The Attitude of School Management Team Members towards using technology in the Primary Schools of the North-West Province

By

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19 JUNE 2025

Supervisors' Declarations

As the candidate's supervisor, I agree with the submission of this dissertation…..

Prof. S.K. Ndlovu (Supervisor)

Personal Declaration

I, Emily Kholofelo Ramakgasha (48334847), declare that:

The research reported in this dissertation, except where otherwise indicated, is my original work

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Ramakgasha E.K

Emily Kholofelo Ramakgasha

20. June. 2025

Date:

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Dedication

This study is dedicated to the North-West Department of Education; my late parents, Solomon Ramakgasha and Gladys Ramakgasha;, my supporter Mmakeletjie; my sisters, Mokgadi, Nkekolo and Magadima; my brothers Modumedi and Itumeleng; my uncle Mabuku Lesley; and all my aunts as well as all my nieces and nephews.

Abstract

In this study, the attitude of school management team members towards using technology in the primary schools of the North-West Province was explored. The objectives of this study was to capacitate the SMT to use technology in school management and to ensure that training takes place continuously in order to realise the vision, mission, and objectives of primary schools. Tape recording devise was used as an instrument of this qualitative research. The study employed theory of planned behaviour and the target group in the study school based stakeholders. Presently, the study observes that the educator as an individual and the school as a collective are in dire need for the implementation of ICT in schools. In this study 16 participants who shared their views on the attitudes towards the use of technology in managing the school were purposively sampled. Results showed that the use of technology in day-to-day management of schools is effective. The SMTs will be able to share ideas even when they are not together using technology to work in separate spaces. Based on these findings, the study recommends the use of technology in management as the new method that saves time and reduces a much work for management as they are able to save and share the work such as ATPs (annual teaching plans) and discuss school matters remotely. This study further recommends that a study should be undertaken, to establish whether the impact of technology use in primary schools is the same as that of high schools.

Keywords: Management, Effectiveness, Team, Technology, Data

Declaration by Editor

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TO WHOM IT MAY CONCERN

This is to confirm that I, Phumzile Prudent Masala, have language edited the dissertation titled:

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I am satisfied with the quality of work in terms of style, grammar and spelling. Suggestions for appropriate corrections have been made to the student. The final printing and layout REMAINS the responsibility of the student.

Dr PP Masala

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CHAPTER ONE

ORIENTATION TO THE STUDY

1.1 Introduction and background

In society today, the school community forms part of the technologically driven world (Hongxia and Xingtai, 2021). As a result, modern learners from the community believe that the use of technology to learn leads to success, that is, it must be user-friendly. The study conducted by Nagasubramani and Raja (2018) has shown that the 21st century is the era of technology and schools face an enormous challenge of the rapid expansion of knowledge where modern technology necessitates learning how to use technological devices such as computers, projectors, and social platforms.

Furthermore, Kyndt, Beausaert and Zitter (2022) have shown that the use of digital technology in learning has a variety of distinct yet related characteristics; for instance, it requires individual expertise as well as purpose for use, and evolvement. Hence, teachers claim that they are unprepared for the integration of modern technology into the teaching and learning environment.

As a new member of the school management team (SMT), the researcher realised that there is a lack of interest in using technology in the school. Due to daily interaction with colleagues, the researcher realised that the school management team is resistant to change which affects their duties. Their attitude towards change aroused interest in the researcher to investigate the nature of the problem.

Furthermore, the researcher conducted the study in the Moses Kotane Sub-District located in the North-West province. The said sub-district has 210 primary schools which range from quintiles 1 to 4. The South African schooling system uses the socio-economic status of the surrounding area of the school to classify the schools into five the quintiles (Caps 123, 2023). The socio-economic status of a school is determined by measuring the average income, unemployment rates, and general literacy level in the geographical area of the school (Ogbonnya and Awuah, 2019). Furthermore, Ogbonnya and Awuah (2019:10) citing Hall and Geese (2008) indicated that the

schools in the most economically disadvantaged (poorest) geographical areas are categorised as Quintile 1 schools and those in the most economically advantaged geographical areas (wealthiest) as Quintile 5. Schools in Quintiles 1 to 3 are non-fee-paying schools and receive more funding per learner from the government than schools in quintiles 4 and 5. The latter are fee-paying schools, on the assumption that parents can afford to pay fees and require less governmental support than schools in lower quintiles.

The four schools selected by the researcher were designated quintiles 2 and 4 because the researcher sought to determine whether there were differences in the attitudes of SMTs in the rural schools compared with those in the urban areas.

1.2 The rationale of the study

Previous studies conducted by Roewe (2020) have shown that modern technology is at the forefront of learning and teaching support materials, allowing classes to take place anywhere and at any time. This was welcomed and user-friendly for the schools in Chicago, where ICT is widely used and old teaching and learning methods have given way to modern ones, which necessitated the participation of all the stakeholders, including the learners who are the generation that is most adept at using technology. In addition, the question is: What measures and mechanisms can be employed to assist them in coping with the use of modern technology at school to make their work more effective?

The researcher realised that the SMT could promote the usage of technology in schools by using gadgets to enhance their work, if only they were not reluctant to change. Technology could be used in the following manner:

- Facilitate effective communication.
- Emails should be used to submit question papers for moderation; this would not only eliminate paperwork but also facilitate editing and correcting the tasks.
- Announcements made to staff should be made electronically, not via a message or communication book.

- Schools should change to remote learning and teaching using technology. Communication with various stakeholders becomes effective and saves time as messages are received instantly.
- Administration and safe-keeping of learner and teacher personal and academic information.
- Devices could be used to protect, save information, and report results for the entire school community.

1.3 Statement of the problem

The widespread application of technology in the field of education brings new opportunities for innovation in teaching and learning methods where technology is the main tool (Hongxia and Xingtai, 2021) while Adams, Cheah, Thien, and Yusoff (2021) state that challenges in the use of technology are apparent in the lack of competency of the teachers and the unavailability of resources at schools. The researcher realised that in the current period of transformation which prioritises the use of technology in schools, the aforesaid would limit opportunities for innovation. The study therefore investigated the attitudes and competencies of the ability of SMTs to use information and communication technology (ICT) to effectively manage their daily work.

1.4 The main research question

The main research question that arose from the problem statement is:

What are the attitudes of school management team members towards using technology in the primary schools of the North-West Province?

1.4.1 Sub questions

More specifically, this study sought to find answers to the following research questions:

a) What are the attitudes of the school management teams towards the use of technology in school management?
b) What are the attitudes of the school management team toward the provision of technology in schools?

1.5 Aim of the study

To explore the attitudes of school management teams towards using technology in managing primary schools.

1.5.1 Objectives of the study.

- "To ascertain the attitudes of the school management teams towards the use of technology in school management.
- To ascertain the attitudes of the school management team towards the provision of technology in schools.

1.6 Research methodology and design

To generate data for the study, the researcher suggested the following approaches and methods to answer the research questions. A plan for participant sampling, data collection and interpretation, and data analysis and interpretation follows.

A research design is a plan or research project where a researcher has to consider issues such as how to choose a research project, how to plan it, how to conduct a literature search and review, and how to ensure that the project is practicable. While the research methodology involves different styles and approaches to research, these must be separated from the various data collection instruments (Cohen, Manion and Morrison, 2018).

1.6.1 Research approaches

According to Cohen et al. (2018), there are various approaches to research, for example, the phenomenology, which is a sound theoretical position to accept direct experience at face value and regard the experience phenomena as dictating behaviour. Ethnomethodology focuses on the sphere of daily life while investigating the situations, ideas, and emotions of people. It is focused on how people perceive the world that surrounds them daily. The ethnographic approach emphasises culture and society. It aims to present an analytical and vivid reconstruction of the groups or civilisations under study. Auto-ethnography is a method that aims to methodically describe and analyse individual experiences in order to comprehend cultural experiences. The sociolinguistic approach focuses on text and talking. Qualitative

research yields an in-depth, intricate, and detailed understanding of meanings, actions, observable and non-observable phenomena, attitudes, and behaviour. Furthermore, it gives a voice to the participants and probes issues that lie beneath the surface of present behaviour and actions.

As the research seeks to investigate, the researcher chose to generate data using a qualitative approach. Hence, this is a potential approach to follow to gain an in-depth understanding of the phenomenon. With this approach, certain elements regarding the aims of the study were already evident. The SMT formed the focus group of the inquiry, from whom the data were garnered to explore the effect that modern technology exerts on their day-to-day school management duties. This SMT was limited to those mangers in primary schools.

Considering the above-mentioned literature, Valente de Andrade and Viega (2021) found that a qualitative method is the only data collection instrument that must follow a set of guidelines related to its preparation, institution, and accessibility. The literature review revealed that the choice of the data collection tool should consider the aims, as well as the population and the background of the research milieu.

1.6.2 Population and sampling

The term population refers to people who live in a specific location or community, whereas sampling refers to selecting individuals to represent a larger group (Cohen, Manion and Morrison, 2018).

According to Cohen, Manion, and Morrison (2018), there are different types of sampling. Homogenous sampling focuses on groups with similar characteristics. Stratified purposeful sampling is used to identify sub-groups and strata. Theoretical sampling is used in grounded theory. Participants are selected for their ability to contribute to the developing or emergent theory. Confirming or disconfirming cases used to find exceptions to the rule may lead to the modification of the rule. Random purposeful sampling is adopted when the potential sample size is too large and a small sub-sample can be used, which still maintains some generalisations for all those who meet the stated criteria for membership of the group or class under study. Opportunistic sampling takes advantage of unanticipated events, ideas, and issues.

A random, purposeful sampling method was employed by the researcher because they investigated only a relevant and exact subject based on the SMTs in primary schools. As a result, the sample comprised only the SMT participants; not the entire school community. The sample size consisted of four SMT members per school, which amounted to 16 participants who shared their views on the attitudes towards the use of modern technology in managing the school.

The sample was selected by drawing from a hat shuffled papers on which the words “I am in” or “I am out” were written. The words were concealed. Four participants per school were selected depending on which paper the SMT picked. The four SMT members whose papers the researcher has in safe-keeping, formed part of the sample, and the principal and deputy principal automatically participated in the study.

1.6.3 Instrumentation and data collection techniques.

Interviews were conducted and used as an instrument for data collection (Cohen et al., 2018). As the main aim of this research is to explore how modern technology enhances school management teams to better manage their work, it required the researcher to dig deep to understand the attitudes of people towards change. The primary data was utilised to garner in-depth information using clerical tools, namely interviews.

The advantage of using this tool was that participants would be granted the opportunity to fully express themselves because people tend to reveal more when they use the language they are familiar with in a setting in which they feel comfortable. In-depth interviews were conducted one-on-one and in groups using audio recordings.

The questions were structured to fit a purpose. The nature of the questions helped to explore the concerns, feelings, experiences, beliefs, and expectations of the SMTs. In addition, the researcher wished to explore how to address the situation, or their recommendations to solve the problem at hand. Open-ended questions were used to garner further information and allow the participants to express themselves fully. The interviews were conducted in two phases, that is, with individuals and in groups. A tape recorder was used to record the sessions and later to analyse the data collected.

1.7 Data analysis and interpretation

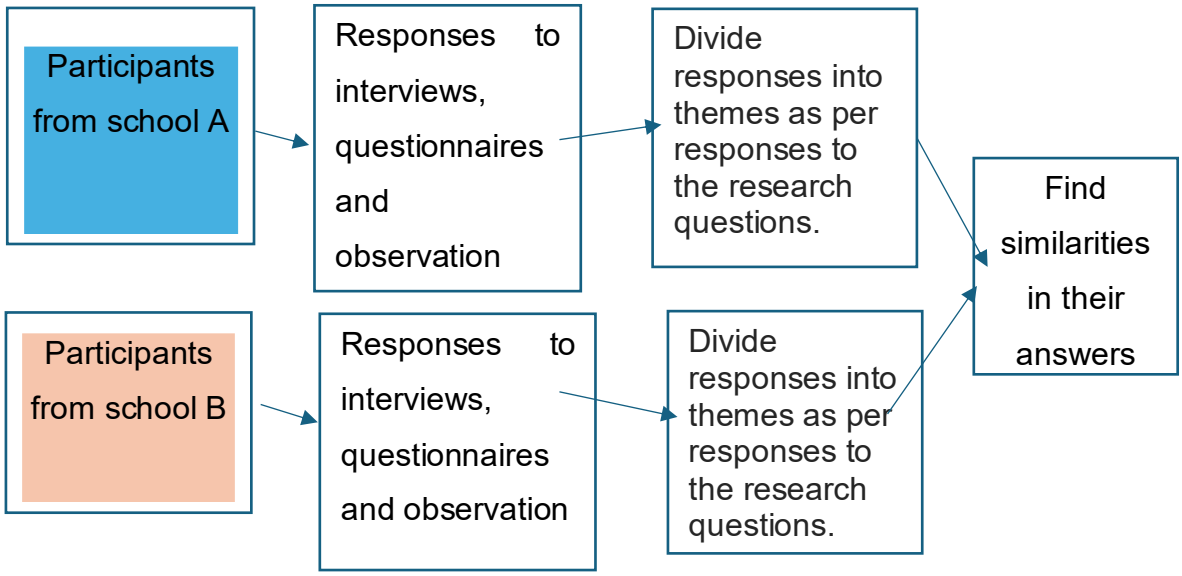
Cohen et al. (2018) state that data analysis and interpretation turn data into findings. It includes, among other things, organising, describing, understanding, accounting for, and explaining data; making sense of data in terms of the participants' definitions of the situation; and noting patterns, themes, categories, and regulatory aspects.

The data were derived from the interviews in the following manner:

- Prepare and organise the data.
- Data were organised into formats, document folders, and audio folders. A written summary or transcription of the audio recordings was also filed.
- Describe and present the data.
    - Data were described and presented using the person method, where all of the responses of each participant were presented and then analysed, before moving on to the next individual. This preserved the coherence and integrity of the responses of each individual and enabled a whole picture of that person to emerge. A table was used to describe and present the data showing the responses to the data gathering instrument. The responses of the participants were tabulated under appropriate headings and the similarities and linkages were indicated.
- Analyse the data.
- Exploring and making meaning of the data involved data assembly and re-assembly as well as combining them in new ways to create a meaningful account. As the researcher used a qualitative approach to collect data, a pattern emerged from the responses of the SMTs, which were analysed in line with answering the research question, objectives, the data collection method, and the techniques employed, namely the interviews which were recorded. This helped to identify the linkages, agreements, and relationships between the data and the literature review.
- Interpret the data.
- Draw a conclusion.

- Repor the findings.

Figure 1.1 The data analysis plan



1.8. Credibility and dependability

Credibility in qualitative research refers to the internal consistency and rigour of the investigation (Lincoln 2004). Credibility relates to the fit between the participants' responses and views and the researchers' interpretation, and how this is represented authentically and credibly (Neergaard & Ulhoi 2007; Bryman 2012). Sufficient information should be given to ensure that the study is true and trustworthy. There should be stability and consistency in interpreting the data without bias.

Dependability refers to the degree of consistency, reliability, and stability of findings and interpretations throughout the research process (Miles, 2014). Is linked to reliability and measures the extent to which a study could be repeated by a separate researcher and reveal the same findings. Involves participants' evaluation of the findings, interpretation, and recommendations of the study based on the data received from participants.

1.9 Ethical considerations in research methods

The ethical approval certificate was obtained from UNISA. Furthermore, permission was sought from the Department of Education to conduct research in a sample of schools within the Moses Kotane Sub District. The level of attention to ethical conduct has both increased and broadened in response to the greater expectation of society

regarding accountability. At many educational institutions, collecting data from human participants for research purposes without ethical approval would place the researcher in breach of the Code of Conduct established by the institution. Therefore, researchers are required to have evidence of the ethics approval. As ethics are principles of conduct governing individuals or groups in research, these principles were adhered to (Fleming and Zegwaard, 2018).

The real names of sampled schools and the participants were not used but rather, pseudonyms were used, as indicated in the ethical certificate application.

1.10 Limitations and delimitations

1.10.1 Limitations

The limitations of the study refer to the issues and difficulties that a researcher has to deal with during the investigation and which may exert an impact on the results and their interpretation. These limitations are variables that are beyond the control of the researcher (Akanle, Ademuson and Shittu, 2020).

In this study, the following limitations emerged.

There were access and time constraints. This arose as a result of the participants not being available at all or only at certain times. Some participants were not available at the time of the appointment which affected the data collection plans.

Possible bias of the researcher needed to be taken into account. As the participants were sampled personally and in a targeted manner, the researcher was able to gain full knowledge of their leadership, their administration and the use of technology to manage the school. The researcher used a qualitative method and a literature review to try to avoid being biased and to present a meaningful study.

1.10.2 Delimitation

Moreover, in this study, the following delimitation emerged.

The researcher opted to focus only on the sampled SMT, leaving out other SMT members. The study was limited to only SMTs of certain primary schools. The study

did not cover knowledge of the content taught but rather the use of technology to manage the schools.

1.11. Definition of key concepts

1.11.1. Management

According to White (2020), management entails not only planning, organising, directing, and controlling but also working with financial and physical resources to achieve organisational goals.

1.11.2 Effectiveness

The term "effectiveness" refers to the quantity of given knowledge that is operationally learned (Ghory and Ghafory 2021). The Cambridge dictionary (2019) defines effectiveness as the result of a particular influence or, something that happens because of something else.

1.11.3 Team

A team consists of a small number of people with complementary skills who are committed to a common purpose, performance goal, and approach for which they hold themselves mutually accountable (Barbour & Widdowson 2021).

1.11.4 Technology

According to Harkness and Williams **(**2019), technology is a piece of hardware employed or fashioned to serve a particular purpose. Kakhkhorov and Rasulova (2020) state that technology is a field of knowledge related to a specific system of guidance.

1.11.5 Modern technology

Modern technology is the advancement of old technology with new additions and modifications (https://www.techquintal.com/).

1.11.6. Data

Essential components of any research, whether empirical or theoretical (Shyama

2020).

1.12 Chapter outline

This research comprises five chapters.

Chapter 1: In this chapter, the researcher has given a clear outline of the study. This chapter consists of the introduction, background of the study, the rationale, statement of the problem, research questions, aims of the study, objectives of the study, definition of terms, a brief literature review, the plan of the study, and the conclusion of the chapter.

Chapter 2: Review of Literature

A literature review and the theoretical background of the study are furnished in this chapter.

Chapter 3: Methodology

This consisted of the research design and methodology where data collection, sampling, a plan of the organisation of the study and the data collection process were detailed. The research methodology commenced immediately after the completion of Chapter 2 (literature review) and obtaining approval from the Provincial Department of Education and an ethics certificate from UNISA to conduct research. Sampling and data collection commenced.

Chapter 4: Data Presentation, Interpretation, and Analysis

This chapter deals with data analysis and the interpretation thereof where the research questions were answered.

Chapter: 5: This chapter outlines the results, recommendations, summary, and conclusion of the study. The dissertation was submitted to Turnitin on 1/09/2024.

1.13 Conclusion

This chapter has furnished a structure for the investigation of attitudes of SMTs towards the use of technology in primary schools, giving voice to primary school SMTs in the North-West province. The introduction and background to the study were discussed. The discussion was placed within the context of South African challenges regarding technology in primary schools. The key concepts in this study were highlighted and the research questions were presented. In the next chapter.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The research study process and structure were outlined in Chapter 1. The problem statement, background to the study, research questions, aim, and objectives as well as the clarification of concepts, were discussed in Chapter 1. An outline of the dissertation was furnished.

This chapter discusses the theoretical framework and literature review of this study. The literature in this chapter entails information under the following sub-topics: attitudes towards technology, *defining attitude towards change, establishing what the use of technology in schools involves, and attitudes towards the use of technology by SMTs. The researcher elaborates on the insights gained from the literature review.*

2.2 Literature review

Relevant literature was consulted to glean information in line with the research objective which is to explicate the attitude of SMTs towards the use of technology in primary schools. Caena and Redecker (2019) claim that by 2019, widespread changes to education systems had not yet kept pace with the digital revolution. The effects of employing technology in schools signal the need to reassess how schools use technology to operate and supervise them. This underlines the need for modern pedagogies that employ technologies to address 21st-century challenges, promote peer learning across all school systems globally, and accelerate the development of crucial transversal competencies, namely problem solving, cooperation, and creativity. These pedagogies ought to be based on teachers utilising their innate motivation and fusing their understanding of system change, pedagogy, and technology.

It is the duty of the teacher to create conditions and opportunities for in-depth learning experiences that can reveal and enhance the abilities of both teachers and students. For such a meaningful environment to flourish, teachers must be excellent lifelong learners, both individually and collectively. It is crucial to build their pedagogical capacity in relation to the pervasive, enabling role of technologies in the new model of

pedagogies. This was evident in the studies conducted where the innate motivation theory and change management theory were employed.

In a study conducted by Heyder (2020), the innate motivation theory was used to analyse the attitudes of teachers towards achievement, including whether they believe that primary school mathematics is a subject that calls for innate talent and how this perception relates to intrinsic motivation. The overall results of the said study, which involved a sample of German students as well as their educators, revealed that teachers' beliefs that success is based on natural talent may be a significant barrier to fostering an engaging environment.

Using change management theory, Souad (2022) investigated and analysed the concepts of change management in institutions and clarified the function and significance of change management in establishing a new organisational culture that addressed both internal and external challenges. In other words, it is the process of enhancing or developing an organisation so that it differs from its present state and is better able to meet its objectives. The outcome showed that there is a statistically significant impact of the change in the organisational structure on the establishment of a new organisational culture that addressed internal and external pressures caused by competition within individuals.

Van Twillert, Kreijns, Vermeulen et al. (2020) refer to technology called Web 2.0. This is an application that includes blogs, Wiki internet sites, and, in particular, social networking. It possesses the potential to change how schools run, how they teach, and how students learn. It also supports social interaction and fosters participation. Despite social pressure and obvious educational benefits, a discrepancy still exists between the limited usage of modern technology in education and its promise and possibilities, particularly with regard to Web 2.0 technology. Programs for teacher development and sizeable infrastructure investments have been proven effective in boosting the use of Web 2.0 technologies and contemporary technology in schools. Additionally, it indicates that schools employ technology more for content delivery than for improving day-to-day management. More knowledge to explain the variations in the desire of schools to use technology is required in order to create effective interventions to promote the integration of Web 2.0 technology in schools. The

Reasoned Action Approach (RAA) is a hypothesis that helps predict the intention of students to use technology in the classroom. It is based on the idea that three proximal variables, namely attitude, perceived norms, and perceived behavioural control directly explain an intention of a person to engage in a certain activity. Understanding the salient beliefs of teachers who intend to incorporate technology into education is essential in order to understand the aims of SMTs, as these views have a direct impact on attitudes, perceived behaviours, and behaviour control.

Semerci and Aydin (2018) clarify that recent advances in information and communication technologies (ICT) have exerted a substantial impact on education, just as they have on many other facets of everyday life. The teaching and learning processes as well as school curricula have all been visibly impacted by these advancements for instructors, students, and schools. In keeping with these advancements, many developed and developing nations have recently viewed the use of ICT in education as a significant lever for achieving educational change. Semerci and Aydin (2018) analysed the opinions of teachers and the use of ICT in education among the participants in their study to determine whether their attitudes varied considerably based on their gender, age, teaching experience, ICT training, and ICT skills. The participants were teachers who were employed throughout the academic year 2016–2017 in various Ankara schools. According to their research findings, the teachers had a very positive attitude towards using ICT in their classes but there was no noticeable difference in their readiness to utilise ICT when considering their gender, age, teaching experience, ICT experience, skills, or training. However, because of their ICT training, experience and talents, the individuals held quite different negative attitudes (ICT anxiety) toward ICT use in education.

The researcher shares similar views as those of the above scholars. The adaptation and implementation of ICT in schools leans heavily on the teachers who are to use it, and they have a strong desire to learn and be developed collectively. The availability of resources is also an important aspect which should not be overlooked as one cannot develop in an environment that is not conducive to development.

2.3 Theoretical framework

Attitudes towards the use of technology were examined in this study; hence, a

theoretical framework that relates to the adoption of the new norm is required. The attitudes of SMTs towards the adoption or use of technology has been theoretically examined in this study by employing the theory of planned behaviour. According to the said theory (Sussman, 2019), attitudes toward behaviour, subjective norms that interpret behaviour, and perceived control over behaviour are the three fundamental components that predict behaviour. This theory was found to be relevant and applicable in this study as it assumes that each of the three fundamental elements influences intentions in one direction only. It is suggested that the theory of planned conduct be changed to account for reciprocal causal links in the light of this showing reverse causal relationships from intentions to the fundamental component.

Ajzen (2020) argues that the “theory of planned behaviour” (TPB) has been used successfully to explain and predict behaviour in a variety of behavioural domains, including safer sex, drug use, recycling, consumer behaviour, technology uptake, and privacy protection, to mention a few. The target, the action, the context, and the time frame of the behaviour of interest are all explicitly defined at the beginning of the TPB. Each of these components can be defined in a variety of ways, either specifically or broadly. Once the behaviour has been identified, all the other theoretical concepts must, however, match it in all four of the aspects.

The principle of compatibility could be illustrated by the following example. For instance, in order to examine technological adoption, an investigator may characterise the behaviour of interest as "the installation (activity) of a webcam monitor at home (the target) in the following three months (the time frame)”. Alternatively, if the researcher is more interested in the adoption of technology as a whole, they might characterise the behaviour as "purchasing (action) an internet-connected gadget (target) in the next three months" (time). All TPB constructs must be defined and measured in accordance with the specific behavioural definition that was chosen.

Proximal determinants of behaviour are explained forthwith. The immediate antecedent of behaviour in the TPB is the intention to perform the behaviour in question; the stronger the intention, the more likely it is that the behaviour will follow. To return to the above example, we could assess the intention to buy an internet-connected device in the next three months and determine whether participants did or

did not implement their intentions. However, unforeseen circumstances, a lack of time, money, or resources, a lack of the necessary skills, as well as a host of other issues, may hinder people from following through on their objectives. The extent to which people actually have control over their conduct depends on their capacity to reach beyond such obstacles as well as the presence of helpful elements such as prior knowledge and support from others. In light of these factors, the TPB hypothesises that behavioural control, to a certain extent, moderates the impact of intention on behaviour: The more control an actor has over their behaviour, the more probable it is that their goal will come to pass.

The determinants of intention are thus important factors to consider. According to the TPB, three variables influence a person's behaviour intentions: their attitude toward a behaviour, their perception of behavioural control, and their subjective norm. A pleasant attitude and a supporting subjective norm, according to the present formulation of the theory, offer the incentive to engage in the activity but a concrete intention to do so is created only when perceived control over the behaviour is strong enough.

The usage of TPB theory has revealed further elements such as feedback effects. When a behaviour is performed, information about the actual (rather than anticipated) results, experiences, responses from important people, as well as facilitating or impeding elements encountered by the actor, is revealed. This input would probably alter some of the behavioural, normative, and controlling beliefs, which will affect how a person would act in the future. For instance, a woman may first think that exercising before work would be energising, that her supervisor and co-workers would support her decision, and that she could be at the gym in time to make it to work on time. On her first attempts, however, she finds that heavy rush hour traffic makes it much more difficult for her to go to the gym, that working out there makes her feel exhausted and dejected rather than energised, and that neither her co-workers nor her boss exhibit support for her behaviour. She might give up on her purpose to exercise as a result of these shifts in her behavioural, normative, and control beliefs, which could also lead to a decrease in her sense of behavioural control.

The researcher is of the opinion that the SMTs, as leaders, should adapt and have a

positive attitude towards technology to be able to implement it in their management duties. Arguably, an application of TPB in this study may assist in proposing guidelines to SMTs regarding their attitudes towards technology use in primary schools in the modern era.

According to Ajzen (2020), TPB is underpinned by particular notions that indicate attitude towards the behaviour. The TPB relies on an expectancy-value formulation to describe the formation of an attitude towards a behaviour. Specifically, attitude towards the behaviour is assumed to be a function of readily accessible beliefs regarding the likely consequences of the behaviour, termed behavioural beliefs. A behavioural belief is a person's subjective probability that performing a behaviour of interest will lead to a certain outcome or provide a certain experience.

A subjective norm could influence behaviour. Injunctive and descriptive normative beliefs can be distinguished from one another. The anticipation or subjective likelihood that a particular referent individual or group approves or disapproves of engaging in the action in question is known as an injunctive normative view. On the other hand, descriptive normative beliefs are opinions on whether significant others actually engage in the behaviour. The perceived overall social pressure to follow the behaviour or subjective standard is influenced by both views.

Perceived behavioural control is considered to be based on available control beliefs, just as attitudes are assumed to be based on accessible behavioural beliefs and subjective norms on accessible normative beliefs. These beliefs are concerned with the existence of elements that may help or hinder behavioural performance.

Since this research was underpinned by TPB, the assumptions of the researcher are that the school management teams may believe that using technology (the behaviour) can remove the traditional method of running the school. Thus, the question to posit regarding the attitude towards technology use by the SMTs is whether it is a genuine collective barrier or a social pressure because other colleagues do not want to assist those with barriers. The attitude of SMTs towards technology may be a result of factors that include required skills and abilities; availability or lack of time, money, and other resources; cooperation by other members; and so forth.

The TPB can be employed to examine focused groups (such as SMTs of primary schools) in order to elicit accessible behavioural, normative, and control beliefs, which makes it appropriate for this study. A free-response style is the most effective way to elicit accessible beliefs. Participants are asked to take a few minutes to describe any control factors, normative referents, and expected outcomes and experiences related to the activity of interest. In the TPB, the predominant factors of attitude toward the behaviour, subjective norm, and perceived behavioural control are supposed to be the beliefs that immediately and spontaneously spring to mind (Ajzen. 2020).

2.3.1The concept of attitude towards change

Sokal, Trudel and Babb (2020) stated that understanding the nature of teachers' attitudes toward change is essential to understanding their intentions to carry out desired behaviours. Despite these challenges, some consensus has developed in defining attitudes toward change and its component, theory of planned behaviour, which was used as an initiative, as one is likely to discontinue one behaviour when they begin the next. Some of the main components of the theory are beliefs, attitudes, and intention for behaviour.

Sokal, Trudel and Babb (2020) found that, firstly, the beliefs of the teachers must be addressed. Beliefs refer to whether individuals believe in the reasons for the change in behaviour, and whether they perceive that the new behaviour will result in a better state than the current state. People who do not believe in the reasons for the new behaviour or are suspicious of them are more likely to resist them. In the case of the COVID-19 pandemic, there were varied cognitive responses to moving to online teaching. Firstly, it appears that reactance played a role because while some teachers thought that this was a rational choice to preserve both learning and safety, others thought that online lessons exposed injustices and placed an unnecessary burden on teachers and parents. Secondly, the feelings of the teachers about the change must be addressed. While teachers may understand the need for remote teaching and learning on a cognitive level, they might resist it emotionally, based on factors such as their endowment to face-to-face teaching or feelings of concern that they are less effective teachers when teaching remotely, the distance of one's comfort zone was evident as lack of teaching efficacy in the new context may cause teachers to feel negative about the changes demanded of them. While teachers may have initial

decreases in efficacy in light of the new demands, their efficacy may recover over time as they learn to adapt to the new situation or as they take advantage of external resources available to them. Of particular concern is the feelings of teachers regarding the use of technology as the main mode of teaching. Given one of the most significant changes in teaching practice provoked by the pandemic is the move to online teaching. Thus, attention to teachers' attitude toward technology is an important factor to consider when examining their feelings.

2.3.2 What does the use of technology in schools involve?

A study conducted by Spiteri and Rundgren (2020) states that technology is widely available in schools, according to a synthesis of studies on its use, using qualitative, quantitative, and mixed techniques. However, the findings show that it is not beneficial for boosting academic achievement of students. Teachers must recognise the potential of digital technology and make effective use of it in their daily practices. However, in order for instructors to become proficient in utilising technology for teaching and learning, they require training and standards. To make suggestions for better training that would eventually result in a more directed and appropriate use of technology in education, they set out to determine factors that would influence primary teachers to use digital technology in their teaching practices. Furthermore, their studies revealed four influential aspects, including instructors' knowledge, attitudes, and skills, all of which are influenced by and exert an impact on school culture. These conclusions led to recommendations for training teachers to use certain technology as well as ideas for additional research. Since there was a mutual interaction between the school culture and the instructor, the teacher's knowledge, attitudes, and skills were influenced by the school culture. Technology integration needed a change in school culture in elementary education, technologically savvy leaders, technical support, and motivation. Primary school teachers were able to collaborate, reflect on the process, and disseminate the new information because a school culture valued and supported effective teacher training. It was suggested that similar learning opportunities for the teachers in primary schools must be offered. Working on local digital initiatives helped teachers to learn new skills and innovate, especially when sufficient resources were available, and feedback was given during workshops on lesson planning and teacher training. Additionally, the culture of the school exerted an

impact on how the teachers felt about integrating technology. The results showed that, in order to integrate technology into the culture of a primary school, leaders who were digitally savvy, technical assistance and motivation were needed.

While Zhang, Wang, and Chuanyi-Wang (2020) do not dispute the findings of their study on teachers' use of technology, it is clear that during the COVID-19 outbreak, the Chinese government launched an emergency policy initiative called "Suspending Classes Without Stopping Learning" to continue teaching activities while schools nationwide were closed in order to contain the virus. The consequences for educational equity are unclear, and there was ambiguity and a dispute over what to teach, how to teach, the workload of instructors and students, the teaching environment, and other factors. The government should support the development of the educational information superhighway, provide teachers and students with standardised home-based teaching and learning tools, conduct online teacher training, develop massive online education, and support academic research into online education to help students with online learning difficulties.

According to Van Twillert, Kreijns, Vermeulen et al. (2020), "attitude" refers to a person's positive or negative assessment of the likely results of engaging in a certain behaviour. The reasoned action approach (RAA) assumes that the behaviour of people is influenced by the underlying assumptions and knowledge they have about either intentional and reasoned activity or instinctive, impulsive behaviour. Thus, the majority of understandings about how people think and the factors that influence their decisions to engage in certain behaviours or not can be learned at the level of fundamental beliefs. For instance, teachers could realise that their proficiency with Web 2.0 technology is less than they had anticipated.

Additionally, Spiteri and Rundgren (2020) emphasised that there was a substantial relationship between school culture and the attitudes of teachers toward the use of digital technology in primary education. These relationships included the confidence, beliefs, and self-efficacy of the instructors. Furthermore, it was evident in the findings that elementary school teachers first lacked confidence while using technology to educate but as they saw and collaborated with their colleagues, their sense of self-efficacy gradually increased. Initially, technology was seen to be a tool to assist

teachers in delivering a better lesson but, with time, the educational progress of the students was also taken into account. Expanded instruction for reserve teachers encouraged favourable shifts in their attitudes and actions regarding integrating technology. It was observed that inexperienced primary instructors experienced device conflicts because they were still learning how to integrate technology into their teaching practices, demonstrating that they lacked expertise in this area. In addition, the teachers considered digital technologies to be ineffective tools that undermined their authority and caused distractions in the classroom, most probably because of their attitudes toward their use.

Pens, paper, chalk, and chalkboards are gradually becoming obsolete as a result of the widespread use of modern technology. Students can now access educational information beyond the walls of the school, and they can learn outside of the traditional classroom setting by merely clicking a button. Traditional school visits happen only occasionally. Thus, South African schools have implemented ICT in classrooms, where teachers must adapt to the new norm as IT usage increases as an LSTM (Mahari, p. 20 of 20).

According to research carried out by Mishra, Gupta, and Shree (2020), certain challenges in implementing the change process have evolved in the educational system. These difficulties are related to new perspectives on online education and their technological complexity. As a result of the induced time, online teaching and learning have become a huge burden to manage, and stakeholders are not necessarily prepared to adapt to the rapid change in educational methodology since they lack the necessary technological know-how. As a result, to successfully implement educational transition (in this case, the switch from using traditional techniques to using technology), it is necessary to address the consequences of change. Long-term online connection has exposed numerous issues that schools face.

The authors mentioned above highlight the goals and value of using technology in education. The school management teams, according to the observations of the researcher, not only find the use of technology devices and their language peculiar, they are also unable to manage and administrate their work using the South African School Administration and Management System (SA-SSAMS), a product which the

government passed to better administer and manage the school community. It is free to all schools and is intended to assist schools with their own school administration and reporting. To enable effective and standardised policy implementation and reporting across all provinces, SA-SAMS offers a single electronic platform. Additionally, the school management teams, whose primary role it is to ensure that the teachers execute their primary mandate as expected by their employer, are not in accordance with those they are meant to represent.

2.4 Conclusion

In this chapter, the researcher reviewed academic literature to explain possible reasons for the attitude of SMTs towards the use of technology in schools. Firstly, the researcher learned that adapting to change is a process and it has factors that can lead to a positive or negative attitude towards the change. Adaptation includes factors such as social pressure, money, knowledge, skills, and time, to name a few. Secondly, the adaptation of the use of technology in managing schools can be viewed as a great opportunity for teachers to develop themselves and position themselves to lead or teach other teachers the skills. Thirdly, not much, if any, research has been undertaken specifically on attitudes of SMTs towards technology; only teachers have been the subjects of the research in this regard. The use of technology in schools changed drastically during COVID-19 to the extent that in some situations decisions were to be made with immediate effect without looking at the availability of resources and skills. The next chapter conceptualises the research design and methodology embraced in this thesis.

CHAPTER THREE

RESEARCH METHODOLOGY AND DESIGN

3.1. Introduction

According to the literature reviewed in the preceding chapter, accepting change is a process that can result in either a pleasant or unfavourable attitude toward the change. Thus, adaptation is influenced by a number of variables, including peer pressure, finances, knowledge, skills, age, and time, to mention a few. The use of technology in managing schools can also be considered an opportunity for teachers to grow professionally and prepare themselves to supervise or mentor other educators.

As mentioned earlier, the aim of this study is to identify the attitudes of School Management Team (SMT) members towards using technology in primary schools of the North-West Province. The present chapter presents the methodology that led the enquiry, the qualitative research design, population sample, instrumentation, data collection techniques and conclusion.

3.2. Research methodology and design

3.2.1 Research methodology

Research methodology is concerned with the methodological techniques a researcher employs when carrying out a study in order to guarantee precise findings that satisfy the goals and objectives of the research (Sileyew, 2019). According to the researcher, a research methodology includes all methods and procedures employed in conducting research. The methodology adopted for the study was qualitative research. According to Crossman (2020), qualitative research entails gathering and deriving meaning from non-numerical data in order to better comprehend the lived experiences of research participants. Qualitative research is useful for developing an in-depth understanding of a subject or for coming up with original research ideas (Bhandari, 2020). The goal in this study was to explore the lived experiences of SMTs regarding their attitudes towards the use of technology; thus, a qualitative methodology was appropriate.

3.2.2 Research design

A research design, according to Cohen and Manion (2018), is a planning process

where a researcher must take into account issues such as how to choose a research project, how to plan it, how to conduct a literature search and review, and how to make sure that the project is feasible. In addition, the procedures for gathering, analysing, interpreting, and reporting data in research projects are described as a study design (Boru, 2018).

According to the researcher, research design may be defined as the method by which the researcher will be able to conduct research logically, guaranteeing that the study will successfully address the research problem and include data analysis. As a consequence of the understanding of the researcher, the research methodologies advanced by Cohen and Manion (2018) were taken into consideration by the researcher as a foundation for this study since they clearly outlined the phases of the qualitative research process and because of their flexibility.

Further, with the employment of a qualitative approach, the studies of Van Wyk (2020) found that technology can improve and transform teaching in a manner that will benefit weaker children (inclusive education) and Mabuza (2019) found that the working environment for adult education teachers is not up to standard.

With reference to the studies conducted by the above-mentioned scholars, the qualitative approach was chosen as it helped to answer the main questions of this study and allowed the participants to express themselves regarding the conditions in which they find themselves. Table 3.1 outlines the qualitative research process.

Table 3.1. The qualitative research process

Research design	Qualitative in nature, in-depth and detailed
Data collection method	Interviews
Population and sampling method (participants)	The population for the study constitutes the school management team (SMT). The SMT includes the principal, the deputy principal and the

	departmental heads whose main responsibility is to support the school, make sure that high standards are upheld, and to monitor the efficient operation of the institution. Furthermore, the role of the SMT is to plan, organise, and monitor the implementation of curriculum activities (Mawela, van Wyk, Lebeloane and Mudau, 2021). To fulfil their responsibility, the SMTs need to have a positive attitude towards technology and a better understanding of its use.
Data analysis and interpretation	Data must be organised into formats, described and presented. The data were analysed and interpreted and the conclusion drawn after reporting the findings. Data were described and presented using the person method, where all the responses of a single participant were presented and analysed before moving on to the next individual. (Refer to tables 3.2 & 3.3).

3.3 Qualitative research

This study adopted an interpretive paradigm and a qualitative approach. Therefore, the research design was drawn collectively in order to seek proposed answers to the posed research questions.

3.3.1 Data collection methods and how they are used

As the main aim of this research was to explore the attitudes of the school management team towards the use of technology in managing primary schools, it required an in-depth investigation to understand the attitudes of people towards change.

In this study, the researcher used semi structured interviews to generate data. The

advantage of using interviews as a tool was that the participants were able to express themselves in full because people tend to reveal more when they use a familiar language in a setting in which they feel comfortable. In-depth one-on-one interviews were conducted and in groups. The interviews were audio recorded.

3.3.2 Interviews

The questions were structured to fit a purpose. The questions were formed in a manner that would allow the researcher to explore the concerns, feelings, experiences, beliefs, and expectations of the SMTs. These questions enabled the researcher to find out what could be done about the situation, or what recommendations should be made to solve the problem at hand. Open-ended questions were used to garner more information and allow the participants to express themselves fully. The interviews were conducted in phases, individually and in groups. A tape recorder was used to record the sessions for later transcription and analysis of the data collected.

3.3.4 Population and sampling method

The research focused on only the school management teams (SMTs) which included the school principals, deputy principals, and departmental heads. A purposeful and simple random sampling method was followed. Wang (2022) maintains that purposeful sampling centres on the idea that the researcher wants to learn, comprehend, and acquire insight; hence, they must choose a sample from which the most may be drawn. On the other hand, random sampling refers to every person in the population who has an equal probability of being chosen in a simple random sampling. The entire population should be included in the sampling frame. The sample was derived from the population of the primary schools in Moses Kotane Sub-District in the Kopano Circuit in the North-West Province. The Moses Kotane Sub-District has 17 primary schools. The researcher, however, focused on only four primary schools within the Kopano Circuit which consists of one principal, one deputy principal and four departmental heads per school.

These primary schools were selected because of their proximity. They are situated within the same complex of schools in which the researcher operates. Thus, the study was not time-consuming and less costly. Thus, the schools that were used for the sample for this study were chosen to represent schools from within quintiles 1 and 4.

The schools that were used as samples of this study fell into two categories in terms of school quintiles. All schools are categorised according to their size, population density, and location. Hence, the sample size consisted of four SMT members per school, which amounted to 16 participants who were interviewed to determine the attitudes towards the use of technology in the teaching and learning environment. There were four principals with one per primary school, four deputy principals with one per primary school, eight departmental heads with two per primary school.

The sample was selected as follows. The school principal and deputy principal automatically formed part of the study by virtue of being in the school. There were four departmental heads per school from which the researcher sampled only two per school because the principal and deputy automatically formed part of the study. In each school, the researcher gave the departmental heads four concealed papers in a hat. The words “I am in” were written on two of the papers and “I am out” was written on the other two. Each departmental head had to draw one paper. The departmental heads whose paper read “I am in” formed part of the study. In schools where there were more than four potential participants, they drew the tickets to randomly select the required number of participants. The researcher chose the schools in the North West Province, Bojanala District, in Moses Kotane Sub-District in Kopano circuit not only because they fell into the radius of the study area but also because the researcher understands how the schools function, they are situated in the circuit the researcher works in, and it was convenient in terms of costs and the time required to visit the schools to conduct the interviews.

3.3.5 Validation of the instrument

With purposive selection, the researcher conducted a trial run of an interview as the instrument used in this study. To validate the instruments (the interviews), two SMT members were selected from two different schools that were not part of the sample, and which were using the South African School and Administration Management System (SASAMS). This electronically integrated application is cost effective, user-friendly, and offers many varied uses and advantages to schools. These criteria ensured that the participants of the pilot study had the same resources the participants of the research study and therefore the results would be meaningful. The researcher conducted an open-ended interview with the sampled members to explore their

attitudes towards the use of technology in managing the school. The were able to respond to the questions mentioned below in a language with which they were familiar, and which allowed them to elaborate further and freely express their experiences.

1. Is there availability of technology resources in their school?
2. Do they possess the skill to use the resources and if not, whose responsibility is it to see that they have the skill?
3. Government introduced SASAMS to schools; is the program user friendly and does it make your management easier?
4. Non -governmental workshops vs. implementation – if this is the scenario what is your take on it, how does it affect you as a manager and an individual?
5. What is the main contributing factor to the way they perceive the use of ICT in managing the school?

The findings from the above trial are that the attitudes towards technology use were evident in a negative way for the following reasons:

- Age – things are ever changing and at times due to age it becomes difficult to grasp; they do not have enough skill to navigate new developments.
- No formal education or development – the respondents also emphasised that the department just wants the schools to implement the technology without in-depth training.
- More monitoring and less support provided – this causes schools to be less interested in the use of technology because they do not do more to assist older teachers to align their skills with those of the new, younger teachers who lead in this respect. Instead, they will feel more comfortable using traditional methods rather than the modern ones.

Table 3.2: Data collection instrument

School	Number of participants per school	Principal	Deputy P	Departmental head	Similar response	Linkages	Differences	Similar response	Linkages	Differences
A/B/C/D										

3.3.6 Data analysis and interpretation

The data were derived from the interviews. Exploring and making meaning of the data involves data assembly and re-assembly before combining them in new ways to create a meaningful account (Cohen, Manion, and Morrison, 2018). As the researcher used a qualitative approach to collect data, a pattern of the responses by the SMT was analysed in line with answering the research question, objectives, and the data collection method and technique (interviews that were recorded). This helps to identify the linkages, agreement, and relationships between the data. The six steps for thematic analysis were employed as defined by Braun, Clarke and Gray (2017).

Step 1: Becoming familiar with the data

The researcher will listen to the recordings of all interviews and transcribe the recordings. Furthermore, the researcher will go over the recorded conversations again while referring to the notes to validate that the correct information is recorded. The researcher will use different page colours to differentiate the participants, for example, pink pages for principals, white pages for deputy principals, and yellow for departmental heads.

Step 2: Generate initial codes

After becoming familiar with the data, the researcher will develop some preliminary schemes. The researcher will break up the information into manageable chunks, for example, similarities / linkages etcetera, the responses, and eventually be able to

gather the necessary information for the research.

Step 3: Search for themes

After allocating codes to the sets of data, the researcher will start the interpretive analysis of the collated codes. The researcher will then organise the outputs into suitable themes emanating from the analysis.

Step 4: Review themes

A more thorough examination of the themes found will come next. The researcher will reflect on combining, improving, or separating the basic topics. To make sure that the themes are current and prepared for analysis, the researcher will review them.

Step 5: Define themes

The researcher will refine and define the themes and potential subthemes. The intention will be to find the essence of what each topic will be about.

Step 6: Write up

In the final analysis, the researcher will discuss each theme and note the extent to which the SMTs exhibit a particular attitude towards the use of technology.

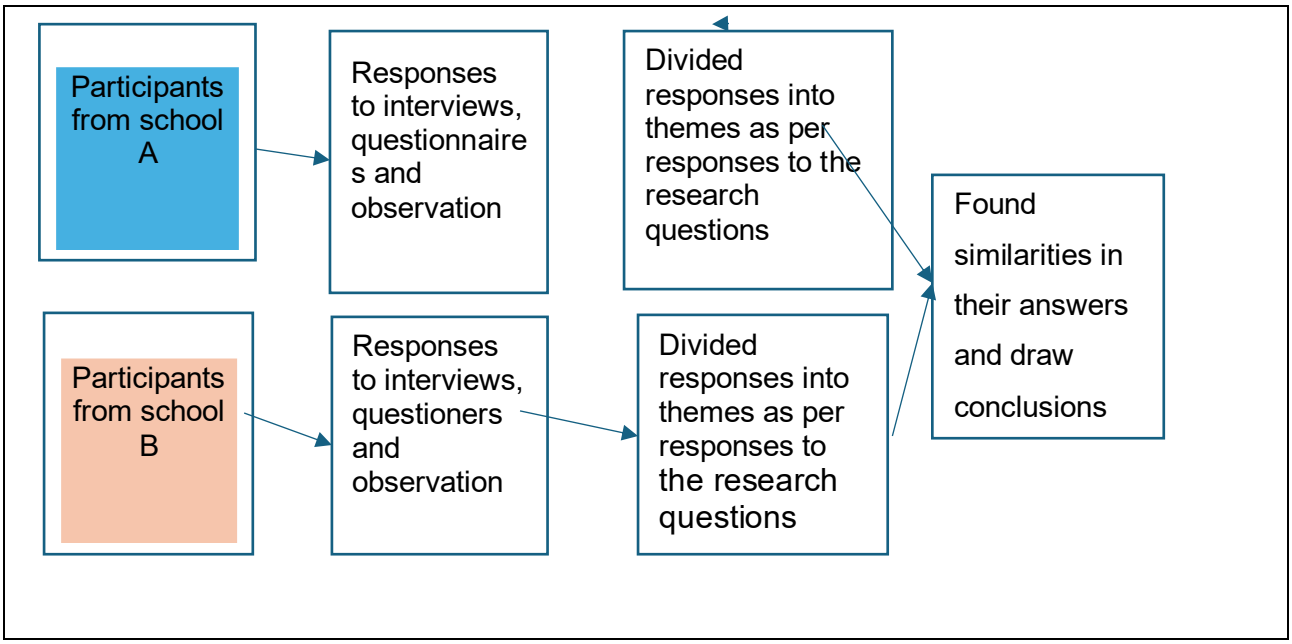
- Prepare and organise the data: The data were organised into formats, document folders, and audio folders. A written summary or transcription of the audio recordings was filed.
- Describe and present the data: The data were described and presented using the person method, which is where all the responses of a single participant were presented and analysed, before moving on to the next individual. This procedure preserved the coherence and integrity of the responses of the individuals and enabled a more complete picture of that person to be presented. A table (Table 3.2) is used to describe and present the data showing the responses to the various data gathering instruments. The table has appropriate

headings with the responses of each participant recorded under them. The similarities and linkages are also presented.

- Analysing the data: Exploring and making meaning of the data involved the assembly and re-assembly of the data and then combining them in new ways to create a meaningful account. As the researcher used a qualitative approach to garner the data, a pattern of the responses of the SMTs was analysed in terms of answering the research question, the objectives and the data collection methods and techniques, namely observation, the questionnaires, and the interviews (which were recorded). This helped to identify the linkages, agreements, and relationships between the data and the literature review.

Figure 3.2 helped to identify the linkages and relationships between the data and indicated the processes and performance of school A and school B, and so on.

Figure 3.1 The linkages, relationships, between data, processes and performances between schools



3.4. Credibility and dependability

The goal of credibility is to guarantee the reliability and credibility of research findings. To prove the veracity of the conclusions of the research study, the researcher ensured

credibility by tangibly relating the findings to reality. Credibility was crucial to ensuring that the findings are credible. The degree to which the research could be repeated under comparable circumstances is referred to as dependability (Stenfors et al., 2020).

The researcher made sure that the study process is rational, traceable, and properly recorded in accordance with the aforementioned definitions. As a result, readers should be able to assess the credibility of the study when they look at the research methodology.

3.5. Ethical considerations

To obtain approval for the research, the North-West Department of Education, UNISA, and the school management teams were contacted. The researcher made it clear to all participants that participation in the study is entirely optional and that they are free to leave at any time without having to give a reason or worry about facing any consequences. The following steps were taken to reassure the participants regarding the ethical principles of the study.

Anonymity – This is concerned with the identification of information; specifically, it asks whether it is possible to determine certain individuals through the information they share or from additional information about them (Sim and Waterfield, 2019).

Confidentiality – The agreement between the researcher and the participant guarantees sensitive or private information is treated with the utmost care (Peters, 2020). The participants completed a consent form to indicate their willingness to participate in the research where their personal information will remain confidential.

Avoiding deceptive practices –To avoid the deceptive practices, the researcher was honest with the participants right from the outset of the interview. The researcher informed them about the aim of the study and allowed them to ask questions about any new information.

The right to withdraw – A participant can leave a research study at any time. The participant should inform the research staff of their decision to stop participating in the study (Reno, 2021).

It is important to note that the researcher was conscious that their co-workers might feel compelled to participate in the study because of their similar experiences regarding the attitudes of SMTs towards using technology. To handle participant obligations, the researcher took into account the following factors which were used by their colleagues.

They received treatment that is sincere, respectful, and courteous.

The respondents had a right to the freedom and empowerment that comes from knowledge expansion and the sharing of their experiences. The researcher was also conscious of their position as researchers and any biases that could influence how the researcher interpreted the answers of the participants. To resolve potential biases, the researcher took steps to do so.

Confirmation bias explains the different ways that attitudes and expectations may affect the selection, retention, and evaluation of the data (Peters, 2020). The researcher ensured that the opinions of the participants are respected and that a specific response to a specific query was not being sought.

Question-order bias occurs when the placement of multiple questions that address the same or related topics affects the results (Peters, 2020). The researcher made sure that the participants are asked the same questions while keeping in mind that they can respond differently.

3.6. The role of the researcher

The primary goal of this study was to explore how SMTs feel about using contemporary technologies. The role of the researcher was to interact politely with each participant while gathering data in order to achieve the aforementioned goal and to make certain that the data analysis was carried out in an ethical and reliable manner. The researcher created an interview schedule to facilitate communication in person. The participants did not suffer any harm, and the researcher made sure that their identities are kept confidential, and that the information was handled in confidence. The researcher took care not to exhibit questioning or confirmation bias during the interviews.

Drawing from Cherry (2022), the researcher re-evaluated the replies of the participants to prevent confirmation bias and to make sure that preconceived notions are avoided. To avoid question-order bias, the researcher employed follow-up questions when specific questions called for further detail. Furthermore, the researcher upheld social good (Barrow et al., 2021) by being fair to all the participants, allowing them an equal amount of time to contribute to the study, and to give knowledge that would improve the welfare of other people regarding that which was being examined. Along with making sure that the data were encrypted and kept in a secure location, the researcher also made sure that the transcription of the interviews accurately captured the actual responses of the participants. The goal of the researcher in performing all of this was to make sure that the study abides by the standards for credible research.

37. Conclusion

This chapter presented the research design and methodology relating to attitude of the SMTs towards technology use in primary schools of North-West province. This chapter began by describing concepts of the research design and methodology before deliberating on the specific design and methodological choices employed. The interpretive approach was used as a branch of philosophy that guided the study. The tape recorder and interview schedule were the data collection tools that made the data available through semi- structured interviews. The researcher found these tools useful in transcribing the data. A qualitative approach was adopted, and the researcher deliberated on its link to the interpretive paradigm. The nature of the case study used was exploratory because the researcher was trying to gain an in-depth understanding of attitude of SMTs towards the use of technology in the primary schools of the North -West province. Thus, compiling the research questions was an essential phase which formed the foundation of this study because, without research questions, one remains directionless while losing focus.

The researcher was able to research broadly before establishing the research interview questions which positioned the literature review. The following research questions were used in this study: (a) “Is there availability of technology resources in their school? (b) Do they possess the skill to use the resources and if not, whose responsibility is it to see that they have the skill? (c) Government introduced SASAMS to schools; is the program user friendly and does it make your management easier?

(d) Non -governmental workshop implementation – if this is the scenario what is your take on it, how does it affect you as a manager and an individual? (e) What is the main contributing factor to the way they perceive the use of technology in managing the school?" This research was solely guided by the above questions in terms of the type of data that needed to be generated and how the data should be analysed. This played a major role in the research design. The next chapter presents and analyses the results of the data regarding the attitudes of SMTs towards the use of technology in the primary schools of the North-West province.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1. Introduction

This chapter outlines the findings categorised in terms of the expressions made by the departmental heads (DHs), deputy principals and principals of four different primary schools in the North-West Province, Bojanala District, Moses Kotane Sub-District.
The collected data were transcribed, presented, and analysed. The analysis was arranged in three categories, namely perceptions of the departmental heads (DH's) in primary schools, perceptions of deputy principals in primary schools, and perceptions of principals in primary schools. The reason that these categories were selected was to ensure coherence and clarity to facilitate understanding of the current state of the use of technology in primary schools and how it is perceived by stakeholders in the education sector. Moreover, the following themes emerged during the analysis process and were captured, as discussed below.

4.2 Themes that emerged from analysing the collected data

4.2.1 Themes that emerged during the analysis of the responses of the departmental heads (DHs)

- Importance of technology use in management.
- Skills levels.
- Facilities and resources.
- Introduction of SASAMS.
- SMT attitudes towards SASAMS.

4.2.2 Themes that emerged during the analysis of the responses of the deputy principals

- Benefit of using SASAMS.
- Improvement to be put in place on how to use the system (SASAMS).
- Other uses of technology.
- Benefits of using the technology.

4.2.3 Themes that emerged during the analysis of the responses of the principals

- Orientation or training process provided by the employer.
- Recommendations, experience and challenges to technology use by SMT.
- Three words used to describe technology use.

4.3 The use of technology in primary schools of the North-West province as perceived by SMT members.

As alluded to earlier, the analysis of data in this study were arranged in three categories, namely perceptions of departmental heads (DHs) in primary schools, perceptions of deputy principals in primary schools, and perceptions of the principals in primary schools regarding the use of technology. Therefore, it was realised that research constitutes the collection of various ideas; hence, the researcher had to ask the participants about their ideas. Their responses empowered the researcher to develop and elaborate the above themes more concisely.

4.3.1 Perceptions made by departmental heads (DHs) in primary schools

This section presents an overview of the perceptions of the departmental heads (DHs) with regards to the use of technology in primary schools. Their attitudes in this regard varied and the details of the findings in relation to each theme are expanded below.

The theme in this section is the importance of technology use in management. This theme indicates a shift in focus from the former days of administration into the current westernised type of administration. This was alluded to by the DH (Lerato) from Mogau primary school; she said:

> *My understanding is that we use technology in day to day management of schools which makes our work to be effective. It is important in the sense that we are able to share ideas even when we are not together using technology to work in separate spaces where others can share information even if we are not in the same vicinity. It makes it possible for all the members to be informed about what is happening within our working environments.*

Karabo, the departmental head of Kopano primary school and Itumeleng, the departmental head of Mokgethwa primary school support Lerato and described her understanding of the concept technology thus:

> *My understanding of the use of technology in management is the new methods of us using things like computers so that we can save time and we no longer use papers. Technology reduces a lot of work for management, we are able to save things and share them.*
>
> *That's it. It reduces a lot a paperwork for management, because we have to move around the classes asking for work from teachers, so using this technology system it becomes easier for us. Thank you."*

Naledi from Kopano primary school said:

> *Technology helps the management to write information as speedily as possible, to be legible and clear to read*

The views of Mphoentle and Tshiamo, the departmental heads of Paseka primary school, support those of Karabo:

> *My understanding of the use of technology in management is that it becomes easier especially when they sent us ATP (annual teaching plans) we are able to print to give to educators. And when we do monitoring and moderations it becomes easier we write our notes on the laptops and we print, also it becomes easy because we save more time when we write that's my understanding. What I understand, the technology use speed up the process especially in communication, like sending messages to our colleagues for prompt meetings, helps us when we receive ATP from the subject educational specialist becomes easier especially when we are on school holidays we use our phones to perform work.*

The above sentiment suggests that all the DHs require the necessary skills to be

relevant in this day and age so that they can perform their work more easily. Supplementary to the claim of the researcher, Molatela who is also a departmental head at Mogau primary school, articulated this view:

> *My level of skill is very poor because we don't get to be trained, the training we receive is very limited. I understand computer processing, emails and answering calls. I am struggling with recording videos for communicating with teachers, learners or whoever I will be communicating with where they can be able to view the activities that I want to express and due to lack of resources which makes it difficult to teach the people.*

Naledi and Karabo from Kopano Primary School and Lefika and Itumeleng from Mokgethwa Primary School shared the following:

> *I am not yet skilled but I am moderate. I can use some of the but some I am not skilled. Us because we are old, we have a problem with technology, it is easier on the younger teachers as they can use it very well without a problem. Us the older once we find is problematic and we are struggling.*

> *For now I can give myself level 3, because I still need to be developed especially as far as things like coding and robotics, use of Google forms and ChatGPT. I feel that I need to use them and the only this is to learn and I am willing to learn and need development so I give myself a level 3. Yes even myself I need to be developed, especially with this classroom Google and this power point what what. I need development on those once to make my work easier especially when presenting my lesson to the learners. Thank you.*

The level of skills that SMT members are expected to possess emerged as yet another theme in the data analysis of this dissertation. This assertion indicates that there is a need for training of SMT members so that they can understand what they are expected to do. This would help to realise one of the objectives of the education sector. In this

school, it appears that the skills are limited. The limitation of skills impedes their ability to effectively use the technological devices such as computers or laptops. For example, they cannot reach fellow colleagues by using certain technological gadgets and platforms.

According to Lerato, schools do have technological facilities and resources such as laptops and photocopy machines. Molatelo agreed that such facilities are available, for example, laptops and screens at the mathematics lab which are strictly for mathematics. Lack of training prevents them from exposing learners to other activities.

Also, the introduction of the South African Schools Administration and Management System (SASAMS) emerged as a theme in the analysis process of this data. It has been found to be more useful than the traditional methods of using pen, paper, and files.

To support the claim made above, Molatela and Lerato had this to say:

> *It has been useful as we know we can do schedules faster and our details can be accessed quickly. We are positive towards the introduction of SA-SAMS because it also enable us to administer the learners' attendances and that of educators including leave forms, and performance of learners. It is able to capture everything about individual stakeholder in the school.* (Molatelo)

> *It is very useful because previously we would make mistakes in terms of adding learner's marks and whatever but with SASAMS, we just take the learners marks from scripts and you submit the mark and the system will be able to capture and do the calculations and also do the analysis of results. That was a bit difficult for us because we had to add from learner to learner their marks and we also had to try to compile them and find the analysis which was most difficult for us. This is also because we are not all mathematically literate so that is how beneficial the batch is.* (Lerato)

Mphoentle and Tshiamo from Paseka primary school shared the following:

> *Yes it has become easier, even if we have to put marks before they are captured and analysed, but it has become easier than before. And we can also if you lost your mark sheet you can go to the AA and they will print it out for you. So it has become easier than before. It keeps things up to date and if you lost things you can go back to term 1 or go to the previous year archives and get it.*

Indeed, there are a number of important benefits of the SA-SAMS system while some improvements are recommended. This will enable the current and future generations to keep abreast with technology. To support this finding, Lerato said:

> *They must teach all of us how to use it because only the admin knows how to use it, if they are not at work we can't use it so if they teach us on how to use it, it will be better. In terms of teaching, technology brings good memory for learners because they learn through seeing and practice what they saw for example using an overhead projector where they can see and read the story when assessed they will be able to remember because it was acted out. Also, with the educators as I said it is also able to help as a point of reference.*

It remains the responsibility of the individual teacher and SMT members to know how to use technology. Parallel to this, Molatelo said:

> *It is my responsibility and SMT with the assistance of the SGB and the department of education. The department should try to get the statistics of the schools that are in need and the SMT should also gather all the information and submit it to the department to know what is happening in the schools. Moreover, we attended ICT training which was not enough because is only 2 or 3 days.*

On the use of technology Mphoentle and Tshiamo from Paseka primary schools, summarised similar views; they said:

We have laptops, each departmental head has a laptop the learners also have the tablets that they use in classes and also projectors for maths and sciences lessons. We also use our personal phones to download the information, we also have the machines that we use for copying and printing what is needed."

The DHs of Mohau P.S. were eager to make some recommendations to the department and this would be helpful in order to revamp the education sector should the recommendation of the SMT be considered. Further training is recommended but not during busy times because learning is hindered when under pressure.

I should say in the training colleges or universities they must train the educators on how to use technology and the effectiveness of it to implement education. It is important, accessible and memorable.

The above sentiment has been advocated by Lefikalarona and Itumeleng:

I would recommend the department to check and move around the schools to see and check the needs of the schools. Like if they move around see that the school is still using a chalkboard they can assist with interactive boards, if they find that the school is still an old school where they are saying that learners should not come with cell phones to school, they must advice the SGB to change the policy because when using technology learners should be allowed to bring tablets and cell phones to school. Thank you.

The articulations of the participants above suggest that black schools had suffered the consequences of the deprivation of democracy until independence was regained. Hence, the introduction of technology in education plays a pivotal role in educating an African child.

4.3.2 Perceptions made by deputy principals in primary schools

Under the category of Deputy Principal there is a theme on the benefit of using SA-SAMS. To affirm this theme, an interview with Deputy Principal B (Modumedi) from

Mogau Primary School was conducted; this is what she said:

> *Technology is the modern faster ways of making management easier and making management record safer and easier like saving them in these technological gadgets; like tablets, usb and laptops all those devices. It has made it easy, it has made it better than before because now if I am doing something, I know how to store them and can use them for later. It has improved my management skills. In my own view for me it means we move away from the traditional met DH's of writing using pens, files and all that and we incorporate the use of technology by using the latest gadgets like tablets, internet of things, we incorporate them in managing the school.*
>
> *It has been very useful and effective because now it reduces stress in relation to the amount of work that needs to be covered. So, the SASAMS is very useful in terms of it is very fast and effective.*
>
> *I am very positive towards SASAMS because I have realised that it is a system that makes our work easier for example when it comes to mark sheets and learner marks it does the accurate calculations for us unlike in the past where we had to sit with a calculator and add the learner marks. So, it does everything using the programmed formulas. So, I have a very positive attitude toward it.*

These utterances indicate the view that the introduction of technology through the use SA-SAMS has indeed played a pivotal in the education sector. The responses of Malesela, the deputy principal of Paseka P.S. further supported Modumedi by saying:

> *Technology has made our management better: like we are in the management and all of us we have access to this technology and we use it in managing. That makes our management to run smoother than when we were using the old methods. Yes, I think it has better our management and how to save management information as I have said, we can take information from SASAMS and spread it in different*

facilities for backup purpose unlike when we were using files and the school get burned everything will be lost for example.

Malesela added:

According to me as management in our school is when we use technology to engage other through the use of technology to run the school. For example, as a school we are able to have management meetings even if we are at home using teams, we don't wait to physically meet. Moreover, SASAMS has helped us, because information that we used to record manually in books now the AA can capture them in the system. Today we don't have to struggle compiling a school timetable SASAMS do it for us. Period registers and leaves are captured on SASAMS and that makes our lives symbol. I am ok, I love it and have a positive attitude toward it.

You will still be able to retrieve old information from the system for example you can be able to get information about learners who have left the school long ago from SASAMS archives unlike when we used to use book and pens were inks of pens will fade away and you will not see the written information or they might be torn.

As for the benefits of technology, Kaboentle from Mokgethwa primary school said:

Just a little bit like maybe in term one to two a learner performance poorly and start performing well in term 3 toward the end of the year you will find that those marks of term 1 and 2 are affecting the child performance. If you reassess the learner, you can't replace the mark, it rejects the marks.

It has helped a lot, I don't have to ask information from other people, I just use Google and wifi to get what I want, the information is in the palm of my hands. Even using this technology in managing the school or in teaching and learning it helps me a lot.

The information shared reaches everyone within a short period of time for example the Whatsup groups we formed as a school as a way of communicating with the parents and other stakeholders. So, the information reaches people within a wink of an eye, even recently we are taught a way of setting question papers using technology where now teachers are no longer overburdened with marking. Technology assist with setting and marking of question papers this are some of its benefits. Thank you.

The recommendation that I would make is that, the employer as they are leading must also involve other stakeholders, they must use external service providers as they are specialists. As we go for training, we should be trained by people who are more knowledgeable in the use of technology in order to address the challenges that we come across. Thank you.

The utterances by Kaboentle and Malesela above clearly indicate that school performance improves because technology simplifies quite a number of aspects of teaching.

Technology must be constantly improved. For this reason, the views of Modumedi are supported by those of Kaboentle:

I think if we could have had workshops when technology was introduced, we could have been far already in the teaching field like the coming generations of todays, so workshops will help us. I think I can recommend to the employer to make sure that they support schools with generators/ something as a backup because sometimes you will be in the middle of something and be destructed by load shedding. If the employer can help with something that can help us as backup during loadshedding then we will be fine.

Furthermore, Malesela recommended this:

I am ok, I love it and have a positive attitude toward it. Since well we are one of the schools with a computer centre before our resources were stolen, there was a plan for all the teachers to be work-shopped on SASAMS so that each teacher can capture their marks. I have a good attitude towards it, I don't have a problem with it. You will still be able to retrieve old information from the system for example you can be able to get information about learners who have left the school long ago from SASAMS archives unlike when we used to use book and pens were inks of pens will fade away and you will not see the written information or they might be torn.

As the researcher said earlier, these remarks emphasise a need for the training of SMT members so that they understand what they are expected to do. This will help to achieve the objective in this education sector. So, in this school, it appears that their technological skills and knowledge are limited.

4.3.3 Perceptions made by the principals in primary schools.

In an interview that the researcher had with the first respond under the category of principals, during my interview with Principal A (Warona) from Mogau primary school, it appears that technology plays a meaningful role in primary schools. Also, primary schools need to ensure that educators are able to use technology in a non-manipulative manner. Warona voiced the following:

It has transformed my day-to-day duties and it has made it much easier especially when it comes to communicating with my staff members. Like I have already mentioned, it has made work easier for me for instead communication with the parents is easier trough social media though not all the parents have things like WhatsApp. Also when it comes to storing of data even though we use files, I know I do have backup on the laptops.

SASAMS is very effective, it is much better than the traditional way of doing things, because most of the things we need we can access them. We know that we can manage leaves, record the misconduct of

educators and learners. It has really assisted. It is helpful it makes work easier. It helps us to record even learner's absenteeism, to record misconduct and for report system.

Technology use in management can be described as a platform of mechanism that can advance the smooth running of the institution and again it also be inculcated in the teaching in classroom and facilitation of all the meeting and workshops in the institution. I thank you

I may say it has been very useful, because one thing for sure errors are limited and again there is no miscalculation. Also, everything that is stored there we are sure that is safely kept and that we also have a backup so we don't lose information like in terms of paper and pen.

SASAMS I think so far is a positive drive in terms of management because now educator profiles safely kept and we also use it for filling in leave for educators, we also use it for safekeeping of information like infrastructure, reports of ill-disciplined learners. We started this year to report ill-discipline in SA-SAMS.

The utterances made above by Warona summarises the themes emerged in this category, namely: Orientation or training process provided by the employer; and Recommendations, experience, and challenges to technology use by SMT.

Technology makes things easy because it saves time, it can be used at one place, and we don't have to move from one place of class to another. Communication is instant especially the use of Whatsup when we want to communicate with parents. It saves money and resources because we don't have to type letters, make copies and sent them via learners which at times do not even reach home or find them after long time. So, for us it really helps in managing time and saves money for us as a school."

My understanding of technology use in management is that we want

our schools to move with times, as we are on the 21st century we want our schools to be technologically advanced hence as management we support the idea of this 4IR in our classrooms to advance the skills of our educators and to help our learners to be in the forefront of technology.

Yes, it is much better, the modern ways of using technology in management is much better because the communication and planning is better unlike when we were using paper even the submission of paper will make us travel just to submit small things but today we are in a position of using emails, WhatsApp and we are in a position of getting information quicker rather than travelling. Information reaches us quicker and helps us in planning and we are able to use this modern way of management.

SASAMS is very good, we are really assisted. Schools are more advanced as compared to the old way of writing for example schedules at the end of the year, it reduces the workload of educators as it is more advanced in a way of helping the SMT with the recording of leave both attendance of learners and educators, we are able to get the timetable, login book (our LTSM). Somehow, I think personally is much better than the traditional way and is less work for educators.

As for the improvements and recommendation, Lesedi who is the principal of Kopano primary school said:

I always complain about the department not supplying equipment needed at school. If they can make sure that these gadgets we are using becomes part of learning and teacher support material for the whole school which we are able to order ourselves, more workshops are also needed because we have teachers which cannot use laptops and internet. Also, because it becomes the disadvantage to the school so workshop and more money to buy gadgets for the whole school. Also make sure that there is enough coverage because at times even

if we have Wi-Fi sometimes it does not work because the coverage is very weak.

The challenge we have is intent coverage even though I have the departmental phone which has data I know I can connect and work after hours at home but other staff members rely on the school Wi-Fi which they cannot go home with. That becomes a limitation to them as they don't have personal Wi-Fi it means they cannot work from home.

There is a need to train personnel, for everyone to have basic use of technology. If we can empower personnel, I think we will be at a great improvement of using technology. And the other thing if you have the security, is very important and is the key because we do buy these things but at the end of the day, we encounter burglary time and again whereby we lose so many things. If the department can bring security in our schools, I think it will be wiser because those who are trying to advance themselves will be in a better position to implement the gadgets and teaching and learning will be better in the system.

With the employer is not so much but with the employer at the school level, the principals at the school level are used to calling the manager of E-learning from the resource center to come and empower the educators with skills. Even earlier this year when we reopened, it was the 4th if I am not mistaken, I had a workshop on ICT connect from Cambridge. I organized them to come and workshop the educators and as I speak we are just waiting for the date for 4 of educators whom will be paid by the SGB to go and be capacitated by the integration of ICT in the classroom like I said is a challenge to many of us hence I have taken that initiative to assist the educators so that they can do their work better.

They should make sure that more personnel should be trained in terms of SASAMS, I would prefer that if laptops or computers can be supplied to our school and then that is been used by the admin assistant is

being used as a server. This will develop teachers in terms of use whereby each and every teacher records their marks as they complete the tasks. This can work and be a sufficient measure for the institution and can take us very far because all the personnel in the institution will know how to use the system and operate it fully.

We also have encouraged teachers to use as vast resources as they can so that they have enough item banks for their subjects so we normally encourage them to download the content.

I would say the provision of data to our school by the department it needs to be done because late last year our school got a donation of 2 WiFi's but unfortunately, they have stopped working from early this year. We tried to find out from our IT specialist from our circuit unfortunately we did not get a legitimate answer with regard to those WiFi's not working but educators had to go an extra mile, they are downloading the content themselves.

Besides the recommendations of the principals, the teachers were eager to make some recommendations to the Department and thus remain helpful in order to restore confidence in the education sector. This means that the recommendations of both teachers and principals are similar and common. Hence, it is important for the Department to consider them.

As for the three words that one would you use to describe technology use, Larona, the principal of Paseka primary school had this to say:

Technology today is life, is a need, is something that helps to see the world at a different angle and helps us interact with others near and far. It really helps and saves us a lot.

We are benefiting because we get accurate calculations, because sometimes copying from one page to another there are human errors but the advantage is that the calculations are accurate. For us the

SMT just to manage to ensure that the information and marks are inserted correctly so that we can get the correct stats or the accurate information that we are looking for and the other advantage is that is easy to get information, the learners, parents and the educators information. All personnel information is recorded in SASAMS so anything that is related to the learners, parents and educators information is easily accessible that's how I find it very interesting and a positive instrument for us to use and to implement it in our schools.

Schools to ensure that we don't operate with one that we don't rely only on 1 laptop that is used by our admin assistant but maybe the department can go to an extent of having that software to other laptops so that we can be able to assist the administrative assist in case where we need to capture so that many of us can capture quickly. One other thing that can be improved, they should make it advanced that the department can get information without making our admin assistant to travel for submission. That the AA can assess these patches and do it themselves without travelling. Because that also disadvantage us, after patching you lose the information so those are some of the things that can be improved.

As for the three words that one would you use to describe technology use, Lerato articulated that:

One recommendation would make is that lets empower our personnel so that when we talk of 4th IR, we really talk of something that people are trained and are able to impart the skills, to have a proper training not a summary as I can call it. Because those who attend 5 days training when they come back to school, they will train others only in 1 day, hence in most instances they train educators in a short period of time where they give them lot of information and when they come back to train others the implementation is difficult. If they can take time to train educator it will be easier for educators to learn as they are lifelong learners, so it is not difficult for educators to learn the problem

is the skill. So, impart the skill to them and they will do miracles

Technology is just advanced machine for learning, it advances the working environment by making it conducive, is a smart way of communicating with the stakeholders and the entire world. Is the advanced machine for learning, you get technological gadgets that can be used so it advances everything, life for educators the only thing is to get access to internet connectivity and everything will work.

This finding indicates the view that technology in primary schools plays a pivotal role. Hence, there is a need for training and improvement by the Department of Basic Education as the one who introduced this program for the benefit of an African child. Moreover, principals are expected to be custodians of the values and ethos of the African black primary schools within their proximity. As a result, their perceptions are fundamental to the data analysis in the current study.

The overall perceptions of the stakeholders (DHs, deputy principals and principals of the participant primary schools), a relationship exists between school performance and technology use for better learner academic performance. However, the department and the school community still need to do more to address the issue that the use of technology should be user friendly and understood by all.

4.4 Conclusion

A conclusion that can be drawn from this section is that deep reflections took place after the researcher had engaged with the stakeholders in the education sector (DHs, deputy principals and principals). The attitudes of SMT members towards using technology in primary schools of the North-west province should be developed so that teaching and learning in primary schools are not disrupted. The operation of technology or technology should be taken into consideration to fit into the formal schooling system. The next chapter focuses on interpretations, discussions, and recommendations emanating from the findings that have been deliberated on as a means to draw the study to a close.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter discusses and summarises the findings, draws a conclusion, and offers recommendations. The application of theories guided this study, and the methods employed helped to achieve the main objectives of this study and answer the main research question (What are the attitudes of School Management Team Members towards using technology in Primary Schools of the North-West Province?).

In this chapter, the researcher first discusses each theme in depth, quoting directly from the interviews and supports the arguments with a literature review. In conclusion of the whole study, the researcher accentuates the flow of this study based on the conclusions of the earlier chapters. The researcher also established new information and deliberates on the contributions this study has made to the body of knowledge. A new theory has been formulated, and the beneficiaries of this study are the stakeholders in the education sector (teachers, principals, and learners). Future research is proposed.

5.2 Discussion of themes emerged in depth.

As alluded to in Chapter Four, themes emerged during data presentation. The researcher established that the themes were ultimately supported by the interviews and the literature reviewed in this study. Therefore, the importance of technology use in management, skills levels, facilities, and resources, the introduction of SASAMS, and SMT attitudes towards SASAMS were the themes that emerged during the interviews the researcher engaged in with the DHs. Also, the benefit of using SASAMS, improvement to be put in place on how to use the system (SASAMS), other uses of technology, and benefits of using the technology emerged as themes during the interviews with the deputy principals. Finally, orientation or the training process provided by the employer, recommendations, experience and challenges to technology use by SMTs and three words used to describe technology use were once again themes that emerged during the interview with the principals.

The theme indicates a shift in focus from the older days of administration to the westernised, more modern style of administration. This has been alluded to by the DH (Lerato) from Mogau primary school who said:

> *My understanding is that we use technology in day-to-day management of schools which makes our work to be effective. It is important in the sense that we are able to share ideas even when we are not together using technology to work in separate spaces where others can share information even if not in the same vicinity. It makes it possible for all the members to be informed about what is happening within our working environments.*

To support the above notion with the literature reviewed in this study, Semerci and Aydin (2018) make it clear that recent advances in technology have exerted a substantial impact on education, just as they have on many other facets of our everyday lives. The teaching and learning processes as well as school curricula have all been visibly impacted by these advancements for instructors, students, and schools. In keeping with these advancements, many developed and developing nations have recently viewed the use of technology in education as a significant lever for achieving educational change.

Drawing from the perceptions of the deputy principals, there was yet another theme which that the introduction of technology through the use SA-SAMS has indeed play a pivotal role in the education sector. Malesela, the deputy principal of Paseka P.S. has further supported the responses of Modumedi by saying:

> *Technology has made our management better like we are in the management and all of us we have access to this technology and we use in managing. That makes our management to run smoother than when we were using the old method. Yes, I think it has better our management and how to save management information as I have said, we can take information from SASAMS and spread it in different facilities for backup purpose unlike when we were using files and the school gets burned everything will be lost for example."*

This view is supported by Caena and Redecker (2019) who claim that widespread changes to education systems have not yet kept pace with the digital revolution. The effects of employing technology in schools signal the need to reassess how schools use technology to operate and supervise them. This underlines the need for modern pedagogies that employ technologies to address 21st-century challenges, promote peer learning across all school systems globally, and accelerate the development of crucial transversal competencies of problem solving, cooperation, and creativity.

As for the three words that one would use to describe technology use, Larona, the principal of Paseka primary school had this to say:

> *Technology today is life, is a need, is something that helps to see the world at a different angle and helps us interact with others near and far. It really helps and saves us a lot."*
>
> *We are benefiting because we get accurate calculations, because sometimes copying from one page to another there are human errors but the advantage it that the calculations are accurate. For us the SMT just to manage to ensure that the information and marks are inserted correctly so that we can get the correct stats or the accurate information that we are looking for and the other advantage is that is easy to get information, the learners, parents and the educators information. All personnel information is recorded in SASAMS so anything that is related to the learners, parents and educators' information is easily accessible that's how I find it very interesting and a positive instrument for us to use and to implement it in our schools.*
>
> *Schools to ensure that we don't operate with one that we don't rely only on 1 laptop that is used by our admin assistant but maybe the department can go to an extent of having that software to other laptops so that we can be able to assist the administrative assist in case where we need to capture so that many of us can capture quickly. One other thing that can be improved, they should make it advanced that the department can get information without making our*

admin assistant to travel for submission. That the AA can assess these patches and do it themselves without travelling. Because that also disadvantage us, after patching you lose the information so those are some of the things that can be improved Warona and Lesedi said.

To support this finding from the literature, Heyder (2020) articulated that the innate motivation theory was used to analyse attitudes of teachers towards achievement, including whether they believe that primary school mathematics is a subject that calls for innate talent and how this perception relates to intrinsic motivation. The overall results of this study, which involved a sample of German students as well as their educators, revealed that the beliefs of teachers that success is based on natural talent may be a significant barrier to fostering an engaging environment.

5.3 Summary of the major findings that emerged from the research data.

The aim of this study was to examine the attitudes of SMTs towards the use of technology in primary schools. This was guided by a pragmatic theory as a framework that was adopted. This theory occupied a significant role in examining, understanding, and explaining such attitudes by DHs, deputy principals and principals in primary schools. The aim was also to advance and further scrutinise the meaning of technological use and to draw a picture of the recognition of Artificial intelligence in the 21st century generation. The research problem of this study has been deliberated upon and a conclusion was reached. The major findings that emerged and which are justified in this study are that:

- The use of technology in day-to-day management of schools is effective. The SMTs will be able to share ideas even when they are not together using technology to work in separate spaces.
- The use of technology in management is the new method that saves time and reduces a much work for management as they are able to save and share the work such as ATPs (annual teaching plans) and discuss school matters remotely.
- It has also been established that the SMTs require the necessary skills to be currently relevant so that their work becomes easier, for example, the use of coding and robotics, Google forms, and ChatGPT.

- Also, the introduction of the South African Schools Administration and Management System (SASAMS) was found to be more useful than the traditional method of using a pen, paper, and files. The Department of Basic Education should prioritise the of use technology in all schools.

5.4 Contribution this dissertation has made to the literature.

Based on the scholarly debates conducted and identified in Chapter 2 (literature review), the researcher argued that this study makes some contribution to the literature. The researcher is not aware of any literature that has paid attention to the involvement of SMTs in the use of technology. Therefore, the contribution brought in by this study, based on the authentic voices of SMTs in the education sector (DHs, deputy principals and principals), is that their perception of the schooling of an African should fall in line with advanced artificial intelligence by using technology in the 21st century.

Also, with great apprehension, the researcher observed that, in the reviewed literature, a large number of schools find it difficult to adapt to this world of technology owing to their lack of training.

Another contribution that this study makes is that age should not be an impediment neither does it have to be an excuse as to why the SMT members in respective schools do not equip themselves with the use of technology. Whether young or old, they should all be technologically skilled.

Most importantly, this study contributes to new knowledge through this study. The observed disjuncture between traditional and technological means of edifying an African child, makes it clear that the study has contributed to the body of literature.

5.5 Recommendations

Although some crucial insights into the attitude of School Management Team Members towards using technology in primary schools of the North-West Province were highlighted in earlier chapters of this study above, the researcher recommends that:

- A joint intersectoral collaboration between the education sector and private sector should be established in order to implement technology systems in all the primary schools of the North-West, beginning with the SMTs.
- Parents should elect literate SGB members who will recognise that their children need to adapt to this world of technology.
- The legislation framework or policy on the operations of primary schools should allow provincial legislatures to mandate districts of education and SGBs to work hand in glove to come up with a policy on the use and implementation of technology in primary schools in the North-West province.
- A relationship should be formed between the DBE and Institution of Higher Education for systems and procedures that are implemented in schools to be taught as courses at institutions of higher learning.
- All the SMTs should be trained on the use of SASAMS with follow up support when a new version is introduced.

5.6 Recommendation for further research

The researcher hopes and believes at once that this study has indeed offered an in-depth understanding of the attitude of School Management Team Members towards using technology in the primary schools of the North-West Province. However, the researcher recommends that further studies be undertaken

- To establish whether the impact of technology use in primary schools is the same as that of high schools.
- A research study needs to be undertaken to establish the attitudes of School Management Team Members towards using technology in the primary schools of South Africa as a whole.

5.7 Conclusion

The drive of this study was to recognise the attitudes of School Management Team Members towards using technology in primary schools in North-West province. The researcher found that a universal trend was that the operation of primary schools needs technology in order to adapt to artificial intelligence in the 21st century. Hence, the researcher undertook the study.

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APPENDICES

Appendix A: Ethical clearance North-west DoBE – submitted to principals as well

education
Department:
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REPUBLIC OF SOUTH AFRICA

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OFFICE OF THE DIRECTOR: BOJANALA DISTRICT

Enq: K. Ntaolang
014 597 8600

To: Ms. Emily Kholofelo Ramakgasha
Holy Family Primary School

From: Ms. N.S.Masipa
CES- Circuit Coordination

Date: 23 October 2023

SUBJECT: PERMISSION TO CONDUCT RESEARCH MOSES KOTANE SCHOOLS

Your correspondence dated 20 February 2024 is acknowledged and the contents thereof noted.

Permission is hereby granted to your good self to conduct research for you M.ED at your schools of choice within Moses Kotane Local Education Office. The participating schools are: Mokhine P.S, Holy Family P.s, Mononono P.s and Madutle P. S.

Please produce this letter as and when you visit schools as proof of permission grated.

Wishing you success in your studies.

Duly signed
----------Ms. N.S.Masipa
CES-Circuit Coordination

Appendix B: Turn-it-in report

PAPER NAME	AUTHOR
RAMAKGASHA FINAL DRAFT.docx	Emily Kholofelo Ramakgasha

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Appendix C: Ethical Clearance Certificate

UNISA university of south africa

UNISA COLLEGE OF EDUCATION ETHICS REVIEW COMMITTEE

Date: 2024/02/14

Ref: **2024/02/14/48334847/09/AM**
Name: Ms EK RAMAKGASHA
Student No.:48334847

Dear Ms EK RAMAKGASHA

Decision: Ethics Approval from 2024/02/14 to 2027/02/14

Researcher(s): Name: Ms EK RAMAKGASHA
E-mail address: 48334847@mylife.unisa.ac.za
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Supervisor(s): Name: Prof S.K. Ndlovu
E-mail address: ndlovks@unisa.ac.za
Telephone: 0124292551

Title of research:

The Attitude of School Management Team Members towards using technology in Primary School of the North West Province

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 2024/02/14 to 2027/02/14.

*The **low risk** application was reviewed by the Ethics Review Committee on 2024/02/14 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.

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Appendix D: Declaration by Editor

CERTIFICATE OF EDITING-EM RAMAKGASHA-UNISA

Dr Phumzile P Masala
BA (Ed); BA Hons (English); MA; Doctor of Communication
SATI Registration number: 1000406
Email: mas_pum@yahoo.com

DATE: 17 MARCH 2025

TO WHOM IT MAY CONCERN

This is to confirm that I, Phumzile Prudent Masala, have language edited the dissertation titled:

The Attitudes of School Management Team Members toward using technology in the Primary Schools of the Northwest Province

Authored by

EMILY RAMAKGASHA (48334847)

I am satisfied with the quality of work in terms of style, grammar and spelling.
Suggestions for appropriate corrections have been made to the student. The final printing and layout REMAINS the responsibility of the student.

Dr PP Masala

Appendix E: Interview guideline

1. What is your understanding of technology use in management?

2. How would you describe you level of skills when it comes to technology use?

3. Which technology facilities and resources does the school have?

4. Has the provision and introduction of South African Schools Management and Administration System (SASAMS) been useful than the traditional method of using pen, paper, and files for example in managing schools?

5. What are your attitudes towards using South African Schools Management and Administration System?

6. What are the benefit of using SASAMS?

7. Which improvement can be put in place on how to use the system?

8. What are other use of technology does your school have in managing the school?

9. What are the benefits of using the technology?

10. Which improvement can be put in place on how to use the technology?

11. What type of orientation/training process is provided by the employer with regards to technology use in schools?

12. What recommendation can you make to the employer when it comes to technology use and the experience or challenges you have come across with?

13. What three words would you use to describe technology use?