set from the beginning of eLearning execution. Enough eLearning frameworks ought to be apportioned to every grade school preceding eLearning execution. Besides, there ought to be an appropriate instructor preparation to stay away from disarray and unsettling influence during execution. Each school ought to have an eLearning board of trustees that will deal with the entire cycle of eLearning execution. The most significant thing, there ought to be a straightforward correspondence between the school's eLearning group and the DBE authorities to report on and revive eLearning execution in elementary schools.

It is significant for the DoE to guarantee that eLearning is carried out during the early years of the learners so that they will be able to develop the eLearning skills that will help them in the future.

5.4. RECOMMENDATIONS

The following recommendations should be made to solve the challenges of eLearning implementation in primary schools. Educational stakeholders should consider the following strategies when implementing eLearning in primary schools Pasian, Woodill and Chapter Authors' project management plan to manage eLearning in schools. According to these authors, a project management plan should be followed using the following issues, to manage eLearning in schools:

a) The project management process should be in place at the beginning of the project

Project management tools and mechanisms can be very useful in keeping the project grounded and closely tied in the initial objectives as set out in the project plan. This involves the goals and objectives for the project as well as the management structure that clearly stipulates the individual role of each member. The goal of eLearning, to improve teaching and learning in schools, should be always kept in mind. The study unearthed that the Department of Basic Education should have an eLearning committee that will have a management plan at hand to handle the whole process of eLearning management in primary schools.

b) Evaluation tools should bookend a project

There should be a survey that the DoE uses to check eLearning readiness. Alternatively, the department should provide enough funds for eLearning infrastructure maintenance. Furthermore, it was advised that the management team also have an evaluation tool that will help them to notice the successes while at the same time solving the challenges of eLearning implementation.

c) **Relationships that are key to some of the tools for eLearning are computers/laptops/tablets, internet and projectors: Managing the eLearning project**

The relationship between members of the project management structure is one of the main themes for managing the project. I suggest that all project team members and stakeholders should be kept updated. Clear, open and continuous communication and expectations between the educational stakeholders have to be managed throughout the project life.

In addition, both the Department of Basic Education and of higher education should declare ICT course as a requirement for the completion of studies in TVET Colleges, and

Universities so that students can be skilled with eLearning knowledge that will help them to implement eLearning at their future workplaces.

d) **Training and preparation are needed**

Training for the entire stakeholders is very important so that they can be familiar with the eLearning environment. Furthermore, eLearning requires far more than the mere introduction of hardware in the classroom. Teachers must be conversant in utilizing them to implement an integrated approach in ICT.

Teachers also required continuous eLearning training that would enable them to effectively implement eLearning in the classroom. Teachers should also be provided with laptops/tablets to use both at school and at home in order to familiarize themselves with ICT usage.

The study found that although professional training was provided to teachers, it is not the number of professional development programmes that matters, but the quality of such programmes in helping them to address the challenges they come across. This can be done if teachers can be provided with ongoing in-service training. Lastly, the eLearning implementation programme should be evaluated continuously, and its findings should be used to develop the programme.

It has been noted that there is a shortage of eLearning infrastructure. Almost all participating schools have insufficient computers/laptops/tablets. This is due to shortage, theft, and damaged and outdated computer devices. It is the responsibility of the eLearning committee and the schools' (School Management Team) SMT to make sure that there are enough computers, computers were also updated and have tight security to avoid theft.

There should be enough eLearning infrastructure and tools provided for each school to enable implementation easier. Both schools and the DBE should provide enough security to eLearning infrastructures that will prevent eLearning infrastructure theft and damage. The Department of Basic Education should provide each eLearning school with an ICT

technician to fix and update eLearning infrastructure and provide support to teachers and learners where necessary. DBE should provide sufficient funds for eLearning infrastructure or alternatively whereas at the other side the SMT do fund raisings at the school to buy more eLearning infrastructure. SMT can also as for donations from parents and local business to assist them with eLearning infrastructure.

e) **Project leadership is important**

Leadership in an eLearning project is dominated by two roles: the project sponsor and the project manage. Leadership relationship is also important as their roles define the vision and mission of the project. Their role is to articulate the project vision to the rest of the team and motive them. A strategy for eLearning needs to be developed with a steering group representing all interested educational stakeholders to regularly review the strategy and its implementation.

The strategy should also clearly stipulate the roles and accountability of each educational stakeholder. A changed management policy should be developed and renewed to meet the needs of teachers and learners regarding eLearning implementation.

f) **Communication and information flow must be well managed**

The study discovered that there should be clear communication between the eLearning committee from the department and the schools/eLearning implementers. Communication is an effective tool for every project. It was recommended that the eLearning committee and teachers should have transparent communication that would help them to talk about the successes and challenges that they encounter during eLearning implementation.

g) **Managing change**

ELearning is not a curriculum change but a tool that was used to improve teaching and learning in South African schools. However, there is a change in how teaching and

learning occur. According to my view, as a teacher and researcher, the Department of Education in SA together with the eLearning project management team should provide proper training for both teachers and learners about eLearning so that they are able to solve problems that they encounter during eLearning implementation.

5.5. AVENUES FOR FURTHER RESEARCH

Some valuable issues emerged which warrant further investigations into the challenges and successes of implementing eLearning in ordinary primary schools in District 4 Tshwane South. There is a gap between eLearning context, infrastructure and teachers. Future research could examine ways in which to bridge this gap. Proper management of the eLearning programme emerged as one area which could be further developed. Perhaps an analysis of eLearning implementation and how it improves learning and teaching in ordinary primary schools could generate useful research about diminishing the challenges of eLearning implementation.

This research focused predominantly on the challenges and successes of implementing eLearning in primary schools. However, in most of the telephone interviews conducted in schools, it was common to find that the issues of teacher training and shortage of eLearning infrastructure were the main challenges of eLearning implementation. Therefore, further research could investigate what schools and the Department of Education can do to overcome the challenges to have successful implementation of eLearning to improve learning and teaching in primary schools.

5.6. CONCLUSION

The aim of the study was to conduct research about the challenges and successes of implementing eLearning in ordinary primary schools in District 4. The study found that there are different explanations of eLearning, the explanation depends on the aim it provides.

This study concluded that many primary schools use computers/tablets/laptops and the internet to improve the process of teaching and learning in the classroom with the help of teachers as instructors. It is noted in the study that both learners and teachers benefit from using eLearning such as using different resources, communicating with different people from different countries, accessing information quickly, giving a synergistic learning climate to students and expanding their commitment, inspiration and assisting them with turning out to be self-coordinated and free students.

It has been set up from the investigation that regardless of the schools 'endeavours to carry out eLearning in the study hall that will improve instructing and learning in schools, they cannot execute eLearning viably in the classroom because the government does not consider or provide the important adequate eLearning foundation including appropriate eLearning preparation for educators.

The research findings also discovered that lately, numerous nations have encountered extraordinary challenges in carrying out eLearning in schools. Instructors were able to leave before executing eLearning however, they did not feel satisfactorily guided by those driving the strategy, nor did they have sufficient assets for eLearning execution. Chapter 4 tended to difficulties that educators experience during eLearning execution in primary schools. Consequently, the research discovered that there is no explicitly controlling arrangement from the DOE for pioneers to use for eLearning programmes, rather schools had made their own eLearning implementation strategy that is appropriate for their schools.

The government’s intention to transform learning and teaching in SA’s ordinary primary schools to meet the objectives of White Paper 7 issued by the Department of Education in 2004, was not accompanied by adequate implementation plans and support mechanisms. Data analysed for this study show that the government’s implementation plans would solve the confusion and uncertainty experienced by teachers during eLearning implementation.

As indicated by this study’s eLearning challenges, for example, deficient instructor preparation, lack of eLearning foundation, and no specified strategies and direction of

eLearning execution and inadequate assets to fix, replacement and update of eLearning framework were a portion of the significant difficulties that frustrated the execution of eLearning in elementary schools. These challenges can be addressed by appropriate and viable administration of eLearning. This investigation recommends ways and techniques to oversee eLearning execution in schools. Lastly, this examination reasons that it is hard for schools to viably carry out eLearning in ordinary primary schools in District 4, Tshwane South.

REFERENCES

Ary, D. Jacobs, L, C. & Sorensen, C. (2010). *Introduction to Research in Education*. Eighth edition. California: Wadsworth.

Bersin, J. (2012). *Building Blocks of an eLearning Infrastructure*. [Accessed on 20 June 2018]. Jbersin@digitaltalthink.com

Becker, D.L. (2017). *Laureate Education.* Balitimore

Beyers, L.T.E & Hlala, S. (2015). *E-learning Evaluation in the Department of Education Limpopo province.* South Africa: University of Limpopo.

Boulton, H. (2012). *Managing eLearning: What are the Real Implications for Schools?* UK: Nottingham Trent University. Helen.boulton@ntu.ac.uk.

Celik, V. & Yesilyart, E. (2012). *Attitudes to technology, perceived computer self-efficacy and computer anxiety as predictors of computer Supported education*. Turkey: Mevlana University.

Conradie, D.P & Roodt, J. (2015). *Realities versus Ideals with regard to eLearning in South Africa*. South Africa: Tshwane University of Technology & Human Science Research Council: South Africa

Creswell, J.W. (2010). *Research design: qualitative, quantitative and mixed approaches*. 2nd edition. Thousand Oaks, CA: Sage.

Creswell, J.W. (2015). *Research design: qualitative, quantitative and mixed approaches*. 4th edition. Thousand Oaks, CA: Sage.

Department of Basic Education Gauteng (DBE). (2020). *DISTRICT MEMORANDUM 234 OF 2020, GAUTENG PROVINCE*. Pretoria: Government Printers.

Department of Education (DoE). (2004). *White Paper on e-Education. Transforming Learning and Teaching through Information and Communication Technologies (ICTs).*South Africa: Government Gazette.

Dibete, K.J. (2015). *The role of the School Governing Bodies in managing finances in no –fee schools in the Maraba circuit of Limpopo province*. Pretoria: University of South Africa.

Doherty, I. (2010). Agile *Project Management for eLearning Development*. University of Auckland, 24 (1).

Du Toit, J. (2015). *Teacher Training and Usage of ICT in Education*. Paris: UNESCO.

Education Labour Relations Council (ELRC). (2010). *Annual Report. South Africa*: ELRC.

Grant, C. & Osanloo, A. (2014). *Understanding, Selecting, and Integrating a Theoretical Framework*. Journal of Social Science, 185-195

Higley, M. (2014). *Problems and challenges in online tutoring/ Education for Sustainable Development.* [Accessed 20 March 2020]. https://ufbutv.com

Hussain, S., Wang, Z & Rahim, S. (2010). *E-learning service for rural community*. Beijing, China: University of Science and Technology.

Information Technology Journal (ITJ). (2017). *Investigating Factors Influencing the Implementation of e-learning at Rural Based Universities*. South Africa: University Of Venda. http://ansinet.com/itj

Jamil, Md, G. (2018). *Technology enhanced teacher development in rural Bangladesh, Acritical realist evolution of the context*. UK: Southampton Solvent University.

Kader, A. & James, W. (2001). *Education and Democracy in South Africa.Today Daedalus*, 130 (1): 185 [Accessed 20 Feb 2020]

Kader, A. & Wilmont. (2001). *Education and Democracy in South Africa Today* –Jstor [Accessed 24 March 2020] https://www.jstor.org

Kalinga, E. (2010). *Development of an Interactive e-Learning Management System. (e-LMS) for Tanzanian Secondary School*. Sweden: Blekinge Institute of Technology.

Kigotho, W. (2018). *eLearning-The challenges of Implementation: Africa* [Accessed on 20 March 2020]. https://ads.universityworldnews.com

Kigotho, W. (28 September 2018). *eLearning- The Challenges of eLearning Implementation.* NAFSA 2019 Annual Conference & Expo. [Accessed 20 March 2020]http://wwwuniversityworldnews.com

Kuanda, J. (2012). *Research Methodology: A Project guide for University Students*. 1st ed). Gyling: Narayana Press.

Kumar, S. (2012). *ELEARNING AND ROLE OF SMART CLASSROOMS IN EDUCATION IN NEW ERA OF TECHNOLOGY*. India [Access 25 September 2018].http://drsanjeevkumarindia@jahoo.in, sanjeev24778@rediffmail.com

Laureate Education, Inc. (Executive Producer). (2010). *Program 5. Cognitive learning theory [Webcast]. Bridging learning theory, instruction and technology*. Baltimore, MD: Author.

Lin, J. H.O.C, Sadiq, W & Orlowska, M. E. (2002). *Using Workflow Technology to Manage Flexible e-Learning Services*. Australia: The University of Queensland.

Lockwood, B. & Cornell, R. (2013). *School ICT Infrastructure Requirements for Teaching and Computing:* BCS and the Chattered Institute for IT.UK.

Mahapelela, S. G. (2015). *The Integration of Computer Technology in the Namibian education system*. Pretoria: University of South Africa.

Mathevula, M.D & Uwizeyimana, D.E. (2014). *The Challenges Facing the Integration of ICT in Teaching and Learning Activities in South African Rural Secondary Schools*. Vol 5, no.20. South Africa: University of Limpopo & University of Johannesburg.

McMillan, J.H & Schumacher, S. (2010). *Research in education: evidence –based inquiry.* 7thedition. New Jersey: Pearson Education.

Mdlongwa, T. (2012). *Information and Communication Technology (ICT) as a Means of Enhancing Education in Schools in South Africa*. Africa institute of South Africa. South Africa

Mojapelo, M.S. (2008). *Library and Information Resources in Rural Schools of Limpopo Province: A Pilot Study*. Pretoria: University of South Africa.

Murphy, S. (updated on May 13 2017). *How to apply Piaget`s Theory in the Classroom*. Leicester: University of Leicester.

Mwanza, D. (2005). *Managing content in eLearning environments*. Vol 36 No 3. University of Helsinki: Britain

Nasser, N.K. & Abir, Z.S. (2010). *Building of Reliable E-Learning Management System for Iraq University Campus*

Nayak, S.K. & Kalyyanda, N.V. (2010). *E-Learning Technology for Rural Child Development.* India

Ngubeni, T. (17 June 2014). SA eLearning under the spotlight. URL, https://www.itweb.co.za [Accessed: 23 June 2017]: South Africa.

Owen-Smith, M. (2010). *The language Challenge in the classroom: a serious shift in thinking and action in needed*.www.semanticsholar.org [Accessed on 5 May 2020]

Pasian, B, Sankaran, S & Boydell. S (2015). *Plan to learn: Case Studies in eLearning project management.* Canada: Canadian eLearning Enterprise Alliance. [Accessed 6 December 2019] http: www.celea-aceel.ca

Patel, N. M, Kadyamatimba, A. & Madzvamuse, S. (2017). *Information Technology Journal (ITJ)*. South Africa: University of Venda [Accessed 7 December 2018] http://ansinet.com/itj

Peterson, T. (2018). *5 Disadvantages to consider about Online Education.* [Accessed 20 July 2019] https://www.peterson.com

Ravitch, S. M & Carl, N. M. (2016). *Qualitative Research: Brid the Methodological*. Los Angeles, USA: SAGE Publications, Inc.

SAPA. (2014). *School ready for eLearning, teachers' not*. [Accessed 18 May 2017] www.iol.co.za/news/south-africa

Shied, M. (2010). *The Definition of Management: Examining the Great Leader*. www.Leadership501.com [Assessed on 12 September 2018]

South African Government. (2010). *Draft Whitepaper on E-learning, Transforming learning and Teaching Information and Communication Technologies*, [Online] Available: URL www.DOE.gov.co.za [Accessed 16 June 2017]: Pretoria.

Souter, D. (2011). *ICT for Teaching and Learning in South Africa*. UK: ICT Development Associates ltd.

Ssekakubo, G. Suleman, H. & Marden, G. (2011). *Issues of adoption: Have e-Learning management system fulfilled their potential in developing countries? In Proceedings of the South African Institute of Computer Sciences and Information Technology Innovation and Leadership in a Diverse, Multidisciplinary Environment* (pp.231-238) Cape Town: South Africa.

Tarus, J.K., Gichoya, D & Muumbo, A. (2015). *Challenges of Implementing EW-Learning in Kenya: A Case study of Kenyan Republic University*. Kenya: Moi University.

Tshiredo, L. L. (2013). *The impact of the curriculum Change in the Teaching and Learning of Science*: University of South Africa

University of South Africa (UNISA). (2016). *Research Ethics*. [Accessed 8 May 2020]

Wang, Y., Liu, X & Zang, Z. (2018). *An overview of eLearning in China: History, Challenges and Opportunities.* Vol 13 (1): 195-210.

Walter, E. (2005). *Cambridge Advanced Learner`s Dictionary.* Cambridge University Press. USA.

Woolfolk, A. (2015). *Educational Psychology.* 13th Edition. Pearson Education. United States of America

APPENDICES

APPENDIX A: Ethical clearance certificate

UNISA university of south africa

UNISA COLLEGE OF EDUCATION ETHICS REVIEW COMMITTEE

Date: 2020/08/12

Ref: **2020/08/12/42250323/07/AM**
Name: Mrs RC Kupa
Student No.:42250323

Dear Mrs RC Kupa

Decision: Ethics Approval from 2020/08/12 to 2023/08/12

Researcher(s): Name: Mrs RC Kupa
E-mail address: ramatsimele7422@gamil.com
Telephone: 0822281896

Supervisor(s): Name: Dr LL Toolo
E-mail address: toololl@unisa.ac.za
Telephone: 012 429 6961

Title of research:

CHALLENGES AND SUCCESSES OF IMPLEMENTING E-LEARNING IN ORDINARY PRIMARY SCHOOLS IN DISTRICT 4, IN TSHWANE SOUTH

Qualification: MEd Education Management

Thank you for the application for research ethics clearance by the UNISA College of Education Ethics Review Committee for the above mentioned research. Ethics approval is granted for the period 2020/08/12 to 2023/08/12.

*The **medium risk** application was reviewed by the Ethics Review Committee on 2020/08/12 in compliance with the UNISA Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.*

The proposed research may now commence with the provisions that:

1. The researcher will ensure that the research project adheres to the relevant guidelines set out in the Unisa Covid-19 position statement on research ethics attached.
2. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.

University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
www.unisa.ac.za

3. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the UNISA College of Education Ethics Review Committee.
4. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
5. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing.
6. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.
7. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data requires additional ethics clearance.
8. No field work activities may continue after the expiry date **2023/08/12**. Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:

The reference number **2020/08/12/42250323/07/AM** *should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.*

Kind regards,

Prof AT Motlhabane
CHAIRPERSON: CEDU RERC
motlhat@unisa.ac.za

Prof PM Sebate
EXECUTIVE DEAN
Sebatpm@unisa.ac.za

University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
www.unisa.ac.za

Appendix B: Permission to conduct the study from Department of Basic Education

GAUTENG PROVINCE
Department: Education
REPUBLIC OF SOUTH AFRICA

8/4/4/1/2

GDE RESEARCH APPROVAL LETTER

Date:	**07 September**
Validity of Research Approval:	**04 February 2020 – 30 September 2020** **2019/600**
Name of Researcher:	**Kupa RC**
Address of Researcher:	**7422 Cumins Street**
	Lotus Gardens
	Pretoria
Telephone Number:	**0822281896**
Email address:	**pheladikupa@gmail.com**
Research Topic:	**Challenges and successes of Implementing e-learning in ordinary in ordinary schools in District4, Tshwane South**
Type of qualification	**Master's in Education**
Number and type of schools:	**3 Primary School**
District/s/HO	**Tshwane South**

Re: Approval in Respect of Request to Conduct Research

This letter serves to indicate that approval is hereby granted to the above-mentioned researcher to proceed with research in respect of the study indicated above. The onus rests with the researcher to negotiate appropriate and relevant time schedules with the school/s and/or offices involved to conduct the research. A separate copy of this letter must be presented to both the School (both Principal and SGB) and the District/Head Office Senior Manager confirming that permission has been granted for the research to be conducted.

09/09/2020

The following conditions apply to GDE research. The researcher may proceed with the above study subject to the conditions listed below being met. Approval may be withdrawn should any of the conditions listed below be flouted:

1. *Letter that would indicate that the said researcher/s has/have been granted permission from the Gauteng Department of Education to conduct the research study.*

1

Making education a societal priority

Office of the Director: Education Research and Knowledge Management
7th Floor, 17 Simmonds Street, Johannesburg, 2001
Tel: (011) 355 0488
Email: Faith.Tshabalala@gauteng.gov.za
Website: www.education.gpg.gov.za

Open Rubric

2. *The District/Head Office Senior Manager/s must be approached separately, and in writing, for permission to involve District/Head Office Officials in the project.*
3. ***Because of COVID 19 pandemic researchers can ONLY collect data online, telephonically or may make arrangements for Zoom with the school Principal. Requests for such arrangements should be submitted to the GDE Education Research and Knowledge Management directorate. The approval letter will then indicate the type of arrangements that have been made with the school.***
4. ***The Researchers are advised to make arrangements with the schools via Fax, email or telephonically with the Principal.***
5. *A copy of this letter must be forwarded to the school principal and the chairperson of the School Governing Body (SGB) that would indicate that the researcher/s have been granted permission from the Gauteng Department of Education to conduct the research study.*
6. *A letter / document that outline the purpose of the research and the anticipated outcomes of such research must be made available to the principals, SGBs and District/Head Office Senior Managers of the schools and districts/offices concerned, respectively.*
7. *The Researcher will make every effort obtain the goodwill and co-operation of all the GDE officials, principals, and chairpersons of the SGBs, teachers and learners involved. Persons who offer their co-operation will not receive additional remuneration from the Department while those that opt not to participate will not be penalised in any way.*
8. *Research may only be conducted after school hours so that the normal school programme is not interrupted. The Principal (if at a school) and/or Director (if at a district/head office) must be consulted about an appropriate time when the researcher/s may carry out their research at the sites that they manage.*
9. *Research may only commence from the second week of February and must be concluded before the beginning of the last quarter of the academic year. If incomplete, an amended Research Approval letter may be requested to conduct research in the following year.*
10. *Items 6 and 7 will not apply to any research effort being undertaken on behalf of the GDE. Such research will have been commissioned and be paid for by the Gauteng Department of Education.*
11. *It is the researcher's responsibility to obtain written parental consent of all learners that are expected to participate in the study.*
12. *The researcher is responsible for supplying and utilising his/her own research resources, such as stationery, photocopies, transport, faxes and telephones and should not depend on the goodwill of the institutions and/or the offices visited for supplying such resources.*
13. *The names of the GDE officials, schools, principals, parents, teachers and learners that participate in the study may not appear in the research report without the written consent of each of these individuals and/or organisations.*
14. *On completion of the study the researcher/s must supply the Director: Knowledge Management & Research with one Hard Cover bound and an electronic copy of the research.*
15. *The researcher may be expected to provide short presentations on the purpose, findings and recommendations of his/her research to both GDE officials and the schools concerned.*
16. *Should the researcher have been involved with research at a school and/or a district/head office level, the Director concerned must also be supplied with a brief summary of the purpose, findings and recommendations of the research study.*

The Gauteng Department of Education wishes you well in this important undertaking and looks forward to examining the findings of your research study.

Kind regards

pp .....

Mr Gumani Mukatuni
Acting CES: Education Research and Knowledge Management

DATE: 09/09/2020

Making education a societal priority

Office of the Director: Education Research and Knowledge Management
7th Floor, 17 Simmonds Street, Johannesburg, 2001
Tel: (011) 355 0488
Email: Faith.Tshabalala@gauteng.gov.za
Website: www.education.gpg.gov.za

Appendix C: Letter seeking permission to conduct a research interview at school

REQUEST FOR PERMISSION TO CONDUCT A TEPHONE INTERVIEW AT SCHOOL

ENQ: RAMATSIMELE CONNY KUPA **PO Box 392**

CELL: 0822281896/0681980286 **UNISA**

STUDENT: 42250323 **PRETORIA**

EMAIL:pheladikupa@gmail.com **0003**

16 September 2020

Dear Principal, HODs and teachers

The above matter refers:

I am a registered student in Master`s degree in Educational Management at UNISA. My research topic is **CHALLENGES AND SUCCESSES OF IMPLEMENTING ELEARNING IN ORDINARY PRIMARY SCHOOLS DISTRICT 4, IN TSHWANE SOUTH**

I hereby request your permission to conduct a telephone interviewed at your school for my research study. The interview will focus on the role you play for managing and implementing eLearning in your school. The interview will take place telephonically since COVID-19 restriction rules. Notes will be taken during the interview. The interview will be done with the permission of The Department of Education in Gauteng Province (evidence from Department of Education is attached in this letter) and UNISA ETHICAL RESEARCH COMMITTEE.

Only 4 staff members of the school will be participants for the research, the principal, 2 HOD and one level 1 teacher. The interview is divided into 3 sections: PERSONAL INFORMATION (NO NAME/ANONYMOUS), QUESTIONS ABOUT ELEARNING

IMLEMENTATION, and DOCUMENTS ANALYSIS, which include documents, minutes of the meeting related to eLearning implementation in the school. It is up to the school to decide as whether the interview should be telephonically or they will just forward their response via email.

I further assure you that your participation is free and anonymous. You will not benefit individually from the research but your school will do as the CHALLENGES OF ELEARNING IMPLEMENTATION and the name of the school in this research will be communicated back to the Department of Education for their attention.

Regards

Student Number: 42250323

Ramatsimele Conny Kupa

Signature:

Appendix D: Interview guide questions

UNISA | college of education

Guide for interview questions

SECTION A

Personal information about the participant

Age group	25<	26-34	35-45	46-50	Other
Teaching experience	0-5	6-10	11-15	20-25	Other
Academic position at school	Principal	Deputy principal	HOD	Level 1 teacher	Other
Highest qualification	Diploma	Degree	Honours	Masters	Other
Qualification in computer	Certificate	Diploma	Higher certificate	Degree	Other

SECTION B

Interview questions related to eLearning implementation. CHALLENGES AND SUCCESSES OF IMPLEMENTING ELEARNING IN ORDINARY PRIMARY SCHOOLS IN DISTRICT 4. TSHWANE SOUTH

1. According to your understanding, what is eLearning?
2. What eLearning infrastructure do you use in the classroom?
3. What do you like about eLearning?
4. What you dislike about eLearning?
5. If you were in the curriculum advisor team, what would you change or add about eLearning?
6. Did you receive any training about eLearning?
7. How long was the training?
8. Was the training sufficient enough to give you more information about eLearning implementation?
9. What are the challenges that you encounter during eLearning implementation?

10. How do you manage those challenges?
11. What do you think the government should do to help schools to overcome eLearning implementations challenges?

SECTION C

DOCUMENT ANALYSIS

Document analysis is another data collection method that will be employed for the study. Both formal and informal documents related to eLearning implementation was analysed.

Informal documents related to eLearning

- Diaries

Formal documents related to eLearning

- Memorandum from the Department of Education
- School minutes and agendas of staff and parents meetings
- News letters
- Management plans

Once more thank you for being part of this interview

Interviewer`s signature

……

Yours faithfully

Ramatsimele Conny Kupa

Signature  ……Appendix E: Concern form for participants

CONSENT TO PARTICIPANTS IN THE RESEARCH STUDY

I ……. confirmed that the researcher has explained the aim and procedure of the research to me. I have read and understood the interview guide questions and I was able to ask questions for clarity. I understand that my participation is voluntary I am free to withdraw whenever I am feeling uncomfortable without any penalty.

I am aware that the findings of the study will be published and that my participation will remain anonymous and that there is no funds that participants will receive from the researcher.

Participant Name & Surname (please print)

…….

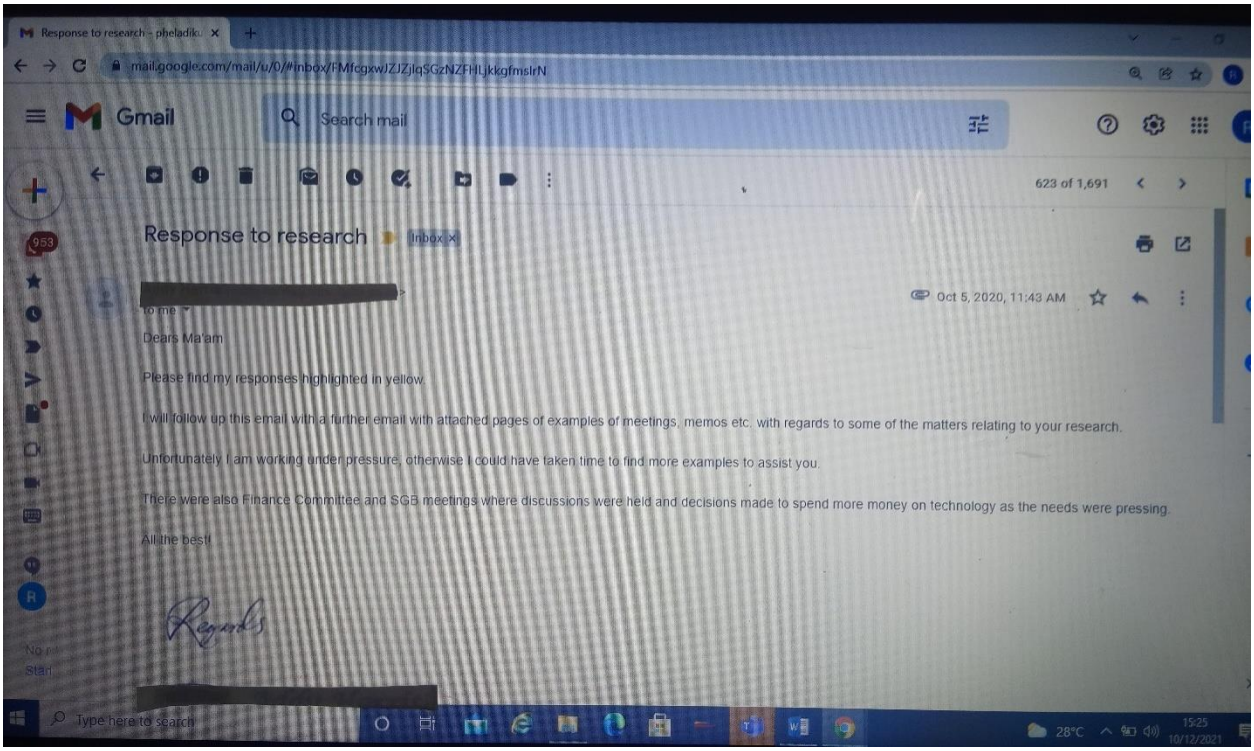
Participant signature ……..

Researcher`s Name & Surname

Ramatsimele Conny Kupa

Researcher`s signature:  …….

Appendix F: RESPONSE FROM PARTICIPANT



Appendix G: DECLARATION OF PROFESSIONAL EDIT

APPENDIX: EDITING DECLARATION

ZENEDIT
professional services

05 Gwai Place,
10 Kudu Heights
Faerie Glen,
PTA, SA

29 November 2021

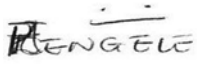
DECLARATION OF PROFESSIONAL EDIT

I declare that I have edited and proofread the Masters in Educational Management and Leadership Dissertation entitled: **CHALLENGES AND SUCCESSES OF IMPLEMENTING E-LEARNING IN ORDINARY PRIMARY SCHOOLS IN DISTRICT 4, TSHWANE SOUTH by Ms RC Kupa.**

My involvement was restricted to language editing: contextual spelling, grammar, punctuation, unclear antecedent, wordiness, vocabulary enhancement, sentence structure and style, proofreading, sentence completeness, sentence rewriting, consistency, referencing style, editing of headings and captions. I did not do structural re-writing of the content. Kindly note that the manuscript was not formatted as per agreement with the client.

No responsibility is taken for any occurrences of plagiarism, which may not be obvious to the editor. The client is responsible for ensuring that all sources are listed in the reference list/bibliography. The editor is not accountable for any changes made to this document by the author or any other party subsequent to my edit. The client is responsible for the quality and accuracy of the final submission/publication.

Sincerely,



Appendix H: TURNITIN

Turnitin Match Overview – R C Kupa