THE IMPACT OF ONLINE SKILLS ON TEACHING AND LEARNING DURING COVID-19 AT A SELECTED SCHOOL IN KEMPTON PARK, JOHANNESBURG

by

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DECLARATION

I, Ziboneleni Maphosa, declare that this dissertation titled "The impact of online skills on teaching and learning during COVID-19 at a selected school in Kempton Park, Johannesburg" is my composition. It has not, in its entirety, or in part, been submitted for any degree or examinations at any other institution. All quotations have been distinguished by quotation marks, and all sources of information have been acknowledged using references. I further declare that I submitted the dissertation to Turnitin originality checking software and that it falls within the expected requirements for originality.

SIGNATURE: *Maphosa*   **DATE:** 14-11-2022

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DEDICATION

This study is dedicated to my late mother, Nana Jane Morake, for raising me the way a parent could and giving me a solid foundation for education and life. I also dedicate this dissertation to my husband, Nhlawulo, and two daughters, Zifisozethu and Andile, for their unending love, support and encouragement.

ABSTRACT

When COVID-19 struck, resulting in the closure of schools and a shift to online learning, the inadequacies in the South African education system were laid bare, especially teacher and learner preparedness to embark on online learning. Documents such as White Paper on e-Education are awash with ideas on how to equip educators and learners with online skills. Yet, such ideas remain on paper, with many educators, especially those teaching in public schools and learners from poor households bearing the brunt. The shift to online learning saw educators and learners pushed to territories they were not familiar with. The purpose of the study was to explore the impact of online skills on teaching and learning during COVID-19 at a selected high school in Kempton Park, Johannesburg. The study adopted a qualitative approach. Two Heads of Departments (Post level 2), four educators (Post level 1) and four Grade 12 learners were purposefully sampled to participate in the study. Thematic analysis was used to analyse data. The study revealed that educators and learners experienced multiple challenges while learning online. They lacked online skills, and there was little support given to them by the Department of Education and the school in general. Based on the challenges experienced, the study recommends that educators and learners be equipped with relevant skills and resources. The government must invest in school infrastructure to ensure effective online learning for all learners, regardless of their background or school. In addition, policies that support onlinelearning must be implemented.

Key Terms:

Online Learning; Innovation; COVID-19; Blended Learning

LIST OF ACRONYMS AND ABBREVIATIONS

DoE   Department of Education

HoD   Head of Department

RSA   Republic of South Africa

PLN   Personal Learning Networks

IT   Information Technology

ICT   Information Communications Technology

MDGs   Millennium Development Goals

ELLS   Estonian Lifelong Learning Strategy

UNICEF   United Nations International Children's Emergency Fund

ESA   Education Sector Analysis

NEPAD   New Partnership for Africa's Development

INSET   In-service Education of Teachers

ATP   Annual Teaching Plan

SASCO   South African Students Congress

CAT   Computer Applications Technology

UNHCR   United Nations High Commissioner for Refugees

UNISA   University of South Africa

UNESCO   United Nations Educational, Scientific and Cultural Organization

NGP   National Development Programme

GDE   Gauteng Department of Education

TRAAM   Tabular Reflections and Analysis of Alternate Meaning

CEDU   College of Education

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CHAPTER 1: OVERVIEW OF THE STUDY

1.1. INTRODUCTION AND BACKGROUND

In a world where changes occur daily, education cannot be immune to change. Fullan (1993:9) argues that change is "a journey where problems are our friends." Fullan further points out that as change agents, educators must develop the habit and skills of continuous inquiry and learning. The lack of online skills and knowledge among educators and learners has always been an issue; however, its effects have been amplified by the Coronavirus disease (COVID-19) pandemic (Scully, Lehane & Scully, 2021).

In March 2020, South Africa, like many countries around the world, went into lockdown, and subsequently, all schools were closed. It is then that the inadequacies, particularly the way educators conducted online learning, were laid bare (Hoadley, 2020). For the majority of schools in South Africa, particularly public schools, teaching and learning came to a halt. Many developed countries accelerated the move to online learning (Le Grange, 2020); however, not all South African schools were privileged to do so. Many educators were pushed to unfamiliar territories as they lacked the skills and equipment to provide distance learning (Gyimah, 2020).

Contact learning is vital, particularly the human connection between educators and learners. However, questions arise when a disaster or pandemic strikes as to whether the 21st century educator is sufficiently equipped with only the traditional "chalk and talk" method. Bariham, Ondigi and Kiio (2020) postulate that "in crisis, change is not an option but a necessity." Technology is one such tool whose influence in the classroom cannot be overlooked (Wikramanayake, 2014). Educators must acquire online skills to augment conventional teaching in order to achieve teaching goals. The 21st century learners are different, and so are the tools they use.

This study explored the impact of online skills on teaching and learning during the COVID-19lockdown. The study also examined the challenges educators and learners face in this regard, and whether educators are provided support to practice online teaching and learning.

1.2. RATIONALE FOR THE STUDY

Creswell (2014:168) posits that the purpose of the study indicates why you want to do the study or the intent of the proposed study. The researcher was of the view that the study should be undertaken to help educators cope in a fast-changing world. COVID-19 might not be the last to befall the world; thus, educators should be well-equipped for any eventualities.

As an educator, the researcher is able to draw on first-hand experience regarding her daily challenges at the school and in the classroom. Her experience with teaching under lockdown brought to light many discrepancies in the education system that warranted further research. After struggling to be in contact with learners during the lockdown, the researcher was prompted to pen her experience to determine a solution. It became increasingly clear that tough decisions had to be made, particularly in the researcher's school, where educators mostly had WhatsApp groups to communicate with learners.

With its complexity, change of any form requires the entire school to work together to realise teaching goals. As school leaders, principals should set a precedent. The study was also inspired by a seeming lack of adequate leadership during a crisis, resulting in teacher apathy and a lack of interest in any school improvement. Harries (2004:244) argues that workplace personal development depends on a certain richness of environment context that allows people to take risks. In other words, educators become innovators when the atmosphere at school allows them to. Direen (2017) posits that in times of crisis, each aspect of the school leadership role is magnified. The study looked at the contribution made by poor leadership during the COVID-19 lockdown when educators and learners struggled to communicate.

The researcher also observed the tension between the Department of Education (DoE) and schools. Letlolo, Heysterk and Marie (2001) postulate that multiple factors concerning the DoE influence education. Some of these tensions might arise when educators feel that some policies are not practicable in the classroom. The role of the DoE and its intervention, or lack thereof, was investigated in helping educators understand and use technology. The manner in which educators respond to the department's recently initiated Development Management System is a clear testimony that there are differences in perspectives. This study also hoped to benefit policymakers, district officials, and scholars who might implement them to improve education. The study sought to get the teacher's perspective in this regard.

Finally, the study hoped to contribute to understanding emerging technologies to support learning during current and future pandemics. Sintema (2020) argues that there is currently little or no literature on COVID-19 in relation to education studies. It is hoped that the study added to the available knowledge and served as a reference for future studies.

1.3. STATEMENT OF THE PROBLEM

McMillan and Schumacher (2014:60) argue that sources of research problems can be from everyday observations and experiences. The impact of COVID-19 on education was felt the world over; it also impacted every aspect of people's lives and is therefore justifiable in triggering research around it. For effective online learning to take place, thorough knowledge is required from educators as central figures in the classroom. The study intended to investigate how online skills impacted teaching and learning during COVID-19 at a selected school in Kempton Park, Johannesburg.

1.3.1. Research question/hypothesis

The following main research question guides the study:

- What is the impact of online skills on teaching and learning during COVIUD-19 at the selected school in Kempton Park, Johannesburg?

The sub-questions flowing from the main research question are:

- How qualified are educators in dealing with online teaching at the selected school in Kempton Park, Johannesburg?
- What resources and equipment are available to allow educators and learners to practice online teaching at the selected school in Kempton Park, Johannesburg?
- How have online skills impacted teaching and learning during COVID-19 at the school in Kempton Park, Johannesburg?

1.3.2. Aims and objectives of the study

The main aim of this study is to explore the impact of online skills on teaching and learning during COVID-19 at a selected school in Kempton Park, Johannesburg.

The study has the following objectives:

- To establish how qualified educators are in dealing with online learning duringCOVID-19 at a selected school in Kempton Park, Johannesburg.

- To ascertain the resources and equipment available to allow educators to be proactive in online teaching at a selected school in Kempton Park, Johannesburg.

- To investigate how online skills have impacted teaching and learning duringCOVID-19 at a selected school in Kempton Park, Johannesburg.

1.4. LITERATURE REVIEW

A literature review is a description of what has been published by acknowledged scholars and researchers (Mitchell, 2009). The literature review underlying this study focused on the need for educators and learners to adapt to online learning. Views from developed and developing countries regarding online learning will be highlighted. The 21st century learners' preferences and the digital divide, among other aspects, will be discussed.

1.4.1. Online learning inevitable

Outbreaks have shown that teaching and learning are not confined to the four walls of the classroom and that education and technology are intertwined (Maphosa, 2020; Wahob, 2020; Wikramanayake, 2014). The lack of teacher training is one of the greatest "roadblocks" to integrating technology in schools (Brand, 1997:11). Brand further posits that the current education system has done a "miserable job" in empowering educators to use computer-related technology in the classroom appropriately and effectively. Educators are central figures in the classroom; if they are not knowledgeable, the struggles are passed on to learners. Emphasising the lack of support, Stein and van Niekerk (2012:127) postulate that educators might have the skills, motivation, and abilities required, but if proper tools and equipment are not available or are inferior, expectations for success should be low. To be effective, educators need appropriate resources and equipment.

Professional workshops and in-service training on specific skills for educators are vital in promoting online teaching and learning. Davies and Allison (1999:31) argue that the impact of technology in the classroom is "radical and it threatens the very existence of the classroom." In other words, the changes are such that sooner or later, the traditional classroom might not fully exist hence the need for online skills.

Hedding, Greve, Breetze, Nel and Van Vuuren (2020) postulate that educators and learners need training on computer-based instruction before it can be implemented as a teaching tool. To put Hedding et al.'s view into perspective, a reference can be made to the 2015 e-Learning programme launched by the Gauteng DoE, distributing Tablets to Grade 12 learners. This initiative, noble as it was, was met with several resignations of educators who could not keep up with these gadgets. The ideal approach would be to train educators on how to use Tablets before rolling them out to learners. Lepp, Aaviku, Leijen, Pedaste and Sak (2021:9) concretise this view stating that educators perceived work stress as related to both insufficient preparations for online teaching and lack of support for teachers' online teaching. It was no surprise then that the ongoing COVID-19 pandemic exacerbated the existing inadequacies, evident in how educators struggled to support learners at a distance. Trust and Whalem (2020:190) argue that the pandemic exposed a significant gap in teacher preparedness and training for remote teaching.

There are multiple positives to online teaching and learning. It can bridge barriers associated with traditional curriculum because it occurs in every learner's environment (Maphosa, 2020). Online learning also benefits educators because it frees them from many mundane, repetitive, and often time-consuming tasks, allowing them to concentrate on the core aspect of teaching (Berdford, 2015). Yet, despite all the supposed benefits, Le Grange (2020) cautions against online teaching and learning with its "dangers of consolidating inequalities." Le Grange further warns that if not adequately monitored, online processes might be prone to abuse by those who develop programmes and courses, who might choose profitisation over quality.

1.4.2 Understanding the numbers
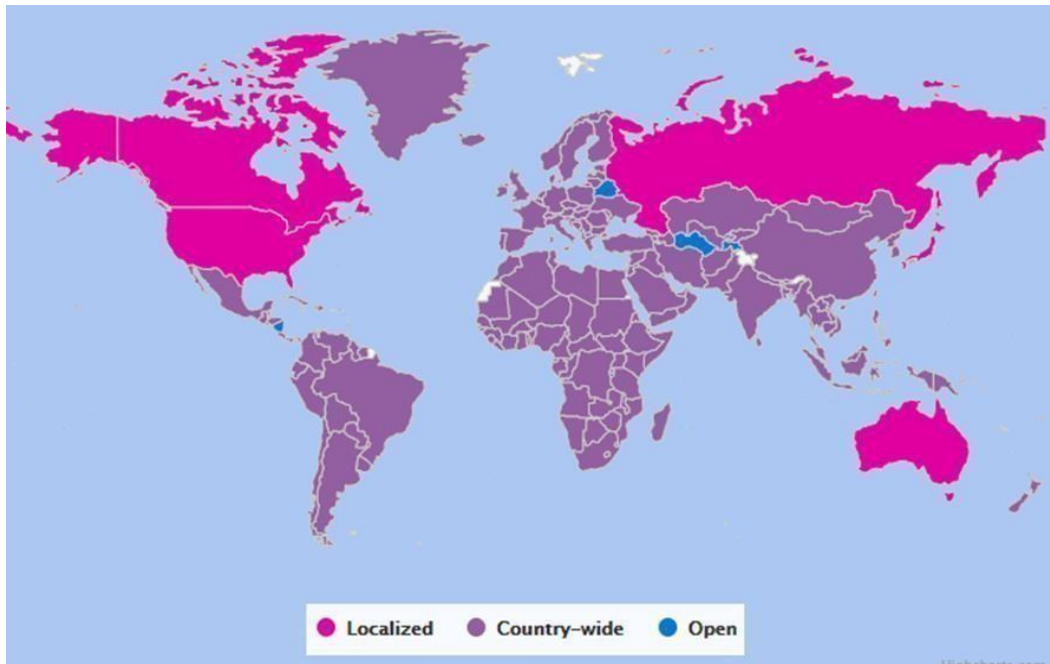
Figure 1.1: Closure of schools across the world (UNESCO 2020; Mahaye 2020)
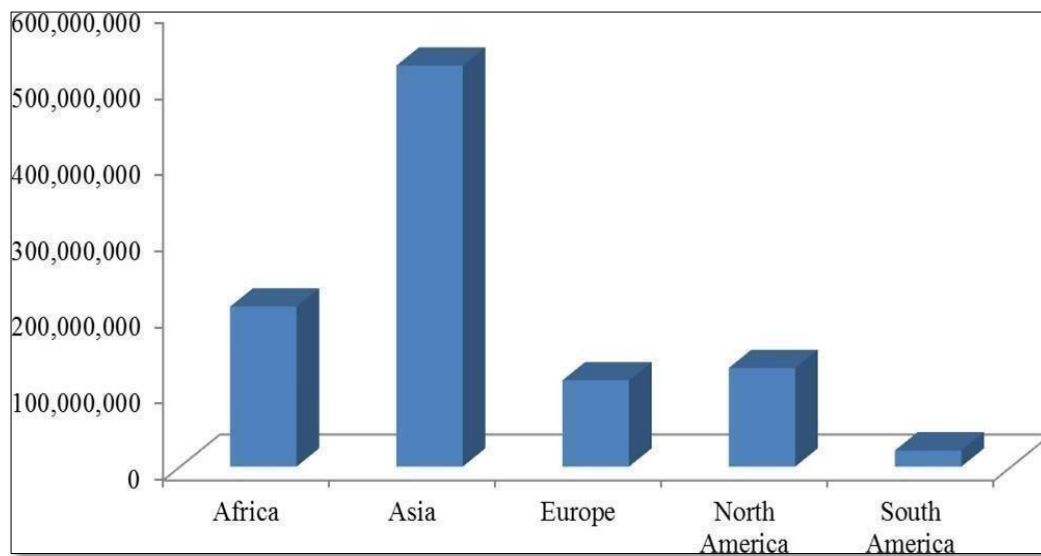
Figure 1.2: Distribution of learners out of school due to COVID-19 (Mahaye, 2020)
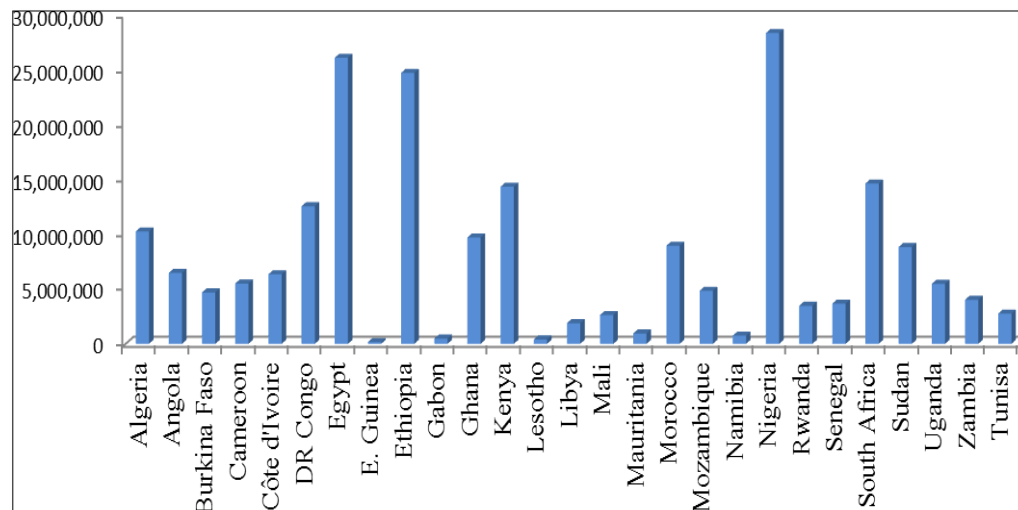
Figure 1.3: Number of learners Affected by COVID-19 across Africa (Mahaye, 2020)

Figure 1 shows that very few schools remained open during the COVID-19 lockdown worldwide as indicated by the blue area (open). In Figure 2, at continental level, over 200 000 000 learners were out of school due to COVID-19. Africa came second after Asia on the worst affected list. Figure 3 indicates how South Africa fared when rated among other African countries. At number four in the continent, South Africa had 15 million learners affected, with Nigeria, Egypt and Ethiopia topping the list. Judging from the figures above, it goes without saying that online learning is a necessity because learning has to go on despite pandemics or any other disasters. Starkey, Shonfeld, Prestridge and Cervera (2021) advocate for vigorous infrastructure development in order to support children "beyond the classroom."

Many countries accelerated online learning when the COVID-19 lockdown was enforced (Starkey et al., 2021). Puleng (2015) argues that 91% of households in Australia have a computer, with 86% of them having internet at home. Zhou Li, Wu and Zhou (2020) postulate that over 98% of schools in China had access to the internet during the COVID-19 lockdown, with 90% of learners participating online. A different picture is created when the focus is on Africa. Only 29% of education institutions in Africa were able to move into the online environment during the COVID-19 lockdown (UNESCO, 2020), with the experience of a 49% failure rate in efforts to apply technology for learning (Tanye, 2017). Adding to the above discrepancies, Gyimah (2020) argues that educators in many developing countries lack the skills and equipment to effectively provide distance learning. A study in Kenya revealed that secondary school preparedness for virtual learning was poor because instructors were not trained to integrate technology into their instruction (Bariham et al., 2020).

1.4.3. Socio-economic impact

The power of poverty cannot be underestimated. Criestie (2008:101) argues that poor people are often rendered powerless by their structured conditions and may feel powerless to act. However, the experiences of educators and learners cannot be generalised. Hedding et al., (2020) observe that not all university staff own laptops or good internet. The same can be said of high school educators and learners. Some lack adequate tools, such as Smartphones and computers, to engage in online learning. The Global Education Report (2019) states that most learners from poor households lack access to computers, the internet, and other digital tools for online learning. Connectivity is, therefore, crucial. Bariham et al., (2020) argue that internet connectivity serves as a "backbone" within which online learning can be implemented. At the centre of the 2015 "Fees Must Fall" movement by university students in South Africa was the call for education to be treated as a right that is entitled to learners and not a commodity. Emphasis was put on the cost and access to educational resources for many underprivileged students, a situation that became prevalent even during the COVID-19 lockdown.

Le Grange (2020) argues that COVID-19 laid bare the severity of the digital divide in South Africa. Patton (2013) observes that most students in township schools or colleges are two years behind those enrolled in suburban institutions in their academic acumen. According to Arendse (2011:344), such learners are prevented from competing on an equal footing with their counterparts. Furthermore, lack of online skills meant that learners who rely solely on the traditional mode of learning were not accessible during the COVID-19 lockdown. Mahaye (2020) advocates for "new alignment and blended learning", arguing that society will never go back to traditional ways of doing things. Mahaye further contends that there is a need for digital equipment to be installed in public schools to ensure equal access to tech-based learning by all South African learners.

1.4.4. Understanding "Generation Millennials"

The context of online teaching and learning should also be understood against the cohort of learners that educators are dealing with: the Millennials. Maphosa (2020) argues that the Millennials' nature is characterised by active participation, flexibility, and the need to be free from a location.

Concurring with Maphosa, Cotze and Van Niekerk (2015:4) describe Millennials as experts in the "latest, fastest, coolest, greatest, and newest electronic technology in the planet." It is worth noting that this group of learners is technologically inclined. The prohibition of cellphone usage by learners at school rings loud, for example, because educators are seemingly interrupting something that is already

a culture among learners. It can be argued that the system should be capitalising on the use of cellphones instead of prohibiting them. Davies and Ellison (1999:36) posit that "we cannot plan in school for the millennium by simply doing more of the same." In other words, advocating for educators and the education system to embrace technology and move with the times. In the same vein, Martinez (2020) posits that this is the time to gravely rethink, revamp, and redesign our education system to meet the demands of the current situation. Martinez is seemingly challenging policymakers to relook at education provision and adapt to changing times.

1.5. RESEARCH METHODOLOGY AND DESIGN

Mouton (2001) postulates that research methodology focuses on the research process and the tools and procedures used. Research design is a plan or blueprint of how you intend to conduct the research (Mouton, 2001:55). This section addresses the type of research used, as well as the research tools and data analysis. The research focused on a particular high school in Kempton Park, Johannesburg.

1.5.1.   Research approach

The study adopted a qualitative research approach. With a qualitative approach, the research attempted to understand participants in terms of their own description of the world (Mouton, 2011:197). The behaviour studied occurred naturally in a school where educators worked. The researcher assumed a complete insider because she had a role in the setting (educator at the school) where data (through interviews and observations) was collected and engaged in genuine participation (McMillan & Schumacher, 2014). The researcher (educator) directly experienced what the rest of the educators and learners experienced. As a result, trust was established. The qualitative approach is also based on multiple realities (McMillan & Schumacher, 2014), thus, making room for the researcher to interview multiple groups (educators, learners) in a social situation.

Interviews were employed to get the educators' and learners' views on their experience with online teaching and learning during the COVID-19 lockdown. Patton (2002) posits that interviews allow the researcher to enter into a two-way conversation where the researcher asks questions to collect data. The researcher learns about beliefs, opinions, views and behaviours, and is able to interpret these through the eyes of the participants. The participants were informed of the data collection instruments used in the study (Creswell, 2014).

The qualitative research design also allows for an in-depth description of cases (Mouton, 2001; Pule & John, 2011). This approach was suitable since this study was a case study of one high school in Kempton Park, Johannesburg. Another advantage of a case study is that the researcher is able to mingle freely with participants in a relaxed environment or context, in this case, a school environment. As a result, participants are bound to give information freely without feeling threatened, thereby contributing to the study's credibility.

1.5.2. Population and sampling

Sampling refers to the process used to select the population for the study (Maree, 2007). The population comprises the entire group of people the researcher wants to study in order to determine some characteristics (Renberg et al., 2011:150). Therefore, purposive or purposeful sampling was employed to select participants. In this type of sampling, the researcher selects particular elements for the population that would be informative about the topic (McMillan & Schumacher, 2014:152). Cohen (2018:219) concurs that purposeful sampling is used to assess "knowledgeable people."

The population for this study consisted of all post level 1 educators, all departmental Heads and all learners at a high school in Kempton Park, Johannesburg. Participants included four post-level one educators (PL1), two Heads of Department (HoD) (PL2), and four Grade 12 learners. The inclusion of HoDs is justifiable because they oversee all learning activities administered to learners in different subjects. The research site is the actual school context where the study took place. This high school was chosen because it is one of the many public schools where online learning was not effectively implemented. However, the advantage was that it is the school where the researcher is based, suggesting that she became an active participant too, hence, increasing the authenticity of the research. The above arrangement also allowed easy access to information from participants who are educators and learners at the school, thereby saving on costs and time.

1.5.3. Instrumentation and data collection techniques

Qualitative data is derived from many sources, such as interviews, observations, documents and reports, and field notes (Cohen, Manion & Morrison, 2011). To generate data, the researcher used semi-structured interviews. Mouton (2011:197) argues that qualitative interviews give the interviewee "the voice." Kumar (2011:42) asserts that with interviews, the interviewer is able to supplement the information obtained from observing non-verbal reactions. Observing the behaviours of participants enabled the researcher to obtain people's perceptions of events and processes expressed in their feelings,

thoughts, and beliefs (McMillan & Schumacher, 2014; Creswell, 2011). Interviews, unlike

questionnaires, have higher response rates (McMillan & Schumacher, 2014) and allow for free, truthful responses from participants (Rensberg et al., 2011). The researcher can also probe to seek clarity and acquire information that the researcher may not have been aware of before conducting the study.

The research was conducted at a selected high school in Kempton Park, Johannesburg. A total of 10 participants were interviewed (four post-level one educators, two post-level two HoDs, and four learners). Although the study focused more on educators, the inclusion of learners was motivated by the fact that anything done by educators in class or at school affects learners – both directly and indirectly.

An interview guide was prepared prior to the interviews, although the order of questions changed depending on the situation (Robinson, 2002). The researcher used open-ended questions, allowing for rich, in-depth responses (MacMillan & Schumacher, 2014). In addition, interviews were scheduled outside of teaching time so that teaching and learning are not disrupted.

Interview questions revolved around Smartphone ownership and data access for learners. For educators, questions were on remote teaching knowledge, connectivity, digital skills, computer ownership, and the extent of support for educators from both the school and the DoE. All interviews were recorded with the permission of the participants. This allowed for verbatim recording. The recordings were then transcribed for comprehensive analysis.

1.5.4. Data analysis and interpretation

Data analysis, in essence, is the sense-making of data in terms of participants' responses, noting categories, patterns and themes (Cohen et al., 2011). The method of data analysis was largely interpretive. Common themes, topics, ideas and recurring patterns of meaning were examined. This method was preferred because it brought insightful interpretations and allowed the researcher to sort large amounts of data into themes for easy interpretation (Jack, 2019).

Sintena (2020) postulates that transcriptions and coding of data should be performed with the help of another person to eliminate bias. The researcher sought the help of another person in this regard. The researcher also allowed participants to read the interview transcripts to confirm that the transcriptions represent their views (McMillan & Schumacher, 2014). Verification of transcripts will increase the validity and reliability of data.

Studying an immediate setting (school) can be advantageous in that there is authenticity, including first-hand experience of the challenges the researcher faces. However, McMillan and Schumacher (2014) caution against this first-hand experience, arguing that it may unduly influence interpretations if not well-handled. Nevertheless, the researcher remained objective in analysing and interpreting data.

1.6. RELIABILITY AND VALIDITY/CREDIBILITY AND TRUSTWORTHINESS

This section comprises steps taken by the researcher to ensure the accuracy and credibility of the findings (Creswell, 2014:250). The findings should be deemed accurate by the researcher and the participants. A study is also accurate if judged by the reader (Gunavan, 2015). To begin with, the researcher established amicable relationships with participants. Flexible questions were constructed, and the researcher constantly rephrased interview questions, putting interviewees at ease to ensure meaningful data collection. The researcher recorded and transcribed the participants' views accurately to avoid misrepresenting participants' perceptions (Sintena, 2020). Sintena (2020) further posits that data and transcription should be made with the help of another person to eliminate bias. The researcher sought a second opinion in this regard.

Additionally, the researcher allowed participants to read transcripts to confirm that the transcription represented their views (McMillan & Schumacher, 2014). Furthermore, the research did not only dwell on positive or comfortable questions. Counter-arguments were considered as they add authenticity to the research (Creswell, 2014). Emphasising the importance of research validity, Creswell (2014:250) refers to it as "one of the strengths of qualitative research."

1.7. RESEARCH ETHICS

McMillan and Schumacher (2014:23) observe that educational research focuses on human beings; as such, it is important for the researcher to protect the rights and welfare of participants. Creswell (2014:257) postulates that qualitative researchers "invade" participants' lives, and sensitive information might be revealed. To be ethically accountable, the researcher thrived to comply will all ethical recommendations and safeguarded participants' integrity and welfare.

To begin with the study in the selected school, the researcher sought permission from the Gauteng DoE. Permission was also sought from the principal before collecting data from targeted educators and learners. Selected participants participated in the study voluntarily. Voluntary participation meant that participants could not be compelled, coerced or required to participate (McMillan & Schumacher,

2014:130). All participants consented to participation via a consent form.

The purpose of the study was also made clear to the participants. It is important to disclose the purpose of the study to avoid what Creswell (2014) calls "deception", meaning that the researcher's view is different from what the participants understand it to mean. Furthermore, to maintain anonymity, the researcher did not link any names with responses; instead, pseudonyms were used to protect the participants' identities during transcription (Lepp et al., 2021).

1.8. LIMITATIONS AND DELIMITATIONS OF THE STUDY

McMillan and Schumacher (2014:25) postulate that education research relies heavily on the relationship with professional practitioners. The success of the research, therefore, relies on how co-operative participants are and how far they are willing to remain objective; otherwise, the results might be inconclusive. Despite anonymity and assurance of protection of collected data, some educators and learners may refuse to answer questions for fear of victimisation. Moreover, the school principal might refuse to answer some questions due to the perception that the shortcomings of the school might be exposed.

The study targeted 10 participants in one high school, thus making the generalisation of results to other schools a challenge. Perhaps a much bigger sample could be more representative, which can be recommended to future researchers. Moreover, using approaches other than the qualitative approach, that is, quantitative or mixed-method approaches, might yield a broader understanding of the impact of minimal online skills on teaching and learning.

Context plays a significant role in research. For example, a similar study may yield different results when conducted at a different school. As a result, transferability becomes limited. Gason (2004) defines transferability as the extent to which the reader can generalise the findings of a study to context and address the issue of how far the researcher may claim for a general application theory.

1.9. DEFINITIONS OF KEY CONCEPTS

Creswell (2014:74) argues that defining terms adds precision to the study.

1.9.1. Blended learning

According to Wikipedia (2020), blended learning is an instructional approach that integrates online learning with traditional face-to-face classroom teaching and learning. Mahaye (2020) refers to blended learning as a system combining face-to-face and computer-mediated instruction. Blended learning is further defined by Garisson and Kanuka (2004) as the thoughtfulness integration of classroom face-to-face learning experiences with online learning experiences.

1.9.2. COVID-19

Mahaye (2020) posits that COVID-19 is a disease caused by a new severe acute respiratory syndrome 2 (SARS CoV-2). The Coronavirus disease was first reported in the city of Wuhan, China, in 2019.

1.9.3. Innovation

Gyimah (2020:2) defines innovation as the application of better solutions that meet new requirements, unarticulated needs, or existing market needs.

1.9.4. Online learning

Rampanta, Botturi, Goodyear, Guardia and Koole (2020:925) define online learning as a type of teaching and learning situation in which there is a distance from the tutor, and the learner uses some form of technology to access the learning material.

1.10. CHAPTER OUTLINE

Chapter 1: Introduction and overview

This chapter presented the background to the study, exposition information pertaining to the topic chosen, the research questions that guide the study, and the significance of the study.

Chapter 2: Literature review

This chapter provided the literature review of the study, focusing on minimal online skills and its impact on teaching and learning, a challenge heightened by the COVID-19 pandemic.

Chapter 3: Research design and methods

This chapter focused on approaches of sampling and methodology used to select participants, data collection, and analysis. Ethical considerations were also outlined in this chapter.

Chapter 4: Data analysis and discussion

This chapter analysed, interpreted and presented the data collected during interviews. The findings were linked to the research questions and relevant literature.

Chapter 5: Conclusion and recommendations

This chapter summarises the findings from the interview data and literature study. A report on the limitations of the study envisaged practice for future research, conclusion, and reflection on the researcher's journey were included in this chapter.

1.11. CONCLUSION

The lack of online teaching and learning skills is a challenge for many educators and learners in South Africa, particularly in public schools. However, various schools will present different contexts. The struggle with online learning is seemingly more prevalent in developing countries, South Africa included. Socioeconomic factors should not be overlooked as they contribute to the problem. To level the playing field, measures should be implemented to ensure equal access to online learning by all South African learners. Moreover, policies and programmes should be in place to ensure that educators adapt to online teaching and learning.

CHAPTER 2: LITERATURE REVIEW

2.1. INTRODUCTION

Cohen (2018:162) postulates that a literature review gives credibility and legitimacy to the research, showing that the researcher has "done his or her homework" and knows the up-to-date key issues and the theoretical, conceptual, methodological and substantive problems in the field in which the research is being proposed. Furthermore, Cohen (2018) argues that a literature review acts as a springboard into the study, raising issues, showing where there are gaps in the research field, and providing a partial justification of the need for the research. The researcher is also cautioned not to "reinvent the wheel" (Cohen, 2018:162). In other words, Cohen suggests that researchers should widely research in their fields of study but ensure they do not merely reproduce what other scholars have written but be critical of ideas presented and raise questions that need answers. From another angle, Cohen (2018:181) likens a literature review to "an extended essay" that sets out an argument, points in favour of this argument, points against the argument and ultimately, the conclusions based on the points raised. This scenario pictures research as a systematic entity with some form of cohesion.

The qualitative nature of the study would mean that the research focus and questions may evolve as the research unfolds and therefore requires a "continuing literature review" (McMillan & Schumacher, 2014:108). The literature review underlying this study focused on the lack of online skills and their impact on teaching and learning, with special emphasis on the need for educators and learners to be well-equipped in order to adapt to online learning. The challenges encountered are detailed in the following paragraphs. In addition, other countries' views on online learning will be gathered and discussed. The literature will also reflect on the number of learners who had access to online facilities during the COVID-19 lockdown and how teachers navigated this terrain. These numbers indicate the need to continue with the curriculum despite COVID-19. This supports Mahaye (2020) and Williamson's (2020) views that learning should continue outside the classroom and that avenues should be established for teachers to continue teaching without limitation.

This research delved into the positive and negative sides of online teaching, the 21st century learners and their preferences, and the digital divide. The school environments will also be discussed to ascertain whether leadership and management enable online teaching and learning. The leadership question resonates with the view that leadership requires interaction, relationship, influence, and doing rather than being (Notolicky, 2020). Direen (2017) argues that each leadership aspect is magnified in times of crisis. Furthermore, the literature established whether there were systems and policies in place to enable

online learning and its effectiveness. Education, like other facilities, does not occur in isolation. Therefore, the context of South African education will be explored in order to ascertain the extent to which it influences education provision in general and indeed online facilities in particular.

2.2. SOUTH AFRICA'S EDUCATIONAL CONTEXT

To fully understand the COVID-19 challenges and their impact on education, specifically online learning, it is important to look at the context of the South African education system. Black, Spree and Vally (2020:53) posit that COVID-19 must be contextualised and linked to historical and socio-economic dynamics. Reimers (2022) argues that the education system in South Africa is structured but fragile, and this fragility dates back to apartheid injustices. The above scenario provides a lens through which the education system in South Africa can be viewed. Reimers (2022: 306) refers to the South African education system as the "young system struggling to divest itself of its apartheid origin." In other words, there are still characteristics of apartheid tendencies in the current education system and provision.

Another nature of South African education, according to Reimers (2020:307), is that it is a "two-tiered" system, as it consists of public and private schools. The above system is also relevant to the study because it seems the provision of education in public schools differs significantly from that in private schools. In agreement, Pillay (2021) posits that education and facilities are very different in private schools compared to public schools and that most rural and public schools are under-resourced. Reimers (2020) concedes that these structural divisions make the management of the education system difficult.

South African schools are also ranked according to quintiles, ranging from one to five (Rwodzi, 2021). Those in quintiles 1 and 2 are the poorest, while quintiles 3, 4 and 5 have relatively stable income streams. Most quintile 1 and 2 schools in Gauteng are located in townships and informal settlements (Van Dyke & White, 2019). The ranking of schools according to quintiles is, however, not a true reflection of the characteristics of schools. For example, the high school under study is a quintile 5 former model C school located in Kempton Park. However, in reality, learners attending the school are from nearby impoverished townships, and their parents can barely pay school fees, with some parents being exempted from paying school fees altogether. Like their counterparts in quintiles 1 and 2, these learners struggle to afford the basics, let alone access to online facilities.

Another reality to be understood is that learners are taught English as a Home Language, yet English is not their first language (Mbatha, 2016). As a result, learners' English language proficiency is low. This situation was worsened by COVID-19, where all learners were forced to adapt to the same pace as those

with linguistic competency. Trotter, Huang and Czerniewicz (2022) refer to these discrepancies as historical linguistic inequalities, adding that these discrepancies have intensified as online learning tends to privilege the middle-class English speakers who are already fluent and quick.

Significant steps were taken at the dawn of democracy in 1994 to adopt policies aimed at redressing past injustices and inequalities, thus promoting democratic principles. According to the School Governance in South Africa, one such example would be the South African Schools Act of 1996, whose key objective is to democratise education (RSA, 1996).

It is disheartening, however, that such Acts and policies remain engraved on paper and not implemented. Coupled with COVID-19 complications, the reluctance by the government to implement policies further fuelled the existing inequalities in the South African education system. The question that remains is whether or not these inequalities will be eradicated by 2030 as per the aim of the National Development Plan 2030 (RSA, 2011).

The preamble of the South African Constitution (Act 108 of 1996) dictates that past injustices should be recognised and efforts made to heal these. The White Paper on Education and Training of 1995 advocates for an education system that is free from discrimination. Surprisingly, South Africa is still dubbed the most unequal society (World Bank, 2019). After 28 years of democracy, it cannot be fair to attribute existing educational inequalities solely to the apartheid system. Surely the existing government should be blamed for not speeding up policy implementation. Pillay (2021) agrees that the failure of the democratic government of South Africa to prioritise development in schools is also a contributory factor to existing inequalities. To justify his view, Pillay (2021) references the Zondo Commission that is currently attempting to uncover widespread looting and misuse of state funds that could have been channelled to addressing inequalities in education. It is clear that as we ponder the existing educational inequalities, difficult questions must be asked on the root cause of the challenges in schools, especially public schools, and genuine answers should be sought.

2.3. ONLINE LEARNING UNDERSTOOD

Online learning is defined by Wang, Pang, Zhou, Ma and Wang (2021) as instruction delivered via various devices to facilitate learning. Rampanta, Botturi, Goodyear, Guardia and Koole (2020) posit that online learning is learning that is mediated by the internet. The above definitions reflect that online learning involves the use of technological devices. Churiyah, Shulikhan, Filianti and Sakdiyyah

(2020:492) add another dimension defining online learning as teaching and learning activities carried out through the use of technology and information in a structured manner in which there is communication between students and teachers. From the definition of Rampanta et al. (2020), online learning is depicted as a systematic, reciprocal process that has to be planned. It must result in the realisation of teaching goals; hence, the need for educators who are well-trained to undertake this exercise. The opposite was true at one high school in Kempton Park, Johannesburg.

Several researchers argue that online learning, ushered in as a response to the COVID-19 lockdown, shocked the education system (Reimers, 2020). Although millions of employees in various entities and departments worked from home with their laptops and other digital devices, this was not the case with educators and learners. McKinsey (2020) postulates that the closure of schools on a wide scale was met with no practical way to shift to online learning. In other words, teacher and learner preparedness was in question. McKinsey (2020) and Gyimah (2020) argue that in many developing countries, teachers lack the skill and equipment to effectively provide distance learning. COVID-19 laid bare the reality that teaching and learning cannot only be confined to the physical classroom (Wahob, 2020; Maphosa, 2020). Education and technology cannot be separated.

The reality, however, is that online learning will be part of our lives in the future. Guet-Zoian (2020) argues that it is no longer possible to return to "traditional" education, calling it a "new step in education." Sandler (2020) agrees with the above view, suggesting that the world will never be the same again as COVID-19 has "reconstituted" our lives. Martin (2017:428) adds that online learning is not the "next" big thing, but it is the "now" big thing. These researchers believe that even if the pandemic ends, online learning will remain an essential component of the education system and that online education has come to stay (Marcus, 2020).

2.3.1. The benefits

Despite the difficulties encountered by educators and learners, Reimers (2020) postulates that there were benefits that came out of this shock, referring to it as a "silver lining." Parental involvement in schools has always been a contentious topic, with educators accusing parents of dumping their children at school and leaving teachers to deal with the problems. However, with the advent of online learning prompted by the COVID-19 pandemic and subsequent closure of schools, Reimers (2020) posits that there has been a mutual recognition between the parents and the teacher, each recognising the other's role. As a result, more co-operation and collaboration were realised, especially with parents getting involved in

the supervision of work posted on various platforms by teachers to learners. By so doing, parents gained more insight into their children's learning (Bubb & Jones, 2020). Barry (2022:69) further concretises this view saying that as parents grappled with online learning and supporting their children at home, they realised that "noman is an island", suggesting that it dawned on them that teachers cannot teach on their own but need parents' help.

For learners, online learning provides independence and the responsibility of working without supervision by teachers. Khatoon, Jafre, Mizra and Pathon (2020) posit that online learning also became a source of motivation for learners through multiple features, such as videos and audio. These researchers further argue that online learning encourages homework submission and class attendance. Online learning also frees learners from bullying, a topical issue in schools. Learners do not feel victimised when they ask questions online compared to doing so in class in front of other learners. Reimers (2020) argues that a general appreciation of teachers by learners is encouraged as learners learn not to take teachers for granted, realising there are days when they would not be readily available. Another advantage of online learning postulated by Addae, Amponsah and Gborti (2021) is that students who engage in digital learning retain between 26% and 60% of what they learn compared to the 8% to 10% retained by those in traditional classrooms. If well-conducted, online learning can impact teaching and learning positively.

With high levels of stress among educators emanating from the realities of the classroom, such as overcrowding and learner discipline, the online learning platform provides a platform for educators to socialise with fellow educators, especially beginner teachers who sometimes experience isolation from other adults (Putri, Khairil & Safrida, 2022). Barry (2022) concurs with the above view, arguing that it is folly to provide training that focuses only on academic knowledge and instructional skills, and ignore the emotional part of this training. Teaching should therefore be viewed as an emotional practice too. For Martin (2017:119), the online experience is seen as a "sharable" entity. He argues that in the digital age, social networking sites provide educators with an opportunity to create Personal Learning Networks (PLN), which helps them to acquire online skills and knowledge. In other words, Martin (2017) believes that when educators engage in online activities they collaborate with fellow educators and refine their skills in the process. This is the opposite of educators working as individuals, dubbed by Martin (2017:152) as "lone wolves."

The shift to online learning also opened paths towards improving schools and the education system in general (Reimers, 2020). For example, in South Africa, schools in the remotest areas got appropriate

facilities for the first time due to mandatory safety and hygiene protocols during the COVID-19 pandemic. Davids (2020) posits that schools in economically poor communities got basic sanitation and water infrastructure for the first time – facilities necessary for all schools, with or without disasters. Azorin (2020) concurs, stating that COVID-19 provides a golden opportunity to rethink what matters most in schools.

There are ongoing online workshops and training on various content for educators in different subjects in Gauteng and other provinces, perhaps a sign that systems are being put in place due to the lessons from the lockdown. However, schools still battle with connectivity, while continuous load shedding is not helping either. Another obstacle is that these online meetings and workshops are usually scheduled for 14h00, which is usually teaching time, meaning most educators would choose to remain in class teaching than attend these crucial meetings. Nonetheless, the efforts cannot go unnoticed.

2.3.2. The costs

Jansen (2020:176) argues that humans thrive on contact, to be touched, to be looked in the eye. To an ordinary child, online learning took away contact or regular instruction, which is a key component of the school. The nature of student-teacher interaction, which normally occurs naturally in the classroom, was interrupted. Tarkar (2020) postulates that school contributes to children's social awareness and social skills. The online learning setting took away the social atmosphere of the school that enables learning. Kim and Asbury (2020) are of the view that when learners are alone in their individual homes, they are more vulnerable and unprotected, arguing that schools and teachers act as "safety nets" (p. 1076). Jansen (2020:174) adds that at home, "destructions are everywhere", implying that a physical classroom is a suitable place for learners to be in to fully concentrate. Perhaps in the absence of contact learning, some learners could not comprehend what they learnt, thus, failed their tests. Expanding on this view, Sayed and Sigh (2020) observe that education should be viewed as "socially relational", adding that a child must be holistically developed, not seen as a vessel for taught content only. Further concretising the view, Devin (2020) posits that human-to-human relations are lost online.

According to Le Grange (2020), online learning saw a rise in profiteering and opportunities over the quality of services offered. Companies ripped off the government of millions of rand to provide services. Concurring with the preceding view, Gyimah (2020) argues that commercial production infiltrated the education space without quality control resulting in poor-quality products offered at exorbitant costs. Other labels given to online learning include "privatisation of public education by stealth" and "techno-

capitalism" (Sayed & Singh, 2020). These terms speak to the misdirection of resources by those who went for profit-seeking during a pandemic.

Online learning also worsened existing inequalities, especially in rural settings, where learners struggle with connectivity (Gyimah, 2020; Le Grange, 2020; Dube, 2020; Sayed & Singh, 2020; Pillay, 2021; Black, Spree & Vally, 2021; Chan, Bista, Krishna & Allen, 2022). Adding to the woes was the high cost of broadband, which made education inaccessible to those who need it the most, namely the poor. According to Salbury and Hansen (2022), in Montana in the United States of America (USA), only 63.6% of Montana residents have broadband access, and the average internet cost is $91.54 per month. The costs will mean learners from poor families cannot afford to attend online classes. These researchers attribute the high costs to limited network competition. When considering the scenario in South Africa, leading networks such as Vodacom and MTN might monopolise the space. Carlanan and Ferara (2021) argue that where education is well-funded, more success stories could be realised through using technology to promote learning.

2.4. 21ST CENTURY LEARNERS

Several researchers argue that the ground is fertile for online learning. This is so because our learners are already motivated to use digital gadgets and do not need to adapt. Online learning should be understood against the background of the calibre of learners we are dealing with. Studies have shown that 94% of teenagers go online every day, they check their phones 150 times a day and send 110 text messages a day (Maphosa, 2021:3). Other terms associated with the 21st century learners include "digital natives", "tech-savvy" (Maphosa, 2020:3), "stimulus- junkies" and "silent generation" (Swanzen, 2018:131-132). It is safe to say that any innovative ideas as far as technological advances are concerned are bound to be well received considering the above realities about the crop of learners we are dealing with.

The constant tension among educators and learners on using cellphones at school highlights the eagerness of learners to use these and other technological devices. With growing calls to incorporate digital learning in schools, one wonders if the prohibition of cellphones would not go against the very objectives for which they are being advocated. One may argue that instead of advocating against cellphone usage in schools, educators and the education system should capitalise on this obsession that young people have for cellphones to advance effective remote-based learning. A robust and open debate should be considered on this topic. After all, Maphosa (2021) argues that a study across sub-Saharan

Africa revealed that mobile phones have improved learning opportunities and enabled learners to discover their potential. Martinez (2020) postulates that perhaps it is time to revisit and redesign the education system to be relevant to current educational demands.

Based on Swanzen's (2018) study, the strategies for teaching 21st century learners should consider that these learners value and expect aesthetically appealing educational presentations. For example, the study carried out by Kravale-Pauline, Romanovska and Presnakova (2021:45-46) at a Lactiva Regional university details the concept of "gamification", which is the use of games in study programmes, adding that games can work productively in Information Technology (IT) courses. Furthermore, the findings of the study above revealed that both lectures and students reported that interactive games make studies more challenging and encourage critical thinking. One learner noted that games replace "lengthy boring lectures." Swanzen (2018) concurs with the above view on using games, stating that the learning process for 21st century learners must be fun and modern (p. 143).

2.5. ONLINE LEARNING AND TEACHER PREPAREDNESS

Teachers are a social fabric that holds the education system together (Kim & Asbury, 2020:1079). Therefore, enabling their competency in relevant skills is important. Hassan (2021) argues that effective online learning depends on educators' technical skills and knowledge. Hilmi (2019) avers that one of the most damaging perceptions of teaching is that it is an easy profession. Such perceptions negate continuous teacher training in various skills, including online learning skills. Aziz and Hamza (2020) concur, adding that untrained teachers cannot conduct online classes. Online skills are a requirement for educators – both in administration and teaching (Sayaf, Alamri, Alqahtani & Alamri, 2022) – a skill that was lacking in one high school in Kempton Park, Johannesburg, and continues to be a challenge.

Rwodzi (2021) argues that in the South African context, educators are to use Information Communications Technology (ICT), but are not instructed on how to go about it. Lack of teacher training is, therefore, a major contributing factor in hindering learner progress in online learning. Kim and Asbury (2020:1070) describe the anxiety and insecurity that educators had at the beginning of online learning, suggesting that it was "like a rug had been pulled under you." On the other hand, Trust and Whalen (2020:193) refer to it as "building the plane while flying it." This emphasises how overwhelmed educators were as they scrambled to shift from face-to-face learning and prepared to delve into the unknown territory of online teaching. Brand (1997) posits that the education system has failed to empower educators in computer-related technology in the classroom, referring to it as a "miserable job."

It is clear from the above views that teachers need training in online teaching-learning skills and that the education system and the government should speed up the process of arming educators with these skills.

In the study conducted by Lekgothoane and Thaba-Nkabinde (2019) in Limpopo schools, the findings laid bare the government's failure in equipping educators with one educator saying she would rather continue using traditional teaching method than "queuing to access one laptop allocated to my department." The above scenario resonates with the situation at the high school under study in Kempton Park, Gauteng, where there is no single computer for over 70 educators. This echoes Martin's (2017:113) view that as classrooms and schools become computer-competent, teachers must be prepared to use technology in the classroom. However, teachers want to engage in online learning, but a lack of resources stands in their way. This was evident in one high school in Kempton Park, Gauteng, where educators' efforts at the height of the COVID-19 lockdown were demonstrated. Many of them came up with innovative ways to keep in touch with learners to the extent of sacrificing their own data and other expenses, although they couldn't access all learners. For example, educators in different subjects formed WhatsApp groups where activities were sent to learners and learners responded on that platform. It is for this reason that Starkey et al., (2020) call for the teaching profession to be celebrated globally, adding that instead of focusing on teachers' shortcomings during the COVID-19 lockdown, focus should also be directed to the teachers' efforts towards helping learners. Bubb and Jones (2020:210) argue that educators were willing "to go the extra mile."

The White Paper on e-Education envisaged that every South African teacher and learner in the general and further education bands would be able to use ICT to develop the skills and knowledge they need and be lifelong learners in the global community by 2013 (DoE, 2004). Yet, 18 years after the policy was promulgated, access to information technology and computer literacy among educators and learners remains a far-reached dream.

The contents of policies such as the White Paper on e-Education above are not implemented; thus, educators are not equipped with relevant skills to impart to learners, despite educators being a significant factor related to student achievement (Martin, 2017). Even before COVID-19 struck, many educators, especially those in public schools, lacked online teaching skills. Reimers (2020) posits that educators were thrust into a territory in which they had no experience. The result of such a move was teacher stress and frustration. South Africa is also a signatory to the Millennium Development Goals (MDGs) agreed to in 2000 at the General Assembly of the United Nations (Martin, 2017). One of the MDGs speaks to teacher professional development in terms of scope, funding, impact and logistics (Martin, 2017:153).

Therefore, South Africa is bound by the above goal and should make right on the pledge.

The 2015 tablet rollout in Gauteng schools is one such example. Although the initiative was meant to improve teaching and learning, it was met with teacher resignation, with educators citing a lack of knowledge on how to use the tablets. The resistance was more pronounced among older teachers whose knowledge was mostly limited to the traditional "chalk and talk" method. The educators' response resonates with the view Urlaub and Dessein (2022) held that when confronted with a new phenomenon perceived as a threat, a common human reaction is to wish it away. Educators could not use the tablets they were trained to use, so they chose an easy way out: quitting their jobs. Lepp, Aaviku, Leijen, Pedaste and Sak (2021) add that lack of preparation for online learning is perceived by educators as a significant contributor to stress in the workplace.

Summing up teacher predicament during COVID-19, Sayed and Singh (2020:31) postulate that:

> The dilemma in which teachers are placed can be compared to that of a surgeon who, having previously been asked to do heart surgery with no equipment other than a rusty pocket knife is now asked to do this in the dark.

In other words, Sayed and Singh (2020) posit that educators have always had it tough and that COVID-19 and the subsequent lockdown that called for accelerated online learning exacerbated existing problems. Urgent interventions are therefore needed to curb another scramble in future disasters. Moreover, many researchers argue that COVID-19 might not be the last pandemic. In the words of Soudien (2020), the world will never be the same again. Therefore, investing in education through teacher training in online skills is vital.

The emphasis on the rushed approach to implementing online learning during COVID-19 and a lack of facilities and teacher skills meant that teachers were destined for failure. However, according to Jansen (2020), educators were still expected to excel in servicing learners. Views such as those from Sayaf, Alamri, Algantanic and Alrahmi (2020) suggest that face-to-face learning should be revamped to ensure relevance in 21st century education ring loud as a solution to ongoing teacher and learner challenges with online learning. The 21st century classroom has changed, thus, there is a need to align teaching and learning with current educational trends. Flexibility and agility are key. Difficult questions should be posed, for example, whether the current educational policies might be too outdated to fit into the existing terrain or whether these policies should be altered or eliminated to pave the way for new ones. Hassam

(2021) argues that training in online learning should be in such a way that it can continue into another emergency.

Several researchers argue that the lack of teacher preparedness was not confined to the South African context but cut across the divide. Bariham, Ondigi and Kiio (2020) detail the challenges encountered in schools in Ghana in an attempt to shift to virtual platforms and teacher preparedness to use these platforms. Their findings revealed that educators lacked ICT technical skills to engage in online teaching and learning. A similar sentiment is echoed by Mulenga and Silumba (2022) about Zambia's educators who lack the competence to handle online learning.

Even beyond the African continent, teacher challenges were reported. For example, Reimers (2020) argues that although Japan prides itself on educators with high professional degrees, this professionalism does not translate to using ICT devices, further arguing that only 18% could use ICT devices. In Indonesia, educator preparedness for distance learning was also in question. Churiyah et al., (2020:490) posit that teachers in Indonesia tended to "stutter about technology" meaning that they were not sure of what they were doing regarding adequate platforms and online activities.

2.5.1. A case in the developed world – Estonia and Norway

Developed and developing countries presented notable differences in handling online learning primarily because of differences in infrastructure. A European scenario can be demonstrated by looking at Estonia, a small country with a population of 1,331 million (World Bank, 2020). Lepp et al., (2021) detail how the transition to online learning in Estonia tested the country's digital system effectiveness. After the lockdown announcement, 15,843 educators and 153,155 learners had one day to prepare learning activities, receive laptops and workbooks respectively, and begin online learning. With ICT resources in place, teachers and learners in Estonia continued with the curriculum during the lockdown.

Furthermore, Estonia is said to be one example of a digitally capable society with the best infrastructure in the world (Lepp et al., 2021:37). In addition, online learning was supported by the Estonian Lifelong Learning Strategy (ELLS). One may wonder how the Estonians achieved the smooth transition from face-to-face to distance learning. The answer lies in planning ahead, not waiting for disaster to strike, and then acting impulsively. Lepp et al., (2021) argue that by 2014, the entire Estonian population was well-equipped with digital skills and access to new generation infrastructure like the web application which connected teachers, learners and parents around the country, as well as e-School, which is an online library that enabled teachers and learners to access a wide variety of educational resources. The above

setting meant that when COVID-19 struck, and online teaching-learning was affected, Estonia was already prepared as systems were in place for online learning to start. The study carried out in Estonia amongst 15-year-olds on their views on the digital tool supports the Estonian experience. Responses expressed satisfaction. The Estonian scenario sharply contrasts with most developing countries in how they handled online learning. South Africa was one of the many countries with a plethora of problems ranging from a lack of devices and connectivity for educators and learners to various inequalities in online learning provision.

A picture similar to the Estonian one was reflected in the manner in which Norway handled the online transition. Bubb and Jones (2020:211) detail the Norwegian experience arguing that Norway is one of the wealthiest countries in the world and a "big spender" in education (p. 211). The above researchers argue that when the lockdown started and online learning was introduced, Norway was better equipped with technology than many other countries. 93% of Norwegian learners attended digitalised schools (Bubb & Jones, 2020:211). Like Estonia, digital learning infrastructure in Norway was in place well before COVID-19 started, making it easy to transition to online learning. All learners had tablets or laptops, while educators had laptops and had received relevant training (p. 213).

2.5.2. Developing countries – Zimbabwe and Ghana

Contrary to Estonia and Norway, Zimbabwe's response to the COVID-19 lockdown and transition to online learning, like with other developing countries, was fraught with challenges. To begin with, 4.56 million learners who depended on face-to-face teaching got affected when the lockdown was effected (Ocha, 2020). Subsequently, radio was declared by the government as the primary tool for supporting teaching and learning (Maphosa, 2020). However, ZimStats (2018) reports that only 23,1% of the population has access to radio in Zimbabwe, suggesting that the majority cannot access the service. Zimbabwe partnered with UNICEF to broadcast radio lessons during the lockdown (Mopse, 2020). Maphosa (2021) argues that radio is a powerful, cheap medium that can bridge the divide by penetrating remote areas and reaching large masses. On the other hand, the above researcher posits that radio was not an effective tool for learning in Zimbabwe during the lockdown, arguing that learners experienced weak or no signals, especially in the southern parts of the country. Despite the benefits of radio usage, some researchers argue that radio is a primitive tool to use with 21st century learners (Maphosa, 2021).

As with Zimbabwe, Ghana had its challenges in handling online learning during the COVID-19 lockdown. According to Bariham et al. (2020), the Education Sector Analysis (ESA) in the Ghana Education Sector Medium Term Strategy of 2018-2021 noted several weaknesses in the education system. These weaknesses included inequalities in education and poor learning outcomes. Making matters worse was the fact that these weaknesses were not addressed. One striking feature common to Ghana, Zimbabwe, and the majority of other African countries regarding online learning provision is the lack of infrastructure. In addition, many policies agreed upon are either not being implemented or are taking longer. For example, the DoE (2004) asserts that Africa adopted the New Partnership for Africa's Development (NEPAD) which identified ICTs as central to the struggle to reduce poverty in the continent. Yet, the continent is still lagging, and the poverty gap is widening.

2.5.3. Way forward and lessons from other contexts

It is argued in the White Paper on Education and Training (DoE, 1995) that the direct way of raising the quality of teaching and learning is through a comprehensive reform and in-service education of teachers (INSET). Educators should be trained to ensure that they are competent with online skills. The National Development Plan 2030 envisages that attention should be given to continuing development of teachers and professional development. In this way, skills development is promoted as educators are trained on how online gadgets operate. Adding to the above views, Toquero (2020) challenges higher education institutions to scale up the training of teachers for online learning instruction.

Darling-Hamond, Hyler and Gardner (2017) define professional development as structured learning that results in changes in teacher practices and improvement. Key to the above definition is the emphasis on the change and improvement of teachers. However, it is regrettable that with the peak of COVID-19 supposedly come and gone, the urgency in equipping educators with these skills is fast diminishing. It can be argued that despite all the lessons learnt during COVID-19, the government and DoE seem to be regressing, resorting mostly to the traditional way of teaching. What will happen if future disasters strike, is a question to be pondered. Arizon (2020:381) presents a challenge to all stakeholders in the education system when declaring that the post-pandemic universe has two possibilities open to us: either return to traditional education as before or transform towards another education system. The latter would seem relevant at this time because the afflictions of COVID-19 have given us lessons.

Perhaps South Africa can take a leaf out of the Norwegian education, which, like South Africa, is predominantly characterised by public schools (Reimers, 2020). Reimers details the great amount of

teacher autonomy in the national curriculum. Teachers in Norway only use the national curriculum as a framework and guideline. The same holds true for Finland's education system, where educators are seen as developers of themselves, provided with opportunities to work in contexts that promote their autonomy (Niemi, 2015). The Norwegian and Finland approaches are a sharp contrast to the South African education system, where many educators are frustrated by rigid policies, some of which are not in line with school contexts. For example, lack of flexibility in packed teaching schedules. Annual Teaching Plans (ATPs) are packed with content to be taught within a short time and accompanied by multiple directives from policymakers. Such rigidity makes decision-making difficult during times of crisis.

Considerable teacher autonomy and flexibility in general should be considered. Top-down decision-making should not always dominate school governance. Instead, school managers and district education officers should value teacher input (Mulenga & Silumba, 2022). After all, teachers have the most direct and sustained contact with learners. Supporting the above views, Kim and Asbury (2020: 1078) argue that teachers should be included in national education-related decision-making. The effects of the centralised approach became more pronounced during the COVID-19 lockdown, leaving educators helpless in schools. Jansen (2020) argues that despite the above challenges, it was "assumed" that teachers would "seamlessly" adjust to their teaching in line with the new protocol. This mission was impossible to achieve. Kose, Kancee and Yildirim (2022) suggest that education must undergo dramatic changes that make it necessary to update policies and procedures, perhaps policies that would enable more teacher input and flexibility.

The lack of localised systems also affects decision-making in school leadership. The COVID-19 lockdown and subsequent move to online learning exposed the weaknesses of this approach. In one high school in Kempton Park, Gauteng, ideas that could have helped learners during online learning were not implemented because the department "could not approve" them. Omandi (2021) argues that, in Kenya, half the school administrators did not have an emergency action plan regarding the pandemic process and so waited and followed one from the Ministry of Education. Meanwhile, learners would bear the brunt of delayed decisions. According to Omandi (2021), the effective way would be to equip leaders with crisis management and co-ordination. Crisis times, such as when pandemics strike, need versatile leaders. Additionally, systems should be put in place to permit this so that teaching goals are realised.

2.6.   IMPACT ON LEARNERS

When COVID-19 struck, learners felt the brunt mainly because most schools, especially public schools in South Africa and many other countries, were not prepared for online learning. Hassan (2021) posits that learners struggled to join class videos and access general resources on online platforms. For example, at one high school in Kempton Park, Gauteng, the school relied exclusively on individual teachers' initiatives. As a result, with limited data or none, learners were following platforms of more than seven subjects. Niedre-Lathere and Samusevica (2020) propose that schools should set up centralised systems to avoid chaos in online learning.

In addition to the daily struggle to access online platforms, there was the psychological impact of online learning on learners. CNN Indonesia (2020) postulates that most students perceive distance learning as a burden causing psychological illness. South African learners were not immune to the above assessment. Barry (2022:62) argues that the importance of emotions is often underplayed because they are not always directly observable. Learners were not only worried about COVID-19 and online learning but also endured mental challenges. It was, therefore, important to address learners' emotions and find out how they handled the change and anxiety that came with online learning, which to many, especially those from poor backgrounds, was a foreign entity. Niedre-Lathere and Samusevica (2020) suggest the inclusion of psychologists in the online learning process to address the emotional aspect.

The challenges of online learning and the lack thereof were more pronounced among poor families. Salsbury and Hansen (2022) argue that in the USA, there were reports of students working from parking lots to capitalise on the free Wi-Fi in buildings nearby, which was a sign of desperation. Bariham et al., (2020) further concretise the point above when they write that internet connectivity saves as a backbone for the effective implementation of online learning. Jansen (2020:172) refers to "bread over data" agony where learners felt that asking for data for online activities meant exhausting the very meagre social grant meant for food for the entire family. Arizon (2020) concurs with Jansen, stating impoverished families had difficulty choosing between internet services and putting food on the table.

It should be noted that not only did learners struggle with data, but some did not possess the very phone meant to link them to the educators, with many reporting sharing a single device with parents and siblings. Niedre-Lathere and Samusevica (2020) argue that in instances where parents are struggling, schools should provide support to such learners. Daniels (2020:93) adds that these are "anxious times" for students and parents who are uncertain when life will be normal again. What further compounded the

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problem was the lack of study space and time because most children's homes are crowded and not friendly to learn (Jansen, 2020; Pareek & Sani, 2020). This could include noise from other siblings, especially younger ones invading study areas.

In South Africa, the dire situation of learners who could not afford the bare necessities of online learning prompted the South African Students Congress (SASCO) to call for a complete boycott of online services at all universities (SASCO, 2020). The strength of the current education system in South Africa is in the classroom because most learners can only benefit from contact learning. Sushma (2022) adds that many children could not attend online classes due to the unavailability of the required gadgets.

One wonders where this all began. A picture can be painted in reference to one high school in Kempton Park in Gauteng. With an enrolment of 1715 learners, the school has 25 computers, with only 88 learners studying Computer Applications Technology (CAT) as a subject. This leaves more 1 627 learners unexposed to computers at high school. For those doing the subject, the number translates to a 1:4 learner-computer ratio. Learners exposed to computers make up 5%, while the bulk of those not doing the subject make up 95%. Yet, these learners were among those who were expected to master the very skill they were not exposed to at school when COVID-19 struck, forcing schools to adopt online learning. These learners were set for failure. A take from the above scenario is that there is a need for the government to invest in infrastructure such as fully furnished computer laboratories. The e-Education policy of 2004 envisaged a crop of educators and learners equipped with 21st century skills and the promotion of online content (Lekgothoane, 2020). It is clear that none of these policies are implemented because schools are struggling with technology infrastructure, many of which are previously disadvantaged public schools, both rural and township (Lekgothoane, 2020:30).

2.6.1. The digital divide

The digital divide is still an obstacle to most schools' effective utilisation of virtual learning (Bariham et al., 2020). According to the Global Education Report (2019), most learners from poor households do not have access to computers, the internet and digital tools for online learning. Kose et al., (2020) argue that while some schools provided chrome books and internet hot spots during the COVID-19 lockdown to many learners, this privilege remained a nightmare. COVID-19 compounded this gap with millions of learners from low-income families failing to access the bare necessities. Black et al., (2020:54) posit that COVID-19 has shown how "violently" unequal our schools are and that the fault lines of inequality were laid bare. Another stark reality of inequalities in South African education was revealed by Patton (2013), who argued that learners attending township schools are two years behind their suburban counterparts.

With the World Bank (2019) citing South Africa as the most unequal society, it follows that unequal academic outcomes could be realised. Jansen (2020) details a study carried out in South African schools under the question, "What were your experiences of learning under lockdown?" where 84% of the respondents were high school learners. The findings revealed that there were digital divides among learners accessing learning technologies, with the elite schools transforming from face-to-face to online relatively smoothly compared to less resourced ones, the bulk of which were public schools. The above sentiments were echoed in the interview conducted on ENCA (2022) with the principal of Curtis Nkondo School of Specialisation on reflections on the challenges of the lockdown. Curtis Nkondo School of Specialisation is a full ICT school. The principal, Lindiwe Ndzala, admitted that although educators were not fully trained, the school remained fully operational with few glitches where online learning was concerned. This will be in sharp contrast to one high school in Kempton Park, Gauteng, where the majority of learners spent the entire lockdown with no contact with educators.

Sayed and Singh (2020) reflect on the need for a deliberate dialogue in policy-making in education so that the needs of vulnerable learners are addressed. From another angle, Addae et al., (2021) postulate that educators need to be empathetic when entering the digital space because the ground is not levelled for all learners. Lack of teacher training in online teaching would again come under the spotlight because educators unfamiliar with online learning, according to Cloete, Ellington and Van Vuuren (2021), tend to adopt a "one size fits all approach." These teachers are, in other words, not considerate of learner differences and needs. Learners also possess a variety of learning styles.

Therefore, COVID-19 accelerated inequalities (Sayed & Singh, 2020). Many researchers argue that the existing socioeconomic problems meant poor families were the hardest hit (Black, Spree & Vally, 2020). As a result, many people were pushed upward to what Sayed and Sigh (2020) call the new poor. In other words, more people are in this bracket than before due to the COVID-19 pandemic. Dunbar-Krige and Van der Merwe (2010) add that poverty can affect learning, particularly when parents are unemployed, illiterate and struggle to support their children's learning.

Bashman (2020) posits that in South Africa, online tests and examinations are a preserve of the privileged. Learners from poor families could not access these tests due to a lack of data and connectivity. Concurring with Bashman (2020), Black et al., (2020) posit that access to devices, time, space, data, and support is deeply classed and raced. These gaps meant that many learners from low and middle-income families could not be reached by remote learning (Hoadley, 2020; Sushma, 2022; Daniels, 2020).

2.6.2. Turning the tide

"Every child is a national asset", so goes the slogan of the South African Government Department of Basic Education (Isaacs, 2020:116). The State President Cyril Ramaphosa restated this slogan in the January 2019 basic education sector workshop. The fundamentality of educating a child is also reiterated by Pareek and Sani (2020), who postulate that no nation can afford the disruption of its education. Lathere and Samusevica (2020) also add that formal education is essential in every human being's development in any country. Educating a child cannot be the government's preserve alone; it calls for all hands on deck, a necessity that heightened during the COVID-19 pandemic. Bariham et al., (2020) are of the view that Telecom companies that control connectivity should support education. In Tanzania, a joint initiative between Vodafone and UN High Commissioner for Refugees (UNHCR) supported over 40 000 learners and 600 instructors in primary and secondary schools (Bariham et al., 2020).

Leading networks such as Vodacom SA and MTN could also accelerate such initiatives by providing data to support online learning. Noted efforts were seen when universities in South Africa negotiated with several cellular networks to make data available at a cost to the university (Hedding, 2020). A case in point is the University of South Africa (UNISA) which provided data to students across all networks during examination times. Such initiatives meant that universities prioritised online learning in their budgets. However, students who live in remote areas with no network coverage still struggled. Television lessons, such as Woza Matric were screened to help bridge the gap for the learners (Hoadley, 2020). Although these programmes registered significant positives, Hoadley (2020) argues that they didnot acknowledge learners who are not first-language English speakers.

Putri, Khari and Safrid (2022) suggest the application of flipped classrooms combined with Google classrooms, which is defined as a learning medium that educators and learners could use to create virtual classes. In the absence of contact learning, educators could use the above platforms to receive learner assignments and send feedback instantly. Hassan (2021) argues that several options should be explored in the wake of the COVID-19 pandemic and acceleration of online learning. One suggestion brought forward is the creation of a community of learners (Hassan, 2021), where learners could support each other. The inequalities in South African education would mean that some learners would find it easy to access online learning while others do not. A community of learners would enable those who did not access the information to benefit from those who did through arranged discussions.

In Spain, the university of Murcia adopted a "leave no child behind" approach in a bid to support vulnerable students (Arizon, 2020). The move included loaning computers and internet cards to those who needed them. A similar gesture was adopted by one school in Lo Esteros, Spain, where learners distributed pens, notebooks and materials to families without computers and internet access (Arizon, 2020). Such acts of goodness reflect that situations can be changed for the better if those who have access to resources assist others along for the greater good.

From a South African education system perspective, LeGrange (2020) proposes that the nation should get inspiration from Ubuntu principles in order to eliminate inequalities and capitalist tendencies in education. Ubuntu means "I am because we are" (Barry, 2022:59), demonstrating humanity towards others. Le Grange argues that communication and debates in education should be guided by Ubuntu principles because Ubuntu affirms caring for others. Humanity means that every learner, regardless of their background, is supported for the betterment of the nation and the world. Mahaye (2020) advocates for the installation of digital equipment in public schools to ensure that all South African learners access tech-based learning.

2.7. NUMBERS DO NOT LIE

It is paramount to understand the numbers to contextualise online learning. Syde and Sigh (2020) argue that 89% of learners in sub-Saharan Africa do not have access to household computers, and 82% lack internet access. Research undertaken by the UNESCO Teacher Taskforce (2020) revealed that 56 million learners live in locations not served by mobile networks, with half of these in sub-Saharan Africa. Only 11% of South African households have an internet connection in their homes (Black, Spree & Vally, 2020). Further compounding the above reality is that over 9 million children in South Africa receive meals at school as part of the National School Nutrition Programme (NSNP) (Le Grange, 2020; Black et al., 2020). The closure of schools due to COVID-19 meant that learners who previously enjoyed the privilege of getting meals at school were dealt a double blow since NSNP was also temporarily suspended. In the same vein, United Nations International Children's Emergency Fund (UNICEF) (2020) further estimates that 350 million learners worldwide had their nutrition affected due to the closure of schools during the COVID-19 pandemic, as shown in Figure 2.1 below.
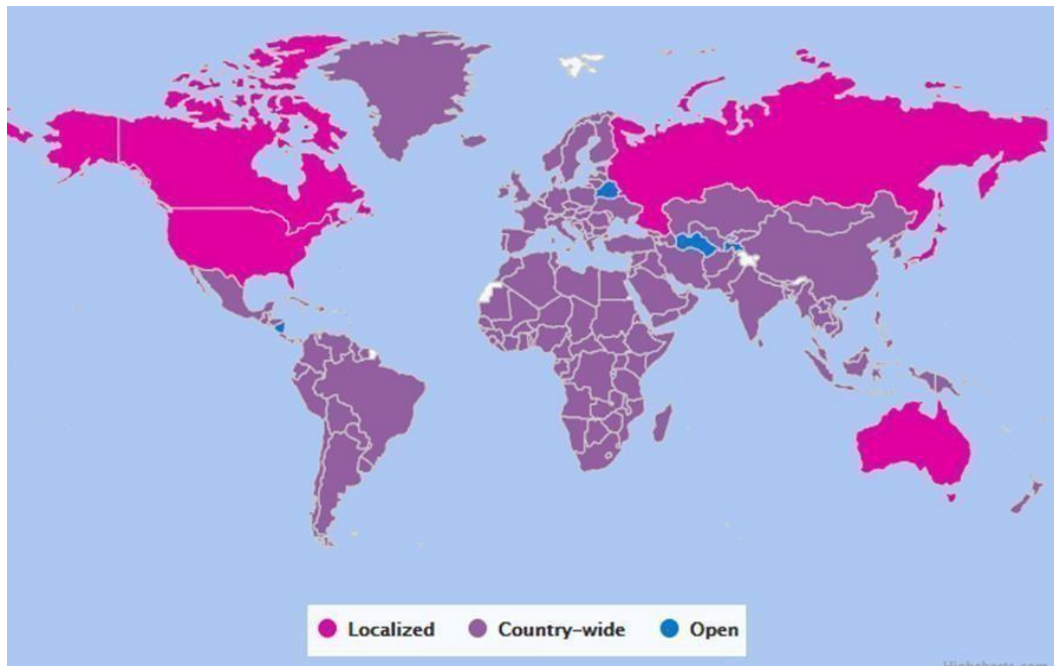
Figure 2.1: Closure of schools across the world (UNESCO, 2020; Mahaye, 2020)

Figure 2.1 provides a clear picture of the widespread closure of schools worldwide, as indicated by the pink and purple colours. In contrast, the small blue colour indicates a handful of schools that remained open. In Africa, the entire continent is presented in purple, representing the closure of schools. One may argue that the closure of schools meant online learning was a must because education had to continue.

A survey carried out in Gauteng revealed that between March 2020 and June 2021, the equivalence of 70% to a full year of learning time was lost and that in May 2021, 10% of parents reported that at least one of their children had not returned to school in 2021, impacting learners' education and learning (Sherperd, Mohohlwane, Taylor & Kotze, 2021). These figures cut across the entire African continent and the world, as depicted in Figure 2.2 below.
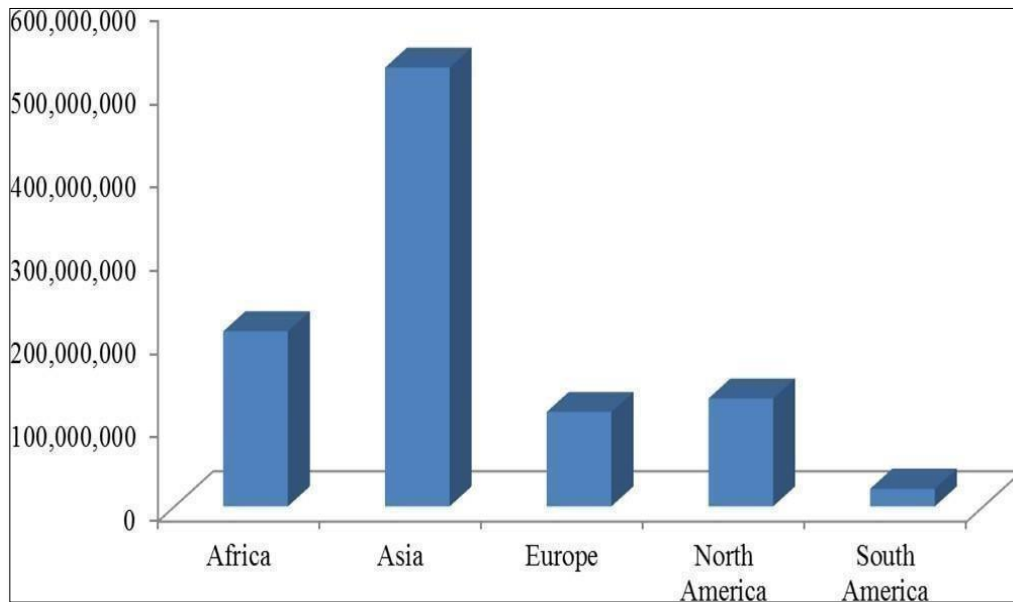
Figure 2.2: Distribution of learners out of school due to COVID-19 (Mahaye, 2020)

In Figure 2.2, second after Asia, Africa recorded over 200 000 000 learners who were out of school due to COVID-19. In addition, Mahaye (2020) posits that many African learners lost out on school time, as shown in Figure 2.3 below.
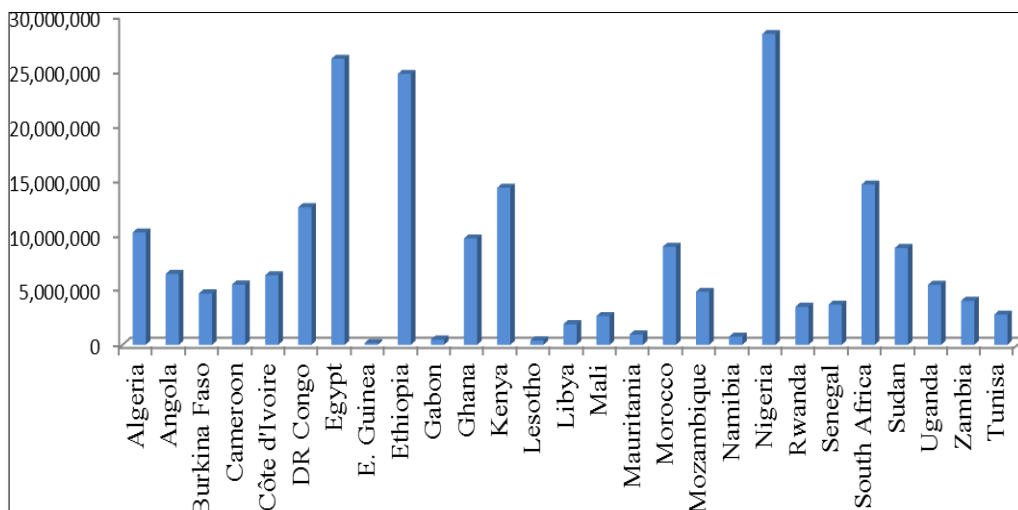
Figure 2.3: Number of learners Affected by COVID-19 across Africa (Mahaye, 2020)

Figure 2.3 shows how South Africa fared when rated among other African countries. At number 4 in the continent, 15 000 000 learners in South Africa were affected, with Nigeria, Egypt and Ethiopia topping the list.

Judging from the above figures and numbers, it goes without saying that online learning was and remains a necessity because learning must continue even beyond the four walls of the classroom. The discrepancy presented in Figure 2 on the number of learners out of school can be attributed to resource availability and online readiness for developed versus developing countries, as alluded above. Puleng (2015) argues that in Australia, 91% of households have access to computers, and 86% of those have internet at home. It can be argued that Australia and other developed countries already had systems in place, making the migration to online learning in 2020 due to the COVID-19 lockdown a relatively smooth exercise. However, the same cannot be said of Africa and its developing nations. Africa had failed to provide the necessary resources way before the COVID-19 pandemic struck. Due to these failures to be proactive, Africa experienced a 49% failure rate in efforts to apply technology for learning (Tanye, 2017). UNESCO (2020) reports that only 29% of educational institutions in Africa managed to move to an online environment during the COVID-19 lockdown, as a direct failure of Africa's unpreparedness for online services before disaster struck; hence, Africa is reactive.

2.8. CONCLUSION AND REFLECTION

Whether post-COVID-19 life will be the same as pre-COVID-19 time is a subject up for debate. However, several researchers concur that online learning is here to stay. From the alluded views, it is evident that the education sector was unprepared for distance and digital communication both from the educator and the learner. South African education context is also key in understanding educational provision in South Africa. The advantages of online learning far outweigh the disadvantages. Worth noting is that the 21st century learners' preferences should be understood in relation to the provision of online learning. It is also worth noting that policy documents are awash with policies and programmes, especially for teacher development, but these are yet to be implemented. One may argue that if those policies were implemented timeously, COVID-19 and subsequent lockdowns could have had a less devastating impact on teaching and learning, particularly in terms of online teaching and learning. Some policies no longer fit existing school contexts. Impoverished learners, however, continue to bear the brunt of school closures and inequalities. Nonetheless, the challenge should not dampen the search for the right to equality and education, which are basic human rights advocated by Sections 9 and 29 of the South African Constitution (RSA, 1996).

The advocacy for the implementation of policies should be made louder so that ideas are put into practice to improve teaching and learning, especially in public schools that continue to bear the brunt of the unequal society. Perhaps lessons from COVID-19, as Azorin (2020) puts it, could herald the possibility of a better education for all, characterised by equity and the well-being of learners. Policymakers should ensure that the dream of improving the quality of education, skills, development and innovation by 2030, as stipulated in the NDP 2030, is achieved, otherwise, equal education will remain a far-fetched dream.

CHAPTER 3: RESEARCH METHODOLOGY

3.1. INTRODUCTION

The preceding chapter (Chapter 2) outlined the literature review on online learning, including the South African education in context, online learning and teacher preparedness, and impact on learners. Chapter 3 presents the research methodology that was utilised to answer the research questions. Rehman and Alharthi (2016) posit that methodology guides the researcher in deciding what type of data is required for a study and which data collection tools will be most appropriate for the purpose of his or her research. This chapter delved into all the stages of the research process detailing the research paradigm, approach, design, selection of site, participants, and justification thereof. Furthermore, trustworthy strategies and ethical considerations used in the study were discussed, all in an endeavour to explore the impact of minimal online skills in teaching and learning during COVID-19 at a selected high school in Kempton Park, Johannesburg. Thefollowing objective guided the study:

- To establish how qualified educators are in dealing with online learning during COVID-19 at the selected high school in Kempton Park, Johannesburg.
- To ascertain the resources and equipment available to allow educators to be proactive in online learning during COVID-19 at the selected high school in Kempton Park, Johannesburg.
- To investigate how minimal online skills have impacted teaching and learning at the selected high school in Kempton Park, Johannesburg.

3.2. RESEARCH PARADIGMS

Paradigms are ways of looking at the world, different assumptions about what the world is like and how we can understand or know about it (Cohen, Marion & Morrison, 2018). Ling and Ling (2017) argue that defining the research paradigm makes the logic underpinning a particular research exercise visible and testable. They further foreground the power of the research paradigm to provide a firm and consistent basis for research design and implementation (p. 16). From a different angle, Cohen et al., (2017) caution that paradigms do not necessarily drive research as its purpose drives it. Cohen et al., (2018) identify six types of research paradigms, namely empirical-analytic, pragmatic, interpretive, critical, post-structuralist, and transcendental. The study was guided by the interpretive

paradigm. Junjie and Yingxin (2022) argue that interpretivism motivates researchers to seek experiences and consider different interpretations of a particular social context. In this light, the researcher sought different views about online learning from educators and learners who detailed their experiences on the phenomenon. Cohen et al., (2018: 19) add that under interpretivist paradigm, effortsare made to "get inside the person and understand from within." The above was achieved by interviewing participants using questions that evolved around gadget ownership, available skills,resources, and support offered. Haven and Van Grootel (2019) postulate that every result in qualitative research is subjective because it is influenced by the lens through which the researcherhas interpreted the data. Data collected through semi-structured interviews went through several stages of interpretation and was influenced by the eyes through which the researcher looked at and interpreted it; hence, qualifying the use of interpretivist paradigm from which qualitative research typically operates. Closely related to interpretivism is the social constructivist theory that holds the belief that individuals seek understanding of the world in which they live and work (Creswell,2017:37). Through interaction with educators and learners in their place of teaching and learning, meanings were forged and insights into online learning were gained.

The research paradigm was also influenced by ontology and epistemology. Under ontology, people are regarded as anticipating, meaning-making beings who actively construct and interpret their own meanings (Cohen et al., (2018). Furthermore, ontologists subscribe to the notion that there is no single truth in interpreting a situation and that "realities are capable of sustaining multiple interpretations" (p. 288). From an ontological perspective, the study fits because participants were asked similar questions during interviews, but all gave different perspectives depending on how individuals experienced online learning.

Epistemology deals with how knowledge is gained (Patel, 2015). Cohen et al., (2018) posit that the researcher's talk under epistemology is to understand, describe and explain the multiple and differing interpretations of the situation, adding that contradictory interpretations should be accommodated. In this light, the researcher was cognisant that not only data favouring the researcher's view should be included. This was done by avoiding leading questions such as one suggested by May (2011: 114), "You don't agree with this idea, do you?" Such questions could solicit views held by the researcher and influence the participants' responses.

3.3. RESEARCH APPROACH

The study adopted a qualitative approach. Basias and Pollalis (2018) argue that qualitative research helps the researcher understand the nature and complexity of the phenomenon being studied, enables research in relatively new research areas, and supports t h e investigation of a phenomenon in a natural environment. The approach gives answers to research questions, such as what, how, when and where (Haven & Van Grootel, 2019; Grad Coach, 2020, 20:15). Unlike the quantitative approach, the qualitative approach does not include statistics or empirical calculations. Instead, data are descriptive in the form of interview notes and observations (Mahajan, 2018). Participants gave detailed accounts of the phenomenon under study, not specific responses (Nilholm, 2021). To understand the phenomenon's complexity, the researcher interacted with educators and learners using semi-structured interviews. The participants detailed their experiences, which is how they experienced online learning during COVID-19 at a high school in Kempton Park. These descriptions made it possible to communicate a holistic picture of online learning challenges from those who experienced them. The study was also conducted in a natural environment, the high school where educators and learners go about their daily activities. Therefore, context played a great role in the construction of the meaning. Furthermore, COVID-19 is also a new phenomenon hence qualifying the use of qualitative research.

There are advantages to the chosen approach. One argued benefit of qualitative inquiry is the "ability to build theory" as data does not result in theory on its own, but the researcher is required to employ data to build theory (Mohajan, 2018; Shufutinsky, 2020). The process in qualitative inquiry is such that, as the research unfolds, there may be twists of events and things that initially were never thought of emerging. Ling and Ling (2017) use a novelist scenario, comparing research to a mystery novelist who has a specific plot and characters in mind. However, as characters interact, relationships emerge, and the plot changes in a way that was not envisaged. As with the novel, during the qualitative research process, some predetermined expectations about outcomes may alter, and new information may emerge. Ling and Ling (2017:38) refer to the above shift as the "sting in the tail." The emergence of new ideas during the study strengthened data analysis and findings.

Further hinting at the strength of the qualitative approach, Wilkinson and Birmingham (2003:76) postulate that counting numbers (usually associated with quantitative research) dilutes the quality of information collected to make it of little use. Instead, qualitative researchers go to the people, settings, sites and institutions to observe behaviour in its "natural setting" (Mahajan, 2018). Likewise, the researcher went where educators and learners were (school) and approached them for consent to give

data and then report using participants' responses (Creswell, 2017).

Despite all its richness and potential for discovery, qualitative research has been critiqued as lacking analytic discipline, scholarly rigour and being inherently biased (Shufutinsky, 2020). Onereason for such is that the researcher in a qualitative study is the main instrument; thus, there is the likelihood of bias based on the researcher's beliefs and experience in interpreting data and findings. Shufutinsky (2020) suggests the use of "self", a critical tool in addressing potential bias. The researcher addressed the bias by practising self-reflection and introspection, examining own beliefs and their likelihood to influence the study outcomes. Furthermore, the researcher was constantly conscious of the internal ideas and perceptions – fully aware that in background studies, familiarity with the research site and participants might influence outcomes if not correctly handled (Creswell, 2014). Cohen (2018) adds that there is a lack of generalisability of results in the qualitative research approach and that data collection and analysis are time-consuming.

Another disadvantage of a qualitative study is that experiences are affected by the location of interviews, the shift of moods, and the quality of interaction between the researcher and participants (Boje, 2019). The researcher established a good rapport with participants prior to the interview session. The introduction to all interviews was crafted in such a manner that it put participants at ease. Issues of anonymity and confidentiality, the purpose of the study, and how data would be handled were reiterated in the introduction.

It became evident that each research approach has advantages and disadvantages; there is no watertight approach. Creswell (2017) posits that no research approach should be viewed as inferior to the other because each approach is used in different contexts. Therefore, it is up to individual researchers to adopt processes that minimise the negative impact of its disadvantages.

3.4. RESEARCH DESIGN

Research design is a plan, structure or strategy of investigation conceived to obtain answers to the research questions (Kumar, 2011:41). Khothari (2004:31) postulates that decisions regarding what, where and when, how much and by what means concerning a research study constitutes a research design. Cohen et al., (2017: 236) recommend that qualitative researchers choose from possibilities such as narrative, phenomenological, ethnographic, case study and grounded theory.

The study adopted a case study design. Kumar (2011:123) posits that a case study could be an individual, group, community, episode or event, adding that the total study population is treated as one entity (p. 123). In this case, the selected high school was a case study because it was treated as one entity comprising different groups, like parents, educators and learners. The school becomes a basis of a thorough, holistic and in-depth exploration of the online learning experience by educators and learners using semi-structured interviews to get detailed experiences that answer research questions. Khothari (2004) adds that in case studies, the behaviour of an institution is studied directly and not indirectly or on an abstract approach, just as the study was carried out directly with educators and learners at the school.

Kumar (2011) postulates that although a case study provides in-depth understanding of a case (one high school) and its interactional dynamics, it cannot claim to make any generalisation similar to the one studied. That is, findings cannot be generalised to other public high schools. Kumar's view above resonates with Suiter (2014), who argues that in education, too often what works well in one setting with one group will not replicate or yield similar results with a change in setting or people, a "peekaboo phenomenon" (Suiter, 2012:18). In other words, Suiter is referring to the question of context. For example, school size, location and structural issues play a role. Nevertheless, the case study design provided the researcher with adequate information to understand the school (case) in totality. Commenting on the interrelatedness of research stages, Kumar (2011) argues that there is a thin line between research design and data analysis, adding that some designs are data analysis methods (p. 104). Interviews doubled as research design and data analysis tools.

3.5. POPULATION AND SAMPLING

The population is the whole or totality of all subjects or members that conform to a set of specifications or attributes (Bhandari, 2021). The population, in this case comprised all post level one educators, all heads of departments and all learners at a selected high school in Kempton park. The school qualifies as a population because it is an entity where members are guided by similar attributes, such as a code of conduct, rules and policies that contribute to the school's running.

The study was conducted at a selected school in Kempton Park, Ekurhuleni North District, Gauteng Province. The school has 1715 learners and 70 educators. It is a former Model C school which qualifies as a fee-paying school and falls under quintile 5 schools. Quintile 5 schools are considered to be rich

and receive limited funding form the government (Lumadi, 2020:1). However, the majority of learners, at the school come from a nearby Tembisa township and contrary to a typical quintile 5 school where most parents could afford paying school fees, learners at the school struggle to pay school fees. In as far as connectivity is concerned, the school is electrified, but there is no Wi-Fi in t h e classrooms. The school predominantly uses traditional methods of teaching (chalk and talk). Context played a part in understanding the phenomenon under study (Suiter, 2014).

Sampling is selecting a group from the population as representatives to participate in the study (Cloete et al., 2021:2). Bhandari (2021) defines sampling as a set of cases that researchers select from a large pool to be generalised to a population. Moser and Korstjens (2018:10) identify five sampling types, namely purposive, judgmental, expert, accidental and snowball.

The sampling technique for the study was purposeful or purposive sampling. Purposeful sampling is the type of sample where the researcher selects particular elements for the population that would be "informative about the topic" (McMillan & Schumacher, 2014:153) and "knowledgeable" (Cohen et al., 2018:219). Staller (2021) also concurs with the above researchers, arguing that the logic and power of purposive sampling is in selecting information-rich cases for in- depth studying. The study's comprised 10 participants, that is, six educators and four learners. Of the six educators, two were HoDs (post-level 2). The sampled educators and learners were 'information-rich', 'informative' and 'knowledgeable' because they were part of the school population that experienced the impact of minimal online learning during the COVID-19 lockdown. However, individual participants experienced it differently. The inclusion of HoDs is justifiable because HoDs oversee all learning activities administered to learners in specific subjects and therefore possess a global perspective in their experience. Purposive sampling enabled the full scope of issues to be explored (Johnsen et al., 2020).

Moser and Korstjens (2018) discuss a contentious question of how much of a sample is enough, arguing that the sampling plan is appropriate when the selected participants and settings are sufficient to provide the information needed for a complete understanding of the phenomenon of the study. Mouson (2002) supports Moser and Korstjens, suggesting the critical question to ask is whether your sample provided access to adequate data to enable you to address your research questions. Ultimately, Mouson (2002) concludes that the key issue to qualitative sampling is how to focus strategically and meaningfully rather than how to represent. Therefore, the sample of 10 participants is justifiable as it provided adequate information to address the research questions.

3.6.   DATA COLLECTION PROCEDURES

Creswell (2014) postulates that data collection focuses on the collection of information either through interviews or other techniques to collect data from participants. Islam and Aldaihani (2022:4) identify several data collection methods, including interviews, observations, focus group discussions, and textual and visual analysis. Semi-structured interviews were a preferred data collection tool.

3.6.1.   Semi-structured interview

A semi-structured interview is a technique used by researchers to collect data from participants using open-ended questions (Desorickheere & Vanghn, 2018). Cheron, Salvagni and Calomby (2022:1) argue that the interview is literally an "inter-view", which means an exchange of views of two people on a topic in which they share the same interest. Cheron et al., (2022) further add that with the interview, data is not simply collected but is co-produced with all participants. Data was co-produced when the researcher was asking the questions, probing, rephrasing and making follow-up questions so that participants understand and respond to give personal experiences on the topic. Semi-structured interviews also allow participants to answer in their "own terms" (May, 2011:135) to produce "rich data" (Creswell, 2014). In the study, the researcher shared a perspective on the impact of minimal online skills in teaching and learning with participants because she drew from her experience as an educator at the school. Educators and learners who were interviewed also experienced challenges of online learning; hence, qualifying the view of Cheron et al., (2022) on the same topic. Islam and Aldaihani (2022: 5) also recommend semi-structured interviews because they enable the exploration of rich data.

After the GDE and the principal had granted permission to conduct the study and consent sought from participants, data collection ensured:

Data were collected from 10 participants (six educators and four learners). Six questions were administered to educators and six to learners. Creswell (2017:244) posits that questions should be few in number and intended to elicit participants' views and opinions. Questions revolved around challenges of online learning during COVID-19, gadget ownership, connectivity, availability of resources, and general support given to educators and learners.

Intrusive or personal questions were avoided at all costs. May (2011:135) cautions against the use of "personal questions" during interviews arguing that these could result in the termination of the interview.

The researcher used open-ended questions to allow participants to discuss and express their interpretations of how they experienced online learning during COVID-19. The interview guide was used to ensure that all areas were covered and made possible the comparability of data among respondents (Kumar, 2011). The interviewees were provided with comforting signs and clues (Wilkinson & Burningham, 2003). Clues included nodding during interview sessions, adopting an attentive posture and maintaining eye contact. By curtailing the eye contact clue, Wilkinson and Burningham (2003) are quick to caution that eye contact could be interpreted as starring, making the participants uncomfortable (p. 135).

Wilkinson and Birmingham (2003:52) postulate that the interviews should take place from "top-down." The HoDs were interviewed first, followed by educators and then learners. The researcher took down notes during the interview in case the recording equipment failed (Creswell, 2017). Other steps in the interview included:

- Demographic details such as time of interview, place and date (Creswell, 2014)
- All desks and chairs in the classroom used as the site were sanitized
- The classroom used as the interview site was well-ventilated
- The researcher and participants wore masks and kept a safe distance per COVID-19 protocols and ethics requirements to cause no harm or injury.
- All interviews had introductions to welcome and thank them for being part of the interview. Ethical issues were also reiterated during interview introductions.
- The researcher asked questions, probed and asked follow-up questions to generate sufficient and relevant data
- Participants were not guided or influenced to give answers that "fit" the researcher's point of view (Johnson et al., 2020:142)
- All participants were thanked at the end of the interviews for making time to participate in the study.

Advantages

Wilkinson and Birmingham (2003:63) postulate that with interviews, you "hear" far more than just what the participants "tell" you, arguing that the researcher could also observe body language and interpret the tone of responses. Information obtained from verbal responses was supplemented by non-verbal clues. Urais (2021) argues that semi-structured interview questions can be modified, included ordeleted. In other words, Urais speaks to the flexibility of this chosen data collection tool. Kumar (2011) argues that, unlike the questionnaire, with interviews, there is no room for consulting others; hence, the data becomes a true representation of the targeted people. Ultimately, Islam and Aldaihani (2022) recommend semi-structured interviews as the most useful method for rich data exploration.

Disadvantages

Conversely, interviews are generally time-consuming (Kumar, 2011). Creswell (2014) argues that the quality of data collected depends on the interaction between the researcher and the participant, adding that the researcher must possess good interview skills. Another disadvantage is that not every teacher or learner is articulate in English (Chapter 2, section 2.6.2, p15). Allowing code-switching during interview sessions meant that rich data was extracted from participants.

3.7.   DATA ANALYSIS

Data analysis involves segmenting and taking apart data "like peeling back the layers of onion" (Creswell, 2017:245). Data analysis is a systematic process that happens step-by-step, like onion layers. Thematic analysis was used to analyse data (Johnson, Adkins & Chauvin, 2020; Ling & Ling, 2017; Cloete, Ellington and van Vuuren, 2020). Islam and Aldaihani posit that thematic analysis entails searching across a data set to recognise, analyse and report repeated or frequent patterns. Patterns and themes that developed during data analysis allowed the researcher to identify collective experiences shared by participants.

3.7.1.   Data analysis process

Data analysis was guided by the six-step thematic analysis suggested by Creswell (2017:247-249):

Step 1: Interviews were transcribed, and raw data was produced. Transcripts were read and re-read for understanding. Moser and Korstjens (2018:16) argue that when you read and re-read, you "immerse yourself in data." To ensure accuracy of what was transcribed, some of the transcripts were given to educators and learners to check accuracy. By doing so, the validation of the credibility of the study was strengthened. Shufutinsky (2020:56) suggests the use of Tabular Reflection and Analysis of Alternate meaning (TRAAM). TRAAM is a method of data verification designed to examine potential misrepresentation of interview statements. The researcher engaged in reflective analysis by applying interview statement in a TRAAM as shown below:
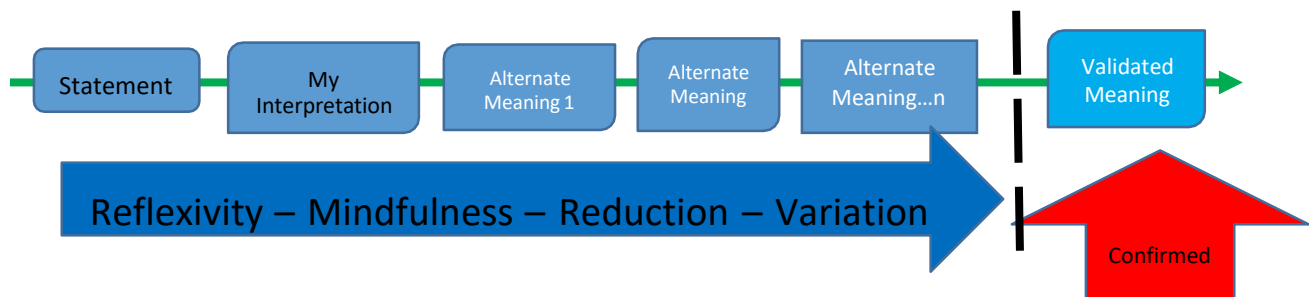
Figure 3.1: TRAAM Method Model (Shufutinsky, 2019)

Shufutinky (2020:56) argues that TRAAM increases transparency and entails considering potential alternative meanings and verifying them with participants later.

Step 2: The research looked at the data to establish the participants' general ideas and t h e tone of ideas. At this stage, the researcher started writing notes on the margins of the interview transcripts and recording general thoughts about the data (Creswell, 2017).

Step 3: Data was coded. This process permitted data to be segregated, grouped, regrouped and relinked in order to consolidate meaning and explanation (Saldana, 2010). Words representing categories were written on the margins. Categories were labelled using participants' actual words called "in viro term" (Creswell, 2017:247). Saldana (2010) recommends manual coding, arguing that computer programmes may result in researchers' mental energies being more focused on software than data. Saldana argues that researchers should first "touch the data" (p. 22) before transferring coded work to computers. Furthermore, Saldana (2010) argues that traditional writing materials, such as red pens and highlighters, help the researcher explore data in fresh ways. The researcher first used manual data coding.

Step 4: Codes for description were generated. Description code formed themes and categories to be later used as headings for findings. Saldana (2010) argues that themes are analytical reflections.

Step 5: Representation of themes and description. The researcher used a narrative passage to convey the findings. The narrative took the form of a discussion that maintained the order of events.

Step 6: Findings are interpreted with emphasis on lessons learnt. Creswell (2017:249) argues that the essence of this step (step 6) in data analysis is best captured by the question, "What were the lessons learnt?" The researcher brought in personal interpretation as part of the lessons learnt. Lessons also took the form of comparison of the literature reviewed and findings, and discussing the links therein. Another thematic analysis model similar to the one presented by Creswell (2012) is suggested by Braun and Clarke (2006, 2012), cited in Islam and Aldaihani (2022:7), indicated diagrammatically below.
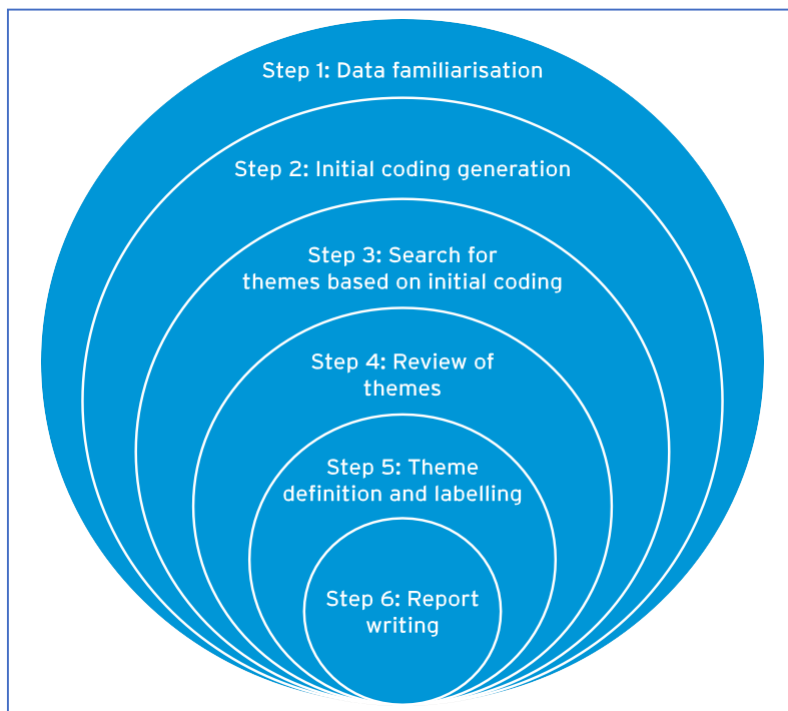
Figure 3.2 : Braun and Clarke's six-step thematic analysis
(adapted from Islam & Aldihani, 2022:7)

3.8. TRUSTWORTHINESS OF THE FINDINGS

Trustworthiness refers to the quality of data and conclusions in qualitative, interpretive research (Nemouch & Holmes, 2022:72). To establish the study's overall trustworthiness, the criteria of credibility, transferability, dependability, and confirmability were used (Johnson et al., 2020; Nemouchi & Holmes, 2022).

3.8.1. Credibility

Credibility is the plausibility of the research findings (Cohen et al., 2018:290). Nemouchi and Holmes (2022:72) posit that credibility concerns the "confidence in the truth of the findings." Echoing a similar sentiment, Maree (2016) postulates that credibility refers to evaluating whether the study's findings are accurate with what the principles say. The researcher ensured that results accurately represented what was studied by participants employing the "member checking technique" (Johnson et al., 2020). Member checking involves asking a research participant to verify the completeness and accuracy of an interview transcript to ensure that the transcript truthfully reflects the meaning and intent of the participant's contribution. The researcher also built a relationship of trust with participants in order to elicit data that represents t h e genuine views of participants (Nemouchi & Holmes, 2022). In addition, the researcher also practised self-reflection, also called positionality by Locke and Struck (2019:3). Shufutinsky (2020) postulates that self-reflection pushes mindfulness and opens individuals to understand their interaction with others and with the world; allowing them to identify potential bias and block or use them transparently to achieve accurate research. Another technique employed was "partnering and mirroring", which entailed recruiting a colleague to serve as a code checker. Shufutinsky (2020:53) refers to the above technique as an "objective set of eyes" (p. 53).

3.8.2 Transferability

Transferability refers to the level at which research findings can be interrelated with life situations (Maree, 2017). The researcher achieved transferability by providing detailed information so readers could determine whether the results apply to other situations. The impact of minimal online skills on teaching and learning was described in detail using views from various participants (educators and learners) who gave individual experiences of the phenomenon to build a holistic view.

3.8.3. Dependability

Dependability is whether the process of collecting qualitative data was sound (Haven & Van Grootel, 2019:238). Johnson et al., (2020) posit that in dependability, researchers describe study process in sufficient detail that the work could be repeated. Haven and Van Grootel (2019) also posit that the question that should be asked in dependability is "Are the research questions clear, and are the features of the research study congruent to them? (p. 238). In analysing data, the researcher ensured that interpretations were based on data. Research questions were also made clear and to be in line with the study. Dependability also refers to the degree to which the results of the studies can be corroborated by others (Maree, 2017).

3.8.4. Confirmability

Confirmability entails how analysis can be traced back to the original data (Jansen et al., 2020). Haven and Van Grootel (2019: 238) argue that to assess confirmability; one may ask questions like: "Are the studies' general methods and procedures described explicitly and in detail? Do we feel that we have a complete picture, including backstage information? The researcher adhered to issues of confirmability by providing steps and processes that enable other researchers to follow the process. Research findings were also reviewed to check where they could be confirmed by data collected during the literature review (Kothari, 2004). Research must help other people or readers "mimic your study" (Grad Coach, 2020).

3.9.   ETHICAL CONSIDERATIONS

This section acknowledged that most educational research deals with human beings. McMillan and Schumacher (2014) posit that qualitative research has the potential to invade privacy; thus, researchers must guard against such. Ethical conduct refers to how moral principles and values are part of the research process (Johnson et al., 2020:142). Cohen et al., (2018) postulate that ethical research concerns that which the researcher ought to and ought not to do in their research behaviour (p.111), a matter of principle and sensitivity to the rights of others (p. 112). During the research, the researcher took care to protect the confidentiality of participants and shielded them from harm while according them respect and dignity for their contributions.

3.9.1. Permission and ethical clearance

Before the commencement of data collection, an application was made to the College of Education (CEDU) Research Committee for approval. This was in line with the UNISA policy on Research Ethics. Application to undertake research was made to the Gauteng Department of Education (GDE) and to the principal of the school where the research was conducted. In line with UNISA procedures and guidelines, consent and assent were sought from educators and learners, respectively, for their participation in the study. Project information was made available to all participants to inform them that participation was voluntary. Participants and the principal were also assured that the data collected was to be used for research purposes only and that only the researcher and her supervisor would have access to it. Furthermore, participants were assured that their names would not in any way appear in the findings of the study and that only pseudonyms and codes would be used.

3.9.2 Informed consent

Informed consent means that a researcher helps participants to understand not just what they are consenting to by participating in this research study, but also discuss the ramifications of participating in the study (Locke & Struck, 2019:25). Cohen et al., (2018) argue that informed consent places part of the responsibility to the participants, should something go wrong during the research. Prior to the commencement of the study, the researcher explained the purpose of the study and how data would be handled and used, after which the participants signed, at their own accord, the consent and assent forms to show a willingness to participate in the study.

Cohen et al., (2018:122) identify four elements influencing the participants' decision to participate in the study, these are:

- **Competence** – The participants are to be mature enough to make decisions about the study.

- **Voluntarism** – The participants are not to be forced to take participate in the study.

- **Full Information** – The researcher is to provide detailed information about the study.

- **Comprehension** – The researcher should ensure participants understand what the study is about and what is expected of them.

Cohen et al., (2018) argue that informing people of the research might disturb the natural behaviour of the participants and may lead to a narrow range of data and neglect of the richest and most authentic data. Cohen et al., (2018) further lament the use of models from the ethics committee, arguing that committees could be overly concerned about protecting institutional reputation and, in the process, stand in the way of researchers who try to challenge decisions. In addition, the above researchers argue that ethics deter researchers from proceeding to uncover important data because the consent of the ethics committee was not granted (p. 119), in other words, suggesting or advocating for the autonomy of researchers.

3.9.3. Anonymity and confidentiality

Anonymity refers to the ability of the researcher to keep participants' identities a secret (Nyumba, Wilson, Derrick & Mukherjee, 2018:25). Confidentiality entails not disclosing information from a participant in a way that might enable the individual to be traced (Cohen et al., 2018:130). Participants were assured that any information shared would not be discussed with or revealed to anyone. For instance, information disclosed about the school management or educators' tendencies is not shared to jeopardise participants' safety or interfere with their work or learning. Wilkinson and Birmingham (2003:62) argue that participants often see interviews as opportunities to voice opinions and "let out steam" about subjects, hence the need to protect that information.

The right to privacy is a basic human right enshrined in the Constitution of South Africa, and all participants had their rights respected. Emphasis was also put on research findings being only meant for research purposes as stipulated in the UNISA Ethics Guidelines. In addition, all interview recordings were treated with confidentiality. Finally, pseudonyms were used instead of the participants' real names, and a code replaced the school name.

3.9.4. Protection from harm

The study adopted the principle of "primum non nocere", which means "first of all, do not harm", espoused by Cohen (2018:127). Participants were not exposed to any harm physically, emotionally or psychologically. No sensitive questions were asked during the interview sessions. The desks and chairs of the classroom used as the interview site were sanitized, and the classroom itself was well-ventilated. This was in line with the COVID-19 protocols. The door of the classroom was secured to avoid banging and interrupting the flow of the interviews. Educators and learners participating in the study were made aware that the information they shared would be treated with the utmost

confidentiality and that the information would not result in them being harmed in any way.

3.9.5. Voluntary participation

Voluntary participation entails ensuring that participants freely choose to take part. McMillan and Schumacher (2014:130) argue that voluntary participation means that participants cannot be compelled, coerced or required to participate. All participants participated voluntarily after signing consent (educators) and assent (learners) forms. Participants were also made aware of the clause that states they can terminate their participation at any stage of the research and not face any consequences (McMillan & Schumacher, 2014).

3.10. LIMITATIONS AND DELIMITATIONS

The purposive sampling and small sample size (10 participants) did not produce generalised data. The sample size and single data collection method meant that findings could not be generalised to other high schools. Therefore, future studies could target several high schools in the area and consider the perspectives of private schools. During the literature review, it was discovered that private schools had a relatively smooth transition to online learning during COVID-19 (Pillay, 2020). Therefore, a study on private schools might produce different findings.

A single-reach approach, namely the qualitative approach, was used. However, other approaches, like quantitative and mixed approaches, could yield different results if explored. Similarly, other qualitative data collection tools other than interviews, for example, focus groups and questionnaires, might also yield different findings.

The study occurred at a high school where the researcher was an educator. The backyard study (Creswell, 2017) meant that familiarity with the school environment and participants could lead to bias. However, the researcher explained the purpose of the research and practised reflexivity (Shufutinsky, 2020) to mitigate the impact of bias. The researcher practices self-reflection to ensure that her personal experiences and views do not negatively impact the study's outcomes.

3.11.   MY ROLE AS A RESEARCHER

The researcher cannot completely remove himself or herself from the study because personal beliefs could influence some interpretations (Creswell, 2017). For interview transcripts to be valid, they should be verified by participants (Butler, 2016). The educator allowed educators and learners who were involved in the study to read the transcribed interviews to verify whether they represented participants' words (Creswell, 2017). By so doing, the study findings become a product of shared interpretations (Lock & Struck, 2019). In addition, shared interpretations add to the validity and authenticity of the research (Creswell, 2017).

Issues of bias are bound to manifest during a backyard study if processes are not addressed well. To mitigate this, the researcher employed reflectivity. Creswell (2017) argues that reflectivity locates the reader as part of the data he or she is studying (Creswell, 2017). In addition, the researcher explored her role in generating and interpreting data (Mouson, 2002:149). The researcher is a primary data collection tool; thus, Shufutinsky (2020) argues that the research should be mindful and open to ongoing events. The researcher was open to constructive criticism throughout the study and accommodated opposing ideas.

3.12.   CONCLUSION

This chapter (Chapter 3) discussed the research paradigms, approach, design, sample data collection procedure, data analysis, and ethical issues. The qualitative approach proved relevant as it allowed the researcher to delve into the educators' and learners' perceptions, attitudes, and feelings on the impact of minimal online skills on teaching and learning during COVID-19. The following chapter presents the data and detailed findings of the study. Verbatim quotes are included to support the findings. The findings of the study are also compared to the literature review.

<center>**CHAPTER 4: PRESENTATION AND ANALYSIS OFDATA**</center>

4.1. INTRODUCTION

The previous chapter outlined the study's research design, methodology, and data collection instruments. This chapter (Chapter 4) will focus on the presentation of data, analysis and interpretation of research results. Data generated from semi-structured interviews with educators and learners are herein presented and discussed. The study's main aim was to investigate the impact of online skills on teaching and learning during COVID-19 at a selected high school in Kempton, Johannesburg.

Selected verbatim quotations were used in the chapter to present the participants' experiences, views and opinions. Nordquist (2019) describes verbatim quotations as a report of the person's exact words, be it author, speaker or presenter, and they are placed inside quotation marks in the written work. Theseviews are analysed as they assist in drawing conclusions and coming up with recommendations. For easy interpretation, data were categorised into various themes.

4.2. BACKGROUND INFORMATION

Data collection was done at XYZ (pseudonym) High School in Kempton, Gauteng province. XYZ is a former model C, quintile 5 public school established in 1966 and comprises 1715 learners and 70 educators. The school was selected because it was one of the public schools that struggled to conduct effective online teaching and learning during the COVID-19 lockdown. A total of 10 participants voluntarily participated in the study. Of the 10, two 2 were post-level 2 (PL2), four (4) were post-level 1 (PL1), and four (4) were learners in Grade 12. Educators' ages ranged from 26 to 54, while their teaching experience ranged from four to 32 years. The post-level 2 educators were included in the study because they are departmental heads who oversee teaching and learning in their respective departments. All participants are from the same school (XYZ). The following codes were assigned to participants to protect their identity, in line with the view that participants' identities must be kept a secret (Nyumba, Wilson, Derrick & Mukherjee, 2018):

- Educator participant 1 (PL1) – EPA

- Educator participant 2 (PL1) – EPB

- Educator participant 3 (PL1) – EPC

- Educator participant 4 (PL2) – EPD

- Educator participant 5 (PL1) – EPE

- Educator participant 6 (PL2) – EPF

- Learner participant 7 (LPG)

- Learner participant 8 (LPH)

- Learner participant 9 (LPI)

- Learner participant 10 (LPJ)

4.3.   RESEARCH SITE AND BIOGRAPHIC DETAILS OFPARTICIPANTS

Table 1: Research site

School name	Quintile	Number of learners	Number of Educators	Established
XYY	5	1300	70	1966

Table 2: Educators

Participant	Post-level	Age	Subject and grade Taught	Years in service
EPA	1	26	Social Sciences 8 & 9	4
EPB	1	45	Computer Applications (CAT) 8 – 12	14
EPC	1	54	Afrikaans 8 – 10	32
EPD	2	47	Life Sciences 10 – 12	22
EPE	1	40	Business Studies 10 – 12	5
EPF	2	48	Art 8 – 12	8

Table 3: Learners

Participant	Grade	Age	Enrolled in CAT as a subject (YES/NO)
LPG	12	18	YES
LPH	12	18	NO
LPI	12	19	NO
LPJ	12	18	NO

4.4. OBJECTIVES OF THE STUDY AND INTERVIEW QUESTIONS

For the data presented to give meaning, research questions and objectives should match the contents of the data presented. The following research objectives were given careful consideration in the presentation of data:

- To establish how qualified educators are in dealing with online learning during COVID-19 at a selected school in Kempton Park, Johannesburg.

- To ascertain the resources and equipment available to allow educators to be proactive in online teaching at a selected school in Kempton Park, Johannesburg.

- To investigate how online skills have impacted teaching and learning during COVID-19 at a selected school in Kempton Park, Johannesburg.

The following questions were asked during semi-structured interviews, a preferred tool because participants answer on their own terms (May 2011); therefore, rich data is produced. All participants in each category were asked similar questions for consistency. The interview questions were administered to PL2 educators, PL1 and learners, respectively. This order of questioning is in line with Wilkson and Birmingham (2003), who argue that interviews should take place from the top-down. Six questions were asked in each category, in line with Creswell (2017), who argues that, with a qualitative approach, questions should be few and intended to elicit views and opinions from participants.

Interview questions for HoDs (PL2)

1. Describe your experience with individual educators on their interaction with learners during COVID-19
2. How was online learning conducted within your subject area?
3. What challenges did you encounter supervising online teaching and learning during COVID-19?

4. From your interaction with educators and learners, what are your suggestions for improving online teaching and learning?

5. What kind of training do you, as HoD, need regarding online teaching and learning?

6. Is there anything you would like to add to this discussion?

Interview questions for educators (PL1)

1. How did you access your learners during the COVID-19 lockdown? How effective was the method you used?

2. What challenges did you encounter regarding connectivity in conducting online learning during the COVID-19 lockdown? Explain.

3. What do you think can be done to address the above challenges?

4. What kind of training do you as an educator need regarding online teaching and learning?

5. Would you say there is currently enough effort by the Department of Education to equip educators with online skills to augment the traditional way of teaching? Elaborate.

6. Is there anything you would like to add to this discussion?

Interview questions for learners

1. In terms of connectivity, how did you communicate with your educators during the COVID-19 lockdown?

2. What challenges did you encounter?

3. What is your view on online learning versus face-to-face learning in general?

4. What is done at your school to promote the acquisition of online skills?

5. Your emotional state and COVID-19. How did you cope at home?

6. Is there anything you would like to add to this discussion?

4.5. THEMES EMERGING FROM INTERVIEW DATA

Themes were developed from transcriptions of participants' views, opinions and experiences of online learning during COVID-19. Data was then presented in the form of written words. As a result, the following four themes emerged:

THEME 1
- Challenges experienced by educators and learners.

THEME 2
- Stakeholders support and online learning.

THEME 3
- Suggestions for improving online learning.

THEME 4
- Positives that emerged from online learning.

Figure 4.1: Emerging themes from interview data

4.5.1. Challenges experienced by educators and learners

One of the questions posed to both educators and learners was regarding the challenges they experienced while engaging in online learning during the COVID-19 lockdown. This was by far the most populated question in terms of responses. It was evident there were numerous challenges 4. experienced.

4.5.1.1. Navigating the technological terrain

Reimers (2020) argues that the shift to online learning shocked the education system. This was because the system was caught unaware as far as teacher training is concerned. The literature has also revealed that educators are a social fabric that holds the education system together (Kim & Asbury, 2020:1079). If educators play such a pivotal role in the learners' futures, one wonders why they are not empowered with relevant skills to conduct their duties. For the first time, many educators were exposed to online

platforms during COVID-19, without formal training, a sentiment echoed by Reimers (2020), who argues that educators were thrust into a territory in which they had no experience. The same applied to learners. Responding to the question of challenges in conducting online learning, EPB said:

"It caught us unaware technology-wise… most teachers were not comfortable because COVID-19 came as a surprise. We thought that once we had our WhatsApp video calls, we are taken care of but when it comes to the meetings whereby you have three or four people working together…the issue of muting, switching off the video, raising your hand, sending some notes or comment during meeting, all that needs to be tracked. I feel like teachers need that exposure so that they become comfortable." (EPB)

The above speaker is aware that educators need training in order to be comfortable with technology and use it productively. However, with WhatsApp being a common tool of communication during the COVID-19 lockdown at the school, it was saddening to learn that some educators are not even able to use WhatsApp, let alone possess the knowledge of how to go online. EPC remarked:

"…So for me, it was difficult because in the first place, I don't know how to use WhatsApp*…For me, as a teacher…I didn't know what to do. It was difficult; it was a challenge…I don't know, even if you say go online, I don't know what to do…."* (EPC)

The question then becomes, how can one be expected to go online and engage with learners when they cannot even go online themselves? EPC's perspective above is complemented by Rwodzi (2021), who argues that, in the South African context, educators are to use ICT but are not instructed on how to go about it. The above response by EPC is also contrary to the policies on White Paper on e-Education that envisages educators and learners who are equipped with 21st century skills (Martin, 2017). Furthermore, EPC added that she belonged to a generation of educators who are not tech-savvy and would appreciate it if the government could prioritise them in the trainings. She remarked:

"…so especially us older teachers, we belong to the old school of thought, so we still need time and training, not one day but continuous…so for us we need time." (EPC)

The above view reflects the desperation and hopelessness of teachers. Learners are also good judges of educators, and if an educator could teach something they (educators) are not comfortable with, learners would pick it up and subsequently lose confidence in the teacher hence the need to train both educators and learners on computer-based instruction before it can be implemented as a teaching tool (Hedding, Greve, Breetze, Nel & Van Vuuren, 2020). Yet, the participants' responses would reveal that the

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opposite was true. EPC's view above was strengthened by EPD who is a departmental head (PL2 educator), who said:

"My experience with educators was two-fold. The first fold would seek to address educators that are equipped with IT skills against educators that are not equipped with IT skills." (EPD)

Another educator participant lamented that the school continues to demand that educators produce documents produced by computers, yet they are not provided with any training to use computers. She remarked:

"I am not sure…since I came here to this school, l have never attended any training on technology stuff; I have never! It's always the school wanting me to produce tools or documents that I have using laptop, but no training was given to me all these five years…I am using my little knowledge but training on their side none so far." (EPE)

Again, the above perspective speaks to the need for teacher training and is consistent with the view that untrained teachers cannot conduct online learning (Aziz & Hamsy, 2020).

EPA bemoaned the idea of emphasising helping learners and forgetting educators. She remarked:

"I feel like they also assume that teachers do not need training, they automatically think that the people we should focus on are learners, but no, it's not only learners. Also, teachers need that training…I feel like technological skills are needed by everyone." (EPA)

EPA's view above can be complemented by Hilmi (2019), who argues that the most damaging perception of teaching is that it is an easy job. As a result, continuous training in various skills is negated, with online skills included. Perhaps it is high time the teaching profession is elevated to the proper level so that, like any other profession, it is given the attention it deserves.

Like educators, learners also struggled during COVID-19 with online learning. It emerged from their responses that they were not exposed to computer skills at school, yet were expected to use the same skills to interact with their educators during the COVID-19 lockdown. LPI stated:

"…Yes, there is a computer skills class in our school, but it's based on a subject, only people who do the subject go for the computer skills but people like me who do not do CAT don't get to know much about the online things or learning about computers. So during COVID-19, we had to self-learn all the skills that had to do with online learning." (LPI)

A similar sentiment about learners and computer skills was echoed by EPA, who articulated that:

"...Now the problem is that they don't know a computer, they only see it now and then, and then you tell them they have to use it for the rest of their lives? No!" (EPA)

EPA extended her feeling about imparting computer skills to learners by reliving her university years. She recollected:

"My school did not teach me computers. When I got there (university) they asked me what is a ribbon? Am like what ribbon? So I did not know what a ribbon is, and that is how bad it was." (EPA)

The above response is a simple cry for knowledge of the basics. For example, different components of a computer because it is those seemingly simple things that educators and learners are ignorant of. EPD also weighed in on the emphasis on basic skills when he said he wants knowledge *"such that when I have a gadget, I know what to press and for what."* In the same vein, EPE added:

"...so basic stuff, teacher, here is your laptop, if there is a situation whereby you can't reach learners, this is how you connect; this is how you do your class activities with learners." (EPE)

Both educators and learners need knowledge of computer skills, and the training should start with the basics.

4.5.1.2. Lack of supervision and feedback

Learning is a reciprocal process. However, data emerging from educator participants indicated that online teaching tended to be a one-way process from educators to learners, not vice versa. As a result, there was no active engagement between educators and learners – a component that forms the crux of teaching and learning. The following responses from participants qualify the above view:

"Yes, you will find out that learners joined WhatsApp, but when it comes to an active role in the lesson, it was a little bit difficult." (EPB)

"Other learners were silent, so I wouldn't say whether they were with me or not...I was just passing information, passing information." (EPE)

"Yes, we tried to send messages to say join lessons at certain times, but co-operation was always a big problem." (EPB)

EPA raised the issue of learners who were not doing activities sent by educators but only waited for answers. Even so, educators had no way of monitoring this. She had the following to say:

"Some of the learners actually confessed to me that they were actually waiting for the memorandum then writing what the memorandum has into their books. So I don't think it was effective because it didn't have a way of monitoring." (EPA)

Adding to the lack of supervision online, EPF articulated:

"Sometimes you need to see the person you are talking to because of the type of work that we do (Art). Sometimes you want to see the examples of the work and the person doing the actual work." (EPF)

Another participant questioned the quality of responses he got from learners, adding that responses did not seem to originate from learners. The participant said:

"Many a times, you find that the responses we get are enhanced; they are responses that are created by consultations. My learners will consult with their older siblings to get responses." (EPD)

It is safe to say online learning seems to have encouraged laziness in some learners, as evidenced by the view that some joined the groups and just kept quiet. Some did not join groups at all, even though they were invited. Furthermore, some waited for answers and did not attempt to do the work, while some opted to let their siblings do the work on their behalf. In addition, educators were frustrated as they were physically not there to supervise learners.

4.5.1.3. Lack of comprehension (Learners)

Complementing educators' struggle with adequate feedback and supervision was learners' struggle with understanding what was sent by educators and a general yearning for the real classroom. Asked whether they prefer online learning over face-to-face, learner participants shared:

"Ummh, personally, I prefer face-to-face because you are able to interact with the teacher better instead of online if you don't understand something, you don't have the opportunity to ask the teacher right here right now." (LPG)

"I do need the teacher's presence, so I wasn't for online learning, so I would really appreciate the teachers we had; with our teachers, we had contact time and asked questions directly." (LPH)

"The things on YouTube we couldn't even understand…the teacher can show you how to do things,

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and they can explain to you, but online, you can't interact." (LPI)

"I prefer face-to-face learning because the teacher is there, you physically see them, and you can ask questions, rather than online where sometimes the network is buffering, and the volume is not all the way." (LPJ)

The above responses suggest that learners preferred face-to-face learning, where they could freely ask questions that facilitate understanding. Jansen (2020:176) agrees with the above views, arguing that "human beings thrive on contact, to be touched, to be looked in the eye." It is this contact that learners yearned for when they shifted from classroom to online learning. It can be concluded for South African education; the strength is in the classroom.

Another motivation for the preference for face-to-face learning was the presence of constant disruptions online. One participant articulated as follows:

"It is hard to work when your phone is here because you could be going through a group and your friends' messages coming through, and you get interrupted." (EPA)

Concentration was a problem as cellphones received school work and other messages too.

4.5.1.4. Challenges of data, network and gadgets

It emerged from the interviews that data networks affected both educators and learners. Cellphone ownership among learners was also a problem while educators had no laptops. Participants remarked:

"Data was expensive most of the time." (LPG)

"Data was a problem..." (EPB)

"Some were complaining of data, so it wasn't easy to reach learners, it wasn't easy." (EPC)

"So you have issues of data, not only data, but some people don't have cellphones." (EPA)

"I don't even have that tool (computer)…I am using my private computer for the school." (EPE)

Educators were sending activities to learners during the COVID-19 lockdown, some of these needed downloading, and without data, learners could not do so. Educators could cater to those who do not understand in a classroom setup by providing remedial work or giving extended opportunities. With online learning, those who did not understand could not be accommodated, and even those without phones were not reachable. EPA bemoaned, leaving other learners behind. She articulated:

"Some of them don't even have phones, so it was a problem because it meant that we were kind of pulling them aside, those learners who don't even have access because we didn't even have alternatives for them." (EPA)

Not only did learners and educators battle with data and gadgets, but they also had to deal with network problems. One participant remarked:

"Network reception was not always good. Sometimes you talk to yourself without being aware that you are offline…sometimes it takes times to connect maybe 10-15 minutes just to connect." (EPF)

In addition, EPF believed that some learners are born into areas with no network, which was beyond their control. He said:

"… and I think it shows the South African landscape, and some people do not have cellphone towers or network towers where they come from, and the reception is nonexistent…I prefer to call it structural racism." (EPF)

Reimers (2020) agrees with EPF, stating that structural divisions make the management of the education system difficult.

Load shedding also added to learners' woes. One participant remarked:

"Eskom as well; let's not forget that we are in this country, so Eskom does play a role." (LPH)

Load shedding was seemingly also a hindrance. However, looking at the current state of the electricity supply, one would understand where LPH is coming from, especially in instances where the country ranged between level 4 and level 5 power cuts.

4.5.1.5. Lack of study space

Not every learner comes from a spacious environment at home. The classroom set-up at school provides a uniform platform for everyone to learn. COVID- 19 and the subsequent lockdown forced learners to learn from home, some in not-so-comfortable conditions. EPF shared:

"Some learners live among extended family members, and it's not easy, and they share small space, and you find out that it's not easy for them to focus."

Adding to the above is the issue of noise at home:

"Some people come from not-so-good surroundings. You have this drunken uncle who doesn't respect anyone who starts shouting and all that you see? And it affects young people's self-esteem." (EPF)

The physical school environment seems the best option for most learners who do not have proper study space at home. EPF's view on home situations was supported by LPI, who articulated:

"...and we still had a problem you can't concentrate at home. There are children and everything...you are worried about finishing the syllabus and also worried about things that are happening at home." (LPI).

Constant reference to terms like "everything" and "things" suggested that there could be more unpleasant experiences, only that the participant was hesitant to delve into them. Cloete, Ellington and Van Vuuren (2021) caution against treating all learners the same way, arguing that educators who are untrained in online learning tend to adopt a one size fits all approach when dealing with learners who are challenged.

Furthermore, EPD observed that lockdown meant that leaners were present at home daily and therefore *"more financial resources channeled towards food"*, a sentiment echoed on the reviewed literature that impoverished families had a difficult task of choosing between internet services and putting food on the table (Arizon, 2020).

4.5.1.6. Psychological impact of online learning

The COVID-19 lockdown and subsequent shift to online learning was a period of anxiety and uncertainty. Asked how they coped during the lockdown, LPG shared:

"I don't know like it was on and off. Sometimes I would be happy to be home, but there were times

when I just needed to go to school." (LPG)

In her response to a similar question, LPI bluntly stated:

> *"We also had to go through the depression of being scared you will die tomorrow or not because of the sickness, and yaah it was very hard."* (LPI)

Another response was reflective of information overload by educators. The participant ranted:

> *"To be honest, I was irritated; I was irritated as they (educators) were sending assignments and homework everywhere. I was breaking down."* (LPJ)

The above responses reiterate that online learning, coupled with the COVID-19 lockdown, emotionally took its toll on learners. Barry (2022) supports the above views on learners' emotional state, arguing that while focusing on academic knowledge and instructional skills, the emotional part must not be ignored. Daniels (2020:93) argues that these were "anxious times" as learners and parents were not certain as to whether life would be normal again.

4.5.2.   Stakeholders' support for online learning

Both the school and the DoE can do better to improve educators' and learners' experience of online learning. The participants' responses showed that very little to no assistance was given. The following are responses to the question of support given to participants:

> *"I don't think there is much done at my school to promote the acquisition of online skills."* (LPH)

> *"Ummmh, for me, not much is done."* (LPI)

> *"To be honest, there hasn't been much done on the acquisition of online skills."* (LPJ)

South Africa is a signatory to the MDGs, as such, it is bound by its dictates. One of the MDGs speaks to teacher professional development (Martin, 2017). Yet, such ideas remain on paper, and educators continue to struggle. One participant gave a personalised response to the support given by the DoE. He articulated:

> *"At the moment, online learning support from the department, at least to me as someone on the ground, is none existent. I see people busy, the MEC, and the minister, but I think because I am an educator, to show that it happens, I need to see it in my school or other schools. I don't remember seeing anything."* (EPF)

EPF further added:

> *"There is a talk, but generally, I think there is more the government can do better it's just that there are many contradictions, and competing powers; as a result, we ordinary people suffer."* (EPF)

In other words, EPF is aware that there should be less talk and more action on the implementation of policies. The majority of educator participants bemoaned the lack of support from the school, especially the provision of data and laptops. EPE cried out:

> *"It was a challenge because the school was not helping me. They just saying teachers make sure you do this with learners without telling us what it is that you need to access learners."* (EPE)

Nonetheless, educators were determined against all odds to help the learners, even if it meant digging deeper into their pockets to buy data with their own money. This was evident from EPA who shared:

> *"I also had my own data which was not paid for by the school…that was also a problem because I have this data that I normally buy for my social life and now it has to accommodate my work."* (EPA)

EPA's response above is in line with Starkey, Shonfeld, Prestridge and Cervera (2020). They argue that instead of focusing on teachers' shortcomings during the lockdown, the teaching profession in its entirety should be celebrated. In addition, more focus should also be directed to the teachers' efforts towards helping learners. This is a befitting view, considering how educators at the school went out of their way to help learners. Bubbs and Jones (2020:210) concur with the above view, stating that educators were willing "to go the extra mile."

Adding to the frustration at school, educators were aware that some of their counterparts in other schools received help from their respective schools. This idea was articulated by EPA:

> *"There are schools that are well off and…also maybe the school takes care of its teachers, they say this is the data plan that we have so you can use it, so it's never coming from a place of ooh I am sacrificing my own data to hold a lesson."* (EPA)

Since the participant refers to "well-off schools" above, it depends on whether the school can afford data for all educators. Above all, there was a plea to provide opportunities for practice, with one participant using the scenario of a book she read. She remarked:

"It happens with everything. I remember trying to get into the habit of reading books. My mum told me just read one, and I actually found out that I enjoyed it, which is how I started reading. Sometimes you just need an opportunity. If there is no opportunity, how am I going to try." (EPA)

In other words, the participants are calling for relevant stakeholders to provide educators with opportunities to practice online skills.

4.5.3. Suggestions for improvement

4.5.3.1. Equip educators and learners with technological skills.

A recurring suggestion was the need to equip educators and learners with technological skills in order to effectively conduct online skills. EPA suggested:

"Every degree should offer computers as a basic thing; technological skills are important for everyone." (EPA)

This view is upheld by Toquero (2020), who challenges higher education institutions to scale up the training of teachers for online instruction.

EPB also added:

"At school level, students who are not doing CAT should have that experience to computers", a view earlier alluded to by LPI (Chapter 4, par 4.5.1.1, p6).

EPB impressed upon the school to make a conscious decision to purchase computers for online learning:

"Looking at the side of the school, the school can buy computers and let teachers pay back monthly at smaller premiums so that everyone can have access to our technologies; that will go a long way." (EPB).

Considering that the school has 70 educators and possible financial constraints, a suggestion such as the one raised by EPB above could go a long way in resolving the challenges and ultimately yielding positive results for online teaching and learning.

EPE lamented the tendency of schools to always wait for initiatives from the department and suggested that schools initiate some ideas and programmes:

"...they should not wait for the district to initiate ukuthi (that) we are going to train teachers. At the school level, the principal should evaluate ukuthi (that) how many teachers in the school that know technology and how many that don't, then try to initiate training helping those teachers so that they can be equipped at any time." (EPE)

The above view was supported by EPB, who suggested: *"We can look at the teachers; we can have them trained after school."* Suggesting after-school training is a good idea as it would mean that teaching and learning are not interrupted and educators benefit.

Furthermore, at the school level, the principal was continually singled out as the driving force behind the success of any school activity. One participant had this to say:

"I feel like something can be enabled by the principal because the principal can set a tone and say you know what, we need to move towards this direction. All of us are going to move towards that direction." (EPA)

From the above view, it can be deduced that effective leadership is key to getting educators and learners equipped with relevant skills. Direen (2017) echoes similar sentiments when arguing that a leader's effectiveness is tested more during times of crisis. In this case, the COVID-19 outbreak.

Prior to training, a needs assessment should be conducted. One participant suggested that training offered to educators should not be haphazard.

"They will say if you want those points just register yourself with any course. Maybe we should look at what we need as teachers, what are the current skills that we need, we need to move with time, and then you introduce a lot of training that are related to that." (EPA)

Planned training is therefore important, otherwise, educators would sit with skills that are not relevant to teaching and learning.

4.5.3.2. Provide free Wi-Fi to schools

One of the challenges that emerged from the interview data was the struggle with connectivity. Some participants suggested the provision of free Wi-Fi and applications that facilitate learning. EPA mentioned:

"...the City of Ekurhuleni has that kind of Wi-Fi on bus stations, so if you can have that kind of Wi-Fi at a bus station, don't you think it can be possible to do it at school, the place that needs it the most, you understand?" (EPA)

EPA further suggested that the school could look for free educational applications and register to facilitate online learning. She mentioned:

"The principal can register us into these apps and inside that app we have different classes."
EPA's views were supported by EPD, who added:

"If a community can have a free connectivity which would be accessible to all members of the community for programmes that support education…" adding that for online teaching and learning to be successful, *"you can block certain programmes that will redirect learners to ill behaviour…verification must be strict."* (EPD)

The above suggestions on the provision of free Wi-Fi in schools resonate with the views of Carlana and Ferara (2021), who argue that where education is adequately funded, more success stories could be realised through the use of technology in promoting learning. Bariham (2020) supports the above view, arguing that Telecom companies that control connectivity should support education.

4.5.4.   Provision of online skills should not be a one-man show

Participants suggested that an all hands on deck approach be adopted for online learning to be fully realised. EPD stated:

"In order for education to be successful, we need all stakeholders to be part of it, that is, educators themselves, parents, learners and even the community members…." (EPD)

This view also includes teacher involvement, suggesting that educators should take a conscious decision to be part of their personal and professional growth.

EPB added, *"Parents must be co-operative",* suggesting that parental involvement is key in effective online learning. However, most parents tend to take a back seat when it comes to their children's education and leave the burden to educators. Bubb and Jones (2020) highlight the positive results of parental involvement (2020), arguing that during the COVID-19 lockdown, parents who were involved in their children's education gained more insight into their children's learning. The collective approach advocated for by the participants is also supported by Martin (2017:152), who refers to "lone wolves",

when referring to people who want to work on their own and not share ideas.

4.5.4.1. Make use of volunteer services

One participant raised the issue of volunteering, especially considering that schools and the government constantly point to a lack of funds as the reason some programmes do not take off. The participant remarked:

"...and I also think another solution is, well you have young teachers like us. I feel like there is something that we might, even if we might not know where to start, but we are better when it comes to technology because there are some things that we know." (EPA)

The above participant is volunteering her services, and other young teachers like her could help others acquire online skills. The government should consider harvesting such expertise in order to address the challenges of online learning.

4.5.4.2. Politicians must be prepared to sacrifice

One participant took a swipe at politicians who earn huge amounts while the masses suffer, including education provisions. He remarked:

"I think if it was up to me, the amount of money that politicians make, coz I think thus where it starts. They earn a lot those people. What for? And they are supposed to be where they are in the name of the people, but the people are struggling." (EPF)

The above view speaks to the equal distribution of resources for the benefit of all, education included. EPF's view above also resonates with Ubuntu principles advocated by Barry (2022:39), who argues that Ubuntu means "I am because you are", demonstrating humanity towards others. If politicians adopt these principles, they would be aware of the importance of sharing resources because Ubuntu affirms caring for others. A similar sentiment is shared by Pillay (2021), who references the Zondo Commission that uncovered misuse of state funds, some of which could have been channeled towards providing online skills to educators and learners.

4.5.4.3. Put systems in place and be prepared for future disasters

The majority of participants were of the view that COVID-19 should be a lesson for the future. The following responses emerged:

"What if it happens again? This simply means that this (online learning) has to form part of everything that we do; once young people enter basic schooling, that needs to form part of what is happening." (EPF)

"From now onwards, there should be meetings that should be conducted either through zoom, Google, or Gmail meetings; we should let learners and educators get used to that…." (EPB)

"…especially in future because we don't know what the future holds. We don't know if there might be another outbreak or pandemic and like make the system better." (LPG)

The above views suggest that the challenges of online learning during COVID-19 should be turned into future lessons. Marais (2020) argues that online learning has come to stay, while Sauden (2020) adds that post the COVID-19 pandemic, the world will never be the same. Simply put, these researchers are calling on the government to invest in education by training educators and equipping learners with online skills. Participants' views on future preparedness are consistent with the findings by Lepp,Aaviku, Leijen, Pedaste and Saks (2021) on the study of Estonians' response to the COVID-19 lockdown and shift to online learning. These researchers detail how smooth it was for the Estonians to shift to online learning overnight because the systems were in place and educators and learners had all the skills.

Furthermore, Estonia is said to have had its entire population equipped with digital skills by 2014, which remains a far-fetched dream in South Africa and other African countries. Reiterating the need for preparedness, Martin (2017:428) argues that online learning is not the "next" big thing, but the "now" big thing. In other words, suggesting the need to adapt to changing times.

4.5.5. The positives that emerged with online learning

COVID-19 provides a golden opportunity to rethink what matters most in schools (Arizona 2020). This view was shared by some participants who believed that amidst the challenges of online learning, there were positives that were realised. EPD had the following to say:

"Ummh, C0VID-19 brought a lot of good reason for us to look at and reflect on our education…I see a lot of positivity or noted positivity in enhancing my IT skills." (EPD)

EPD's response suggests that the COVID-19 lockdown resulted in school improvements. Reimers (2020) argues that the shift to online learning opened paths towards school improvements and the education system in general. This is true considering that at the height of COVID-19, even the remotest schools benefitted from mandatory COVID-19 regulations, such as water infrastructure and basic sanitation. Another point from EPD's response is that he acknowledges that engaging online improved his technological skills. Martin (2017) supports this notion, stating that when educators engage in online activities, they collaborate with fellow educators and, in the process, refine their skills.

Online learning also turned out to be more environmentally friendly than face-to-face exercise. With the number of natural disasters such as drought, floods and fires on the rise, it is safe to say online learning could be the answer to curbing climate change. EPD articulated:

"…If you are to realise your fourth revolution that speaks to a paperless environment, less pollution and also have learners who are responsible." (EPD)

Besides contributing to a clean environment, EPD noted that online learning encouraged learners to take responsibility for their own work, a view backed by Khatoon, Jafre, Mizra and Pathon (2020), who argue that online learning provided independence and responsibility for learners to work without the supervision by teachers.

Online learning also made learners realise the value of educators and that there would be days when educators would not be available. Family members were appreciated as well. LPH had this to say:

"I feel like the world is coming to an end, and we need such challenges to help us realise, it gives us a purpose to live. Actually, you realise you appreciate people around you, you appreciate your teacher, you appreciate family members as well."

The above view resonates with Reimers (2020), who argues that a general appreciation of educators was encouraged during COVID-19. Another online positive was that learners gained skills they would use later in their world of work. EPA added:

"So it is a good cause (online learning); it can also help learners to prepare to prosper when they get into their work environment."

4.6. CONCLUSION

Chapter 4 presented the data from the themes that emerged from the interviews. The experiences of participants were captured, and responses were reported verbatim. The findings addressed the study's three research questions and were in agreement with themes from the literature review. The literature review highlighted challenges experienced by educators and learners as they embarked on online learning, the lack of support from relevant stakeholders, possible solutions to challenges encountered, and the benefits of online learning. The above themes came up during the interviews (Chapter 4, para. 4.5.1, p. 60-75). The following chapter (Chapter 5) presents the conclusions, discussions and recommendations for future research.

CHAPTER 5: SUMMARY OF THE FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1. INTRODUCTION

The previous chapter presented and interpreted the findings based on themes emerging from interview data. The following research questions were linked to the findings (as summarised in Chapter 1); How qualified are educators in dealing with online teaching at the selected school in Kempton Park, Johannesburg? 2) What resources and equipment are available to allow educators and learners to practice online teaching at the selected school in Kempton Park, Johannesburg? 3) How have online skills impacted teaching and learning during COVID-19 at the selected school in Kempton Park, Johannesburg? The purpose of the study was to investigate the impact of online skills on teaching and learning during COVID-19 at a selected school in Kempton Park, Johannesburg. The findings attempted to answer the three research questions above. This chapter (Chapter 5) presents an overview of all the chapters, summarises the findings and limitations, concludes the study, and makes recommendations.

5.2. CHAPTER OVERVIEW

Chapter 1: Provided an introduction to the study, which included the background, rationale behind the study, problem statement, aims and objectives, research questions, the scope of research, and the definition of key concepts.

Chapter 2: Presented an extensive review of literature on the impact of online skills on teaching and learning during the COVID-19 lockdown. The sub-headings on the literature reviewed included South African education context, the benefits and costs of online learning, 21st century learners, teacher preparedness, impact on learners, digital divide, and lessons from other contexts.

Chapter 3: Presented the research methodology that incorporated the research paradigm, research design, research approach, sample size, and sampling techniques. Purposeful sampling was used to collect data as it allowed the researcher to get in-depth knowledge through the use of semi-structured interviews. The final section of this chapter is related to the researcher's role, validity, trustworthiness and ethical considerations.

Chapter 4: Dealt with the presentation, interpretation and analysis of data collected through semi-structured interviews. Educators' and learners' views were sought regarding the impact of online skills on teaching and learning during the COVID-19 lockdown at the selected school in Kempton Park,

Johannesburg. Thematic analysis was used to analyse data. The themes allowed the researcher to establish patterns in participants' responses and to conduct a more detailed analysis.

Chapter 5: Presents an overview of the entire study, followed by the main findings, recommendations, limitations and conclusions.

5.3. SUMMARY OF THE RESEARCH FINDINGS AND CONCLUSIONS

In this section, the researcher provides a summary of the research findings. Each finding will be briefly described. The four major findings were imbued in the data collected, which are also related to the research questions. The following four themes emerged:

- Challenges experienced by educators and learners
- Stakeholders' support and online learning
- Suggestions for improving online learning
- Positives that emerged from online learning

5.3.1. Challenges experienced by educators and learners

COVID-19 caught the entire world by surprise. In South Africa and the entire African continent, educators and learners were not equipped with the skills to embark on online learning. The literature analysed in Chapter 2 (par 2.7, p.18) indicated the extent to which the African continent was affected; hence, the need to invest in online skills. The study revealed that educators and learners experienced several challenges when shifting to online learning. These challenges are discussed below:

5.3.1.1. Navigating the technological terrain

The study revealed that educators and learners struggled to engage in online learning because they lacked the skills to do so. Educators are not trained, and learners are not exposed to computer skills at school. As a result, educators' confidence levels are affected as they find themselves using tools they are unfamiliar with. It emerged that educators require basics to navigate online platforms because some argued that they could not even go online or operate WhatsApp (Chapter 4, par 4.5.1.1, p.5), a tool used as the primary mode of communication at the school during the lockdown. Conversely, the study revealed that only a handful of learners studying CAT as a subject are exposed to computers, while the rest are left

to

self-teach (Chapter 4, par 4.5.1.1, p.6). Moreover, it also emerged from the study that more attention is given to learners, and it is assumed that educators know the skills, which is not the case.

5.3.1.2. Lack of supervision and feedback

Learning is a two-way process. The study revealed that the shift to online learning saw teaching and learning becoming a one-way process. Educator participants reported a lack of touch with learners. They (educators) could not differentiate between those participating in online discussions and those who were not. It also emerged that some learners copied memorandums sent by educators into their books without attempting activities, while some submitted work written by their siblings (Chapter 4, par 4.5.1.2, p.7).

5.3.1.3. Lack of comprehension (learners)

Leaners found it challenging to understand what educators sent online. The study revealed that learners preferred face-to-face learning, where they could freely ask questions and understand. It also emerged that cellphones could also be a distraction because while online, some messages not related to learning might pop up on the phone and interrupt learning (Chapter 4, par 4.5.1.3, p.8).

5.3.1.4. Challenges of data, network and gadgets

To effectively conduct online learning, there should be data and connectivity. The study revealed that data was expensive for both educators and learners. In addition, some learners had no cellphones, while some stayed in areas with no network booster; hence, the poor reception (Chapter 4, par 4.5.1.4, p.9). Educator participants reported that they had no laptops, while load shedding also played a part. From learners' perspective, financial constraints meant that some families chose to put food on the table over data.

5.3.1.5. Lack of study space

Some learners come from home environments where they share small spaces with large families. This is prevalent in informal settlements. The study revealed that learners struggled to cope with online learning as a result of lack of space at home resulting in numerous distractions. Noise levels also meant they do not concentrate well hence the reason why all learner participants preferred face to face learning.

5.3.1.6.   Psychological impact

When one is not stable mentally, one cannot perform optimally. In addition, the study revealed that online learning took an emotional toll on learners. They generally missed the natural school environment, went through depression, were scared of COVID-19 deaths, and felt overwhelmed as they could not cope with the amount of work sent by educators.

5.3.2.   Stakeholders' support for online learning

The government, DoE, and schools must ensure that educators and learners are equipped with relevant skills to attain educational goals. The study revealed that there is hardly any support for educators and learners despite the many policy documents that are awash with policies. Participants felt that there was more talk and less action. There was also a general frustration with the failure of the school to initiate programmes that help educators and learners to acquire online skills, only expecting the skills to be used by educators without training them first.

5.3.3.   Suggestions for improvement

Several suggestions to improve online learning emerged from the study, these include:

5.3.3.1.   Equip educators and learners with technological skills

Educators are the first line of managers in the classroom; any change implemented without equipping them first is bound to fail. It was suggested in the study that universities and colleges should offer computer skills as a basic. The school was also encouraged to initiate in-service computer training programmes and buy laptops for educators. In addition, all learners at school must be exposed to computers, not only those studying CAT. The study's participants implored the principal to rally all educators and learners towards a common mission. Furthermore, the department was challenged to adopt training that targets specific skills that advance educational goals.

5.3.3.2.   Provide Wi-Fi to schools

Every child is a national asset; thus, the government should invest in their education. The study revealed that schools are generally not prioritised regarding connectivity. This was evident in the fact that participants were aware that one could get Wi-Fi in bus stations, yet there is none at school (Chapter 4, par 4.5.3.2, p.13). The suggestion was that schools could make an effort to register themselves on free

applications that facilitate online learning. Furthermore, Telecom companies were challenged to play their part in supporting education.

5.3.3.3. Provision of online skills should not be a one-man show

Effective online learning can only take place when all stakeholders come together to support the cause. The participants suggested parents, educators, and the community must come together for the greater good.

5.3.3.4. Make use of volunteer services

The study revealed that the government and schools could benefit from voluntary skills. It emerged that young teachers are willing to volunteer to teach online skills. If such skills could be harnessed, the gap in lack of finances to fund training programmes for educators could be greatly reduced.

5.3.3.5. Politicians must be prepared to sacrifice

The study revealed that there is a considerable gap between the haves and have-nots. The view from participants was that politicians are unnecessarily earning a lot of money, part of which could be channelled towards imparting online skills to educators and learners. If resources could be shared equally, education could also benefit.

5.3.3.6. Put measures in place in the event of future disasters

COVID-19 might not be the last pandemic to be experienced. The study revealed that there is a need to put systems in place and be ready to respond timeously to future disasters, with specific reference to the need to arm educators and learners with adequate skills.

5.3.4. The positives that emerged with online learning

The study revealed that not all was gloom and doom regarding online learning. Educators perfected their technological skills while figuring out how the gadgets worked. Learners also learnt to work independently of educators and came to appreciate their teachers and families more. Online learning also meant less paper used; therefore, it was deemed environmentally friendly (Chapter 4, par 4.5.4, p. 15-16).

5.4. RECOMMENDATIONS

The following recommendations can be incorporated into existing policies to promote the acquisition of online skills:

5.4.1.   Recommendation 1

The study recommends that the government and other relevant stakeholders invest in school ICT infrastructures to support online teaching and learning. In addition, there should be continuous training for educators on the use of technological gadgets so that they are competent to use them to conduct online learning. Investing in school infrastructure will eradicate inequalities in education, especially in public schools where learners are not operating at par with their counterparts in private schools.

5.4.2.   Recommendation 2

The DoE should partner with internet service providers to offer cheap or free educational content for learners who struggle with connectivity at school.

5.4.3.   Recommendation 3

Policies that support online learning must be implemented and not only remain on paper. Furthermore, a deliberate push toward paperless classrooms must be made a reality considering that we are dealing with a tech-savvy generation of learners.

5.4.4.   Recommendation 4

ICT must be integrated into the curriculum. CAT, like Mathematics and English, must be made compulsory.

5.4.5.   Recommendation 5

Government must address corruption and unfair use of funds across all sectors of the economy so that all funds intended for different departments and projects are not diverted to other uses.

5.4.6.   Recommendation 6

The study recommends that the DoE make a concerted effort to recruit volunteers at a low fee to help train educators and learners on online skills. The study revealed that young teachers are standing ready to assist in this regard.

5.4.7.   Recommendation 7

To a greater extent, educators must also take charge of their personal and professional growth, for example, by taking computer courses to keep abreast with digital trends.

5.5.   LIMITATIONS OF THE STUDY

The study's main limitation was the small sample size (10 participants). As a result, several findings cannot be generalised to a larger population. Again, only one high school was considered. Future studies could consider several high schools and larger samples. The study also got perspectives at a public school; perhaps a private institution could produce different results considering that, according to the literature reviewed, private schools handled online learning differently, with many reporting a smooth transition to online learning. In addition, only semi-structured interviews were used as a data collection tool. Other tools, such as questionnaires, focus group interviews, and document analysis, could produce different results. Furthermore, since the study only used the qualitative approach, other quantitative and mixed methods approaches might produce different results.

5.6.   RECOMMENDATIONS FOR FUTURE RESEARCH

- The study provides a baseline for researchers to further explore how technology can be fully integrated into teaching and learning to advance online skills.
- Technology is a dynamic aspect; new innovative components are incorporated every day. Similarly, future research could look into this dynamism so that educators and learners know what works better and under what conditions.
- Policies on imparting skills to educators and learners are on paper, and implementation remains a far-fetched dream. However, future research could make a deliberate effort to delve into reasons why policies are not implemented.
- The impact of effective leadership in times of crisis should be explored. The study revealed that effective leadership is vital when making critical decisions in times of crisis, like the COVID-19 pandemic.

5.7. CONCLUSION

COVID-19 reconstituted people's lives, and education was not spared. The shift to online learning due to the COVID-19 lockdown laid bare the inadequacies in the education system, particularly the lack of teacher preparedness as far as online skills are concerned, a sentiment that all educator participants in the study reflected. The study revealed that educators and learners were unprepared to shift to online learning. Moreover, there was little to no support from relevant stakeholders, with educators left to fend for themselves and use their own data and laptops to access learners.

The final analysis is that from the afflictions of COVID-19, there should be lessons that will take us forward in the event of future disasters. Like developed countries, South Africa and the rest of the African continent should strive for a state of preparedness by investing in education by training educators and learners in online skills, as envisaged in the White Paper on e-Education and the Millennium Development Goals (Chapter 2, par 2.5, p.8). More than before, there is a need for all concerned stakeholders in education to work together to attain educational goals.

However, not all was gloom and doom. Some positives emerged amid the challenges of COVID-19 and the shift to online learning. The study revealed that educators perfected their technological skills and knowledge by interacting with fellow educators. For learners, online learning taught them to work independently and provided an opportunity to appreciate their educators. Parents also gained insight into their children's work. Online learning also eliminated paper; hence, a move towards a cleaner environment.

5.8. MY REFLECTIONS ON THE RESEARCH AND LEARNING JOURNEY

My reflection on this journey will begin with the motivation behind conducting this study. When COVID-19 struck, I was among the many educators who were not fully equipped with online skills to move smoothly to online teaching and learning. As an educator, I, too, struggled with data expenses and used personal gadgets to try and continue with the syllabus during the lockdown. This experience ultimately triggered the interest in investigating how other educators and learners experienced online learning, which, according to the study's findings, revealed that they, too, experienced challenges.

Overall, my research journey has been of mixed emotions, characterised by excitement, frustrations and sometimes pain. The interview sessions were the most fulfilling. Participants co-operated and freely detailed their experiences which afforded me a wide pool of data. The sad and painful chapter of my

journey was when I fell ill in August 2021. I was forced to halt my studies for almost a month to concentrate on my health. Looking back, I am grateful to God for the gift of life and the opportunity to continue with my studies. My family was also a pillar of strength during this trying time.

I was privileged to be allocated Professor R. I. Lumadi as my supervisor. I could not have made it this far without his support. From constantly directing me to relevant resources for my study to providing suggestions for improvement, I could not have asked for a better supervisor. The research journey taught me patience, time management, collaboration, and communication skills. Juggling the duties of a mother, wife, high school teacher, and a student was not easy. From late-night browsing of multiple articles only to write a single paragraph to transcribing lengthy interviews, I learnt that conducting research is no child's play and that perseverance and dedication always pay.

My journey will not be complete if I do not acknowledge the financial assistance I received. When I was awarded a bursary in 2022, I was motivated to push even more as my fees were paid. I will forever be grateful for this financial support.

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APPENDIX A: PROOF OF REGISTRATION

UNISA | university of south africa

0959

MAPHOSA Z MRS
57 MANCHESTER BODY CORPORATE
BERGRIVIER DRIVE
CHLOORKOP EXT 61
1619

STUDENT NUMBER : 48250619

ENQUIRIES TEL : 0861670411
            FAX : (012)429-4150
eMAIL : mandd@unisa.ac.za

2022-10-28

Dear Student

I hereby confirm that you have been registered for the current academic year as follows:

Proposed Qualification: MED (EDUC MANAGEMENT)   (98420)

CODE	PAPER	S NAME OF STUDY UNIT	NQF crdts	LANG.	PROVISIONAL EXAMINATION EXAM.DATE	CENTRE(PLACE)

Study units registered without formal exams:
DLEDM95   Mini Dissertation: Education Management   84   E

You are referred to the "MyRegistration" brochure regarding fees that are forfeited on cancellation of any study units.

\# Your attention is drawn to University rules and regulations (www.unisa.ac.za/register).
   Please note the new requirements for reregistration and the number of credits per year which state that
   students registered for the first time from 2013, must complete 36 NQF credits in the first year of study,
   and thereafter must complete 48 NQF credits per year.
   Students registered for the MBA, MBL and DBL degrees must visit the SBL's ESOnline for study material and other
   important information.
   Readmission rules for Honours: Note that in terms of the Unisa Admission Policy academic activity must be
   demonstrated to the satisfaction of the University during each year of study. If you fail to meet this requirement
   in the first year of study, you will be admitted to another year of study. After a second year of not demonstrating
   academic activity to the satisfaction of the University, you will not be re-admitted, except with the express
   approval of the Executive Dean of the College in which you are registered. Note too, that this study programme must
   be completed within three years. Non-compliance will result in your academic exclusion, and you will therefore not be
   allowed to re-register for a qualification at the same level on the National Qualifications Framework in the same
   College for a period of five years after such exclusion, after which you will have to re-apply for admission to any
   such qualification.
   Readmission rules for M&D: Note that in terms of the Unisa Admission Policy, a candidate must complete a Master's
   qualification within three years. Under exceptional circumstances and on recommendation of the Executive Dean, a
   candidate may be allowed an extra (fourth) year to complete the qualification. For a Doctoral degree, a candidate
   must complete the study programme within six years. Under exceptional circumstances, and on recommendation by the
   Executive Dean, a candidate may be allowed an extra (seventh) year to complete the qualification.
\# Your study material is available on www.my.unisa.ac.za, as no printed matter will be made available
   for the research proposal module.
   Study material can be accessed on the Unisa website. You must register on MyUnisa (https://my.unisa.ac.za/portal/)
   for this purpose. You are also reminded to activate your myLife email address since all electronic correspondence
   will be sent to this email address.

CREDIT BALANCE ON STUDY ACCOUNT: 3.00-

Yours faithfully,

Prof M S Mothata
Registrar   1031 0 00 0

APPENDIX B: ETHICAL CLEARANCE

UNISA | university of south africa

Date: 2022/06/08

Dear Mrs Z Maphosa

Decision: Ethics Approval from 2022/06/08 to 2025/06/08

Ref: **2022/06/08/48250619/23/AM**

Name: Mrs Z Maphosa

Student No.:48250619

Researcher(s): Name: Mrs Z Maphosa
E-mail address: 48250619@mylife.unisa.ac.za
Telephone: 071 918 9001

Supervisor(s): Name: Prof RI Lumadi
E-mail address: lumadri@unisa.ac.za
Telephone: +27 12 429 2123

Title of research:

The impact of online skills on teaching and learning during COVID-19 at a selected school in Kempton Park, Johannesburg.

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 2022/06/08 to 2025/06/08.

---

*The **medium risk** application was reviewed by the Ethics Review Committee on 2022/06/08 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.

Open Rubric

3. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the UNISA College of Education Ethics Review Committee.

4. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.

5. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing.

6. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.

7. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data requires additional ethics clearance.

8. No field work activities may continue after the expiry date **2025/06/08**. Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:

The reference number **2022/06/08/48250619/23/AM** *should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.*

Kind regards,

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

Prof Mpine Makoe
ACTING EXECUTIVE DEAN
qakisme@unisa.ac.za

APPENDIX C: GDE REQUEST LETTER TO CONDUCT RESEARCH

PERMISSION REQUEST FORM: EKURHULENI NORTH DISTRICT, DEPARTMENT OF EDUCATION, GAUTENG PROVINCE.

UNISA | college of education

Date: …………………………...

Re: **Request for permission to conduct research at Sir Pierre Van Ryneveld High School, EkurhuleniNorth district, Gauteng Province.**

Title of the research:

THE IMPACT OF ONLINE SKILLS ON TEACHING AND LEARNING DURING COVID-19 AT A SELECTED SCHOOLIN KEMPTON PARK, JOHANNESBURG.

CEDU Ethics Review Reference**: 2022/06/08/48250619/23/AM**

ATT: Mrs NP Ntuta
District Director
Ekurhuleni North
District Bunyano Street
1500

Dear Mrs NP Ntuta,

I, **Ziboneleni Maphosa** am doing research under the supervision of **Professor Israel Lumadi Rudzani,** a lecturer in the Department of Educational Leadership and Management (contactable at +71 12 429 2123/+71 71 532 2761/lumadri@unisa.ac.za). I am studying towards a Master's degree in Educational Management at the University of South Africa. I am requesting your permission to conduct a research study at Sir Pierre Van Ryneveld High school in Kempton Park.

The aim of the study is to explore the impact of online skills on teaching and learning during COVID-19 at the school, including challenges that were experienced by both educators and learners.I have purposefully identified the school for easy accessibility of participants as I am an educator atthe school. The study will entail interviewing two HODs,four educators and four learners using semi-structured interviews.

The benefits of this study are:

- The study may potentially inform the Department of Education and other relevant stakeholders on thestate of the school and how best to effectively equip and support educators and learners with online learning skills.
- The findings may assist the Department of Education put systems and measures in place and better prepare for unforeseeable disasters.
- May encourage the spirit of Ubuntu through sharing of resources for the promotion of educational goals.
- May encourage educators to take responsibility for their personal and professional growth by sacrificing their time and resources.

No foreseeable risks are anticipated. There is also no remuneration for participants or any form of incentive. The research is solely for academic purposes only. I intend to make a copy of the findings available to your office upon completion of the project.

Thank you.

Yours sincerely,

Ziboneleni Maphosa
ziboncube@gmail.com
0719189001

APPENDIX D: GDE PERMISSION LETTER TO CONDUCT RESEARCH

GAUTENG PROVINCE
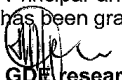Department: Education
REPUBLIC OF SOUTH AFRICA

8/4/4/1/2

GDE RESEARCH APPROVAL LETTER

Date:	29 July 2022
Validity of Research Approval:	08 February 2022- 30 September 2022 2022/323
Name of Researcher:	Maphosa Z
Address of Researcher:	57 Manchester Complex
	Bergrivier Drive
	Choorkop Ext 61/ Kempton park
Telephone Number:	0719189001
Email address:	48250619@mylife.unisa.ac.za
Research Topic:	The Impact of online skills on teaching and learning during Covi-19 at a selected school in Kempton park,Johannesburg
Type of qualification	Masters
Number and type of schools:	1 Secondary School
District/s/HO	Ekurhuleni North

Re: Approval in Respect of Request to Conduct Research

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

29|07|2022

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

1

Making education a societal priority

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

103

1. The letter would indicate that the said researcher/s has/have been granted permission from the Gauteng Department of Education to conduct the research study.
2. The District/Head Office Senior Manager/s must be approached separately, and in writing, for permission to involve District/Head Office Officials in the project.
3. **Because of the relaxation of COVID 19 regulations researchers can collect data online, telephonically, physically access schools, or may make arrangements for Zoom with the school Principal. Requests for such arrangements should be submitted to the GDE Education Research and Knowledge Management directorate.**
4. **The Researchers are advised to wear a mask at all times, Social distance at all times, Provide a vaccination certificate or negative COVID-19 test, not older than 72 hours, and Sanitise frequently.**
5. A copy of this letter must be forwarded to the school principal and the chairperson of the School Governing Body (SGB) that would indicate that the researcher/s has been granted permission from the Gauteng Department of Education to conduct the research study.
6. A letter/document that outlines the purpose of the research and the anticipated outcomes of such research must be made available to the principals, SGBs, and District/Head Office Senior Managers of the schools and districts/offices concerned, respectively.
7. The Researcher will make every effort to obtain the goodwill and cooperation of all the GDE officials, principals, and chairpersons of the SGBs, teachers, and learners involved. Persons who offer their cooperation will not receive additional remuneration from the Department while those that opt not to participate will not be penalised in any way.
8. Research may only be conducted after school hours so that the normal school program is not interrupted. The Principal (if at a school) and/or Director (if at a district/head office) must be consulted about an appropriate time when the researcher/s may carry out their research at the sites that they manage.
9. Research may only commence from the second week of February and must be concluded before the beginning of the last quarter of the academic year. If incomplete, an amended Research Approval letter may be requested to conduct research in the following year.
10. Items 6 and 7 will not apply to any research effort being undertaken on behalf of the GDE. Such research will have been commissioned and be paid for by the Gauteng Department of Education.
11. It is the researcher's responsibility to obtain written parental consent of all learners that are expected to participate in the study.
12. The researcher is responsible for supplying and utilising his/her research resources, such as stationery, photocopies, transport, faxes, and telephones, and should not depend on the goodwill of the institutions and/or the offices visited for supplying such resources.
13. The names of the GDE officials, schools, principals, parents, teachers, and learners that participate in the study may not appear in the research report without the written consent of each of these individuals and/or organisations.
14. On completion of the study, the researcher/s must supply the Director: Knowledge Management & Research with one Hard Cover bound and an electronic copy of the research.
15. The researcher may be expected to provide short presentations on the purpose, findings, and recommendations of his/her research to both GDE officials and the schools concerned.
16. Should the researcher have been involved with research at a school and/or a district/head office level, the Director concerned must also be supplied with a summary of the purpose, findings, and recommendations of the research study.

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

Kind regards

....

Mr. Guhani Mukatuni
Acting CES: Education Research and Knowledge Management

DATE: ....29|07|.2022...........................

2

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

UNISA | college of education

Date: ....

<u>Re:</u> Request for permission to conduct research at Sir Pierre Van Ryneveld High School in Kempton Park, Gauteng

Title of the research:

THE IMPACT OF ONLINE SKILLS ON TECHING AND LEARNING DURING COVID-19 AT A SELECTED SCHOOL IN KEMPTON PARK, JOHANNESBURG.

CEDU Ethics Review Reference: **2022/06/08/48250619/23/AM**

Att: Mrs M.J. Mangali
The principal
Sir Pierre Van Ryneveld High school
Kempton Park

Dear Mr Pillay

I, <u>Ziboneleni Maphosa</u> am doing research under supervision of Professor Israel Lumadi Rudzani, a lecturer in the Department of Educational Leadership and management (contactable at +71 12 429 2123/ +71 71 532 2761/ lumadri@unisa.ac.za). I am studying towards a Master's degree in Educational Management at the University of South Africa. I am requesting your permission to conduct a research study at Sir Pierre Van Ryneveld High school in Kempton Park. The aim of the study is to explore the impact of online skills on teaching and learning during COVID -19 at the school, including challenges that were experienced by both educators and learners. I have purposefully identified the school for easy accessibility of participants as I am an educator at the school. The study will entail interviewing two HODs, four educators and four learners using semi-structured interviews.

The benefits of this study are:

♦ The study may potentially inform the Department of Education and other relevant stakeholders on the state of the school and how best to effectively equip and support educators and learners with online learning skills.
♦ The findings may assist the Education Department of Education in putting systems and measures in place to better prepared for unforeseeable disasters.
♦ May encourage the spirit Ubuntu through sharing of resources for the promotion of educational goals.
♦ May encourage educators to take responsibility for their personal and professional growth by sacrificing their time and resources.

No foreseeable risks are anticipated. There is also no remuneration for participants or any form of incentives. The research is solely for academic purposes only. I intend to make a copy of the findings available to your office upon completion of the project.

Thank you.

Yours sincerely
Ziboneleni Maphosa
ziboncube@gmail.com
0719189001

APPENDIX F: APPROVAL LETTER FROM THE PRINCIPAL

Sir Pierre van Ryneveld High School

Sir Pierre Van Ryneveld High School
Commissioner Street
Kempton Park
P.O. Box 478
Kempton Park
Tel: 011 970 1811/2
Fax: 011 975 9101
Email: info@sirpierre.co.za
Web: www.sirpierre.co.za
Principal: M.J. Mangali

August 1st, 2022

Re: Request for permission to conduct research at Sir Pierre Van Ryneveld High school.

Dear Mrs Z.Maphosa

This letter serves to inform you that approval is hereby granted to you to do your research study at our school in respect of the study on the research topic:

The impact of online skills on teaching and learning during covid-19 at a selected school in Kempton Park, Johannesburg.

The conditions as stipulated in the approval letter from GDE will apply.

We wish you well in your research study and also looking forward to the outcome of your findings.

Yours Faithfully

Mrs M J Mangali (Principal)   Mr K.L Sathekge (SGB chairperson)

DEPT. OF ED. GAUTENG
SIR PIERRE VAN RYNEVELD
HIGH SCHOOL
OFFICIAL
AMPTELIK
KEMPTON PARK
DEPT. VAN ONDW. GAUTENG

APPENDIX G: HODS AND EDUCATORS' CONSENT FORM

UNISA | college of education

Date: ....

Title of the research:

THE IMPACT OF ONLINE SKILLS ON TEACHING AND LEARNING DURING COVID-19 AT A SELECTED SCHOOL IN KEMPTON PARK, JOHANNESBURG.

CEDU Ethics Review Reference: **2022/06/08/48250619/23/AM**
DEAR PROSPECTIVE

PARTICIPANT
We are inviting you to participate in a study titled "**The impact of online skills on teaching and learning during COVID-19 at a selected School in Kempton Park, Johannesburg.**"

WHAT IS THE PURPOSE OF THE STUDY?

- The study may inform the Department of Education and other relevant stakeholders on the state of schools and how best to effectively equip and support educators and learners with online learning skills.
- The findings may assist the Education Department in putting systems and measures in place to be better prepared for unforeseeable disasters.
- May encourage the spirit of Ubuntu through sharing of resources for the promotion of educational goals.
- May encourage educators to take responsibility for their personal and professional growth by sacrificing their time and resources.

WHY ARE YOU BEING INVITED TO PARTICIPATE?

As an educator, you possess the necessary knowledge, experiences and skills that you use every day to help learners meet their educational needs. I have purposefully identified you as having vast knowledge related to my study. You are one of the ten participants from who data for the research will be collected. Permission to conduct the study has been sought and granted by the Department of Education and from your school principal.

WHAT IS THE NATURE OF YOUR PARTICIPATION IN THIS STUDY?

The study may involve the use of a voice recorder during semi-structured interviews and focus group discussions with the aim that you will be able to provide possible answers to the following research questions:

- How qualified are educators in dealing with online teaching?
- What resources and equipment are available in schools to allow educators and learners to practice online teaching?
- How have online skills impacted teaching and learning during the COVID-19 lockdown at the selected school in Kempton Park, Johannesburg?

IS IT POSSIBLE TO WITHDRAW FROM THIS STUDY EVEN AFTER HAVING AGREED TO PARTICIPATE?

Participants are free to withdraw at any stage of the research. This is a voluntary engagement, and there are absolutely no obligations attached. It is for improving education as a whole and for academic purposes only. Thus, at any stage, participants are free to walk away from the process without giving any reason. Again, there are no consequences for this.

ARE THERE ANY POTENTIAL BENEFITS FOR PARTAKING IN THE STUDY?

There are no potential benefits as compensations given directly to you for your participation in this study. However, your participation will help provide useful solutions and recommendations to the government and various stakeholders about online learning and how best it can be used to advance educational goals.

WHAT ABOUT ISSUES OF CONFIDENTIALITY?

Pseudonyms will be used. Under no circumstances will any name or information supplied be identified to anyone. Even other participants are not obligated to be informed of who other participants are. Answers will be given code numbers, and participants will be referred to as such. Only people who supervise and monitor the academic process (Research Ethics Review Committee members) may review the process to see whether proper processes and procedures were adhered to. Documents from the data collection process will be locked away by the researcher and kept for a period of five years, after which the information will be discarded.

WILL I BE INFORMED OF THE FINDINGS/RESULTS OF THE RESEARCH?

Communication about the research findings will be made available to all participants by the researcher; contactable at these details: 0719189001/ziboncube@gmail.com.

Alternatively, you can contact the research supervisor, Professor Lumadi Rudzani at +71 12 429 2123/+7171 532 2761/lumadri@unisa.ac.za

Thank you for your time.

Ziboneleni Maphosa (Student
Researcher)

NB: *Please complete the return slip below*

CONSENT TO PARTICIPATE IN THIS STUDY (Return slip)

I,_____(participant name), confirm that the person asking my consent to take part in this research project has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation. Together we went through the process, and clarity was provided.

My participation is voluntary and that I am free to withdraw at any time without penalty. I have been informed that the process will last approximately forty minutes.

I have received a signed copy of the informed consent agreement.

Participant Name & Surname (please print): _____

_____   _____

Participant Signature   Date

Researcher's Name & Surname (please print): _____

_____   _____

Researcher's signature   Date

APPENDIX H: LEARNERS' ASSENT FORM

UNISA | college of education

Title of the research:

THE IMPACT OF ONLINE SKILLS ON TEACHING AND LEARNING DURING COVID-19 AT A SELECTED SCHOOL IN KEMPTON PARK, JOHANNESBURG.

CEDU Ethics Review Reference: **2022/06/08/48250619/23/AM**

Dear_____   Date _____

I, **Ziboneleni Maphosa**, am doing research under the supervision of **Professor Israel Lumadi Rudzani,** a lecturer in the Department of Educational Leadership and Management (contactable at +71 12 429 2123/+71 71 532 2761/lumadri@unisa.ac.za). I am studying towards a Master's degree in Educational Management at the University of South Africa. Your principal has given me permission to do this study in your school. I would like to invite you to be a very special part of my study. I am doing this study to find ways your teachers can use to improve your learning. This may help you and many other learners of your age in different schools.

If there are anything words you do not understand in this letter, please feel free to ask me. You may take a copy of this letter home to consider my invitation and talk to your parents about this before you decide if you want to be in this study.

We will be done with interview questions in about forty minutes, after which you can ask any question or freely comment on our discussion.

I will write a report on the study, but I will not use your name in the report or say anything that will let other people know who you are. Participation is voluntary, and you do not have to participate in this study if you do not wish to.

If, for any reason, you choose to withdraw from the study, there with be no penalties or consequences. Upon completion of the study, I shall return to your school to talk briefly about some of the study's findings. I shall invite you to come and listen to my talk.

The benefits of this study are:

- The study may inform the Department of Education and other relevant stakeholders on the state of the school and how best to effectively equip and support educators and learners with online learning

- The findings may help the Department of Education put systems and measures in place to better prepare for unforeseeable disasters.
- May encourage the spirit of Ubuntu through sharing of resources for the promotion of educational goals.
- May encourage educators to take responsibility for their personal and professional growth by sacrificing their time and resources.

There are no potential risks in this study and you are not going to be exposed to any harm. You will not be reimbursed or receive any incentives for your participation in the research.

If you decide to be part of my study, you will be asked to sign the form on the next page. If you have any other questions about this study, you can contact me at 0719189001/ziboncube@gmail.com. Do not sign the form until you have all your questions answered and understand what is requested of you.

Researcher:_____   Phone number: _____

Do not sign the written assent form if you have any questions.

WRITTEN ASSENT (SECONDARY SCHOOL LEARNERS)

I have read this letter which asks me to be part of a study at my school. I have understood the information about my study, and I know what I will be asked to do. Therefore, I am willing to be in the study.

_____   _____   _____

Learner's name (print):   Learner's signature: Date:

_____   _____   _____

Researcher's name (print)   Researcher's signature: Date:

APPENDIX I: SEMI-STRUCTURED INTERVIEWS

UNISA | college of education

Date of interview: _____ Place of interview: _____

CEDU Ethics Review Reference: **2022/06/08/48250619/23/AM**

Opening statement

Good day! My name is Ziboneleni Maphosa and I am a student at the University of South Africa (UNISA) currently registered for a Master's Degree in Educational management. The aim of this interview is to investigate your perception on the impact of online skills on teaching and learning during COVID-19 lockdown. The information that you supply is solely for academic purposes and your responses will be treated with utmost confidentially and pseudonyms will be used instead of your real name. This interview will take us approximately forty minutes. Thank you once again for allowing me to interview you.

SEMI – STRUCTURED INTERVIEW QUESTIONS (HODs)

1. Describe your experience with individual educators on their interaction with learners during COVID-19
2. How was online learning conducted within your subject area?
3. What challenges did you encounter supervising online teaching and learning during COVID-19?
4. From your interaction with both educators and learners, what are your suggestions on improving online teaching and learning?
5. What kind of training do you as HOD need as far as online teaching and learning is concerned?
6. Is there anything you would like to add to this discussion?

Thank you for your time and valuable contribution!

SEMI-STRUCTURED INTERVIEW QUESTIONS (Educators)

1. How did you access your learners during COVID-19 lockdown? How effective was the method you used?
2. What challenges did you encounter in terms of connectivity in trying to conduct online learning during COVID-19 lockdown? Explain.
3. What do you think can be done to address the above challenges?
4. What kind of training do you as an educator need as far as online teaching and learning is concerned?
5. Would you say there is currently enough effort by the department of education to equip educators with online skills to augment traditional way of teaching? Explain.
6. Is there anything you would like to add to this discussion?

Thank you for your time and valuable contribution!

SEMI-STRUCTURED INTERVIEWS (Learners)

1. In terms of connectivity, how did you communicate with your educators during COVID-19 lockdown?
2. What challenges did you encounter?
3. What is your view on online learning versus face- to- face learning in general?
4. What is done at your school to promote acquisition of online skills?
5. Your emotional state and COVID-19. How did you cope at home?
6. Is there anything you would like to add to this discussion?

Thank you for your time and valuable contribution!

APPENDIX J: PROOF OF LANGUAGE EDITING

NIM Editorial
Midrand, Gauteng, 1685
Cell: +27 82 587 4489
Email: info@nimeditorial.co.za
www.nimeditorial.co.za

Reg. No. 2016/488856/07

NIM
EDITORIAL

12 November 2022

Editorial Certificate

To Whom It May Concern,

This certificate confirms that the dissertation entitled; **THE IMPACT OF ONLINE SKILLS ON TEACHING AND LEARNING AT A SELECTED SCHOOL IN KEMPTON PARK, JOHANNESBURG** by **ZIBONELENI MAPHOSA**, was edited by an expert English editor with a PhD. The following issues were corrected: grammar, spelling, punctuation, sentence structure, phrasing, and formatting.

Signed on behalf of NIM Editorial by:

....
Dr N.I. Mabidi
Founder & Chief Editor

APPENDIX K: SIMILARITY INDEX REPORT

48250619_Dissertation