

Navigating emergency remote teaching: The lived experiences of Grade 7 teachers

by

Tina Louise Hermanus

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Supervisor: Prof. Wayne Hugo

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DECLARATION

This thesis is submitted in partial fulfilment of the requirements for the degree of Master of Education in Teacher Development Studies within the College of Humanities, University of KwaZulu-Natal, Pietermaritzburg, South Africa. I, Tina Louise Hermanus (student number 222119798), declare that:

1. This research, except where otherwise indicated, is my original work.

2. This thesis has not been submitted for any other degree or examination.

3. This thesis does not contain other persons' graphs, data, pictures, or other information. Any information sourced from other people has been acknowledged.

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Student's Signature: [redacted] Date: 30 June 2025

Name of Supervisor: Prof Wayne Hugo

Supervisor's Signature: [redacted] Date: 14/07/2025

DEDICATION

This thesis is dedicated to my husband, Mr Shane Hermanus, our sons, Tristan and Ethan, and our family, for their unconditional love, support, and motivation.

I also dedicate the thesis to the Grade 7 teachers
who navigated Emergency Remote Teaching
during an unprecedented time in South African education.

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and my family—especially my husband—for constant support and motivation.

ABSTRACT

The unprecedented COVID-19 pandemic resulted in school closures that disrupted education systems on a global scale, necessitating the transition from traditional face-to-face teaching to Emergency Remote Teaching (ERT). In South Africa, this sudden transition in teaching methods underscored disparities in levels of pedagogical and digital preparedness for the implementation of ERT. This research study examined the lived experiences of Grade 7 teachers implementing ERT during the COVID-19 pandemic through the lenses of three complementary theories: self-efficacy theory, technological pedagogical content knowledge, and digital divide theory. This framework enabled an exploration of the personal, pedagogical, and societal dimensions of teachers' experiences during this transition and a multi-layered analysis of the challenges and opportunities teachers experienced. The study is grounded in the interpretivist paradigm, which facilitated an in-depth understanding of teachers' perceptions and experiences. Hermeneutic phenomenology was employed to elicit rich descriptions of teachers' experiences. A qualitative research approach was used to facilitate a rich exploration of teachers' experiences, challenges, and adaptations during ERT. Seven Grade 7 teachers involved in ERT implementation were selected using purposive sampling. To answer the research questions, data were collected through semi-structured interviews, focus group discussions, and document (resource) analysis. The findings reveal the disruptive impact of COVID-19 on traditional classroom practices and highlight the teachers' varied experiences, emotions, and adaptations. The study provides insights into pedagogical practices, the evolution in the use of digital technology, and teacher development and capacity-building. The study underscores the need for digital equity in education, digital citizenship education in schools, curriculum redesign, flexible and adaptive educational policies, and ongoing teacher professional development and support. I recommend the development of flexible and adaptive education policies that would enable the education sector to respond quickly to changing circumstances. Additionally, I recommend the redesign of curricular to incorporate hybrid pedagogies and digital citizenship education supported by the investment in robust digital infrastructure and the creation of research partnerships to promote the continual improvement in digital learning experiences. Finally, the implementation of all-encompassing teacher professional development opportunities accompanied by the establishment of collaborative teacher networks is recommended.
Keywords: digital divide, digital citizenship, digital equity, digital technology, emergency remote teaching, pedagogical approaches.

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ABBREVIATIONS AND ACRONYMS

CK	Content Knowledge
COVID-19	Coronavirus Disease 2019
DBE	Department of Basic Education
ERT	Emergency Remote Teaching
ICT	Information and Communication Technology
IT	Information Technology
LMS	Learning Management Systems
PCK	Pedagogical Content Knowledge
PK	Pedagogical Knowledge
SGB	School Governing Body
STEM	Science, Technology, Engineering, and Mathematics
TCK	Technological Content Knowledge
TK	Technological Knowledge
TPACK	Technological Pedagogical Content Knowledge
WCED	Western Cape Education Department

CHAPTER 1: INTRODUCTION

1.1 Background to the study

The COVID-19 pandemic disrupted education on a global scale, affecting an estimated 1.7 billion students (Rodriguez et al., 2021; Reimers, 2022). Schools were forced to make a rapid transition from face-to-face teaching to ERT. Hodges et al.(2020) state that ERT is a stop-gap, meaning that it moves a face-to-face or blended course fully online only for the duration of the crisis. When normal conditions return, so does the original mode.

In South Africa, the Minister of Basic Education at the time, Angie Motshekga, announced the closure of schools from March 18, 2020, to April 14, 2020. An amended school calendar and annual teaching plans were introduced (Department of Basic Education [DBE], 2020a). The impact of COVID-19 on the South African education system was a reality, further aggravating the inequalities of a fragile post-apartheid education system (Soudien et al., 2022). This sudden shift exposed and amplified disparities in schools' preparedness for ERT, revealing the country's existing digital divide.

1.2 Statement of the Problem

While the transition to online or remote teaching was inevitable in the face of the pandemic, it has uncovered deep inequities. Rural and low-income learners often lacked devices, connectivity and teachers trained for online work (Dube, 2020). This digital divide threatens to widen the gap between privileged and underprivileged learners, potentially undermining national efforts towards educational equity.

Moreover, the sudden shift to ERT left little time for schools and teachers to prepare adequately. Teachers were thrust into an unfamiliar mode of instruction, requiring them to exercise versatility in their pedagogical approaches and integrate available digital technologies to ensure teaching and learning could continue. This transition has placed significant stress on teachers, challenging their self-efficacy and requiring them to quickly develop new skills in technology integration and online pedagogy.

Given these challenges, understanding how teachers managed the shift is essential.

1.3 Research Objectives

This study aimed to explore and understand the lived experiences of Grade 7 teachers within the South African education landscape as they navigated ERT during the COVID-19 pandemic. Specifically, the objectives were:

1. **Describe** Grade 7 teachers' experiences of implementing ERT.
2. **Identify** drivers that led teachers to adopt, modify, or abandon particular digital tools.
3. **Extract** lessons teachers reported having learnt from the ERT period.
4. **Generate** teacher-informed recommendations for future policy and support.

These objectives aim to uncover the challenges, adaptations, and insights Grade 7 teachers experienced during this educational transformation.

1.4 Research Questions

To meet these objectives the study asks:

1. What experiences do Grade 7 teachers report while implementing ERT during the COVID-19 pandemic?
2. Which factors shaped their decisions to persist with, adapt, or discontinue specific digital technologies?
3. What lessons do teachers believe they learnt from the ERT experience?
4. What changes, policy actions, or support structures do teachers propose for stronger digital integration in South African primary schooling?

1.5 Significance of the Study

This study adds to the understanding of Grade 7 teachers' experiences during a period of educational transformation. By exploring their lived experiences, the study aims to:

- Illuminate the difficulties and possibilities ERT presented in primary education.
- Identify strategies and practices for integrating digital technology in teaching.
- Inform policy decisions and support structures needed to enhance digital education in South African schools.
- Contribute to the broader discourse on educational resilience and adaptation in times of crisis.

The findings of this study will be useful for educational policymakers, school administrators, and teacher training institutions. Understanding the experiences of Grade 7 teachers during

ERT can help in developing more effective strategies for integrating digital technologies in education, both during crises and in regular teaching practice.

Moreover, this research addresses a gap in the literature by focusing specifically on the South African context and the experiences of Grade 7 teachers. While there has been research on the impact of COVID-19 on education globally, less attention has been paid to the specific challenges and adaptations made by teachers in the South African primary education system.

Exploring the factors influencing teachers' technology choices also provides insights into the sustainability of these technologies beyond the crisis. This information could be valuable for schools and education departments in making decisions about long-term investments in educational technology.

1.6 Brief Overview of Methodology

Using an interpretivist paradigm and hermeneutic phenomenology, this study employs a qualitative research design. This design was chosen to gain an in-depth understanding of the first-hand experiences of Grade 7 teachers during the execution of ERT.

The research focused on Grade 7 teachers from selected schools in the WCED (Metro Central and Metro South Education Districts). Data collection methods include:

1. Semi-structured interviews with individual teachers
2. Focus group discussions
3. Analysis of teaching resources used during ERT

These methods allow for exploring teachers' experiences, challenges, and adaptations during the transition to ERT. The data analysis process involved thematic analysis, following the six-phase approach outlined by Braun and Clarke (2006).

This methodological approach allows the researcher to capture detailed participant experiences and uncover themes not readily apparent through quantitative methods.

1.7 Theoretical Framework

Three theories ground this study:

1. Self-Efficacy Theory (Bandura, 1977): This theory explains how teachers' beliefs about their capabilities influenced their adaptation to ERT. It provides a lens through

which to examine teachers' confidence, persistence, and performance in the face of new challenges.

2. Technological Pedagogical Content Knowledge (TPACK) Framework (Mishra & Koehler, 2006): This framework analyses how teachers integrated technology, pedagogy, and content knowledge in their ERT practices. It provides a structure for understanding the complex interplay between these three domains of knowledge in effective technology integration.

3. Digital Divide Theory (van Dijk, 2017): This theory explores how disparities in accessing and using digital technologies impacted teachers' and students' ERT experiences. It helps in contextualising the difficulties faced by teachers and students within the broader socio-economic landscape of South Africa.

These theories provide complementary lenses through which to analyse and interpret the data collected in this study. They allow for a nuanced understanding of the personal, pedagogical, and societal factors that influenced teachers' experiences with ERT.

Combining these perspectives, the study aims to understand the complex dynamics and lasting impacts of the shift to ERT on South African education.

1.8 Limitations and Delimitations

While this study offers insights into Grade 7 teachers' ERT experiences, its limitations and delimitations must be acknowledged:

Limitations:

- The study focused on teachers from the WCED (Metro Central and South Education Districts) which may not be representative of all South African contexts, particularly rural areas.

- The reliance on self-reported data through interviews and focus groups may be subject to recall bias.

- The study was conducted after the initial ERT period, which may affect the accuracy of teachers' recollections.

Delimitations:

- The study is confined to Grade 7 teachers, chosen due to their role in preparing students for secondary education.
- The research focused on the experiences during the COVID-19 pandemic and may not be generalisable to other crisis situations.
- The study does not include the perspectives of students, parents, or school administrators, focusing solely on teachers' experiences.

1.9 Definition of Key Terms

ERT: A temporary shift of instructional delivery to an alternate mode due to crisis circumstances, involving the use of fully remote teaching solutions for instruction or education that would otherwise be delivered face-to-face or as blended or hybrid courses (Hodges et al., 2020).

TPACK: A conceptual framework that describes the kinds of knowledge required by teachers for effective pedagogical practice in technology-enhanced learning environments, emphasising the connections between technology, pedagogy, and content (Mishra & Koehler, 2006).

Digital Divide: The gap between individuals, households, businesses, and geographic areas at different socio-economic levels regarding both their opportunities to access information and communication technologies (ICTs) and to their use of the Internet for a wide variety of activities (OECD, 2001).

Self-Efficacy: An individual's belief in their capacity to execute behaviours necessary to produce specific performance attainments (Bandura, 1977).

1.10 Structure of the Thesis

This thesis is presented in seven chapters:

Chapter 1: Introduction - Presents the background, the research problem, its significance, objectives and questions. It also focuses on the methodology, the theoretical frameworks and key definitions.

Chapter 2: Literature Review - Examines existing research on ERT, digital pedagogy, and the challenges of remote learning in the South African context. The focus is on the impacts of Covid-19 on education, global perspectives on ERT, its pedagogical approaches, the use of various technological platforms, digital divide, teacher experiences and perspectives, the current policy landscape and future directions in education.

Chapter 3: Theoretical Framework - elaborates on self-efficacy theory, TPACK, and digital divide theory and their relevance to the study.

Chapter 4: Methodology - Details the research design, research setting, research sample and the data collection and analysis procedures. The trustworthiness of the study and its ethical considerations are included.

Chapter 5: Findings and Discussion - Presents the results of the study organised into key themes, with interpretation and discussion. The themes are linked to classroom disruptions caused by Covid-19, difficulties confronted and gains achieved during ERT, the emotional and psychological experiences of teachers, reflections on pedagogical approaches, the evolution of digital use during Post ERT, teacher capacity building and development, and envisioning the future of digital education.

Chapter 6: Synthetic Discussion of Findings - Provides a holistic analysis of the findings, insights and implications of the study, drawing connections between themes and situating them within the broader context of educational research and theory.

Chapter 7: Conclusion - Summarises key findings, discusses implications, offers recommendations, and suggests directions for future research.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The existing literature was reviewed to build a contextual framework to better understand the challenges, adaptations, and broad implications of the abrupt transition to ERT experienced by Grade 7 teachers in South Africa. At the outset, this chapter reviews the global context of educational disruption, then progresses to delving into the specific realities in South Africa. Each section in this chapter explores a specific aspect of ERT. These aspects focus on COVID-19's impact on education and teacher experiences. The implementation of ERT is explored, along with its associated pedagogy, digital platforms, challenges, and opportunities.

2.2 Impact of COVID-19 on Education

To understand the context in which ERT was implemented during the COVID-19 pandemic, the impact of the pandemic on education in South African and abroad must first be explored.

2.2.1 The Global Impact of COVID-19 on Education

The COVID-19 pandemic unleashed an unparalleled disruption in education systems across the globe, affecting an estimated 1.7 billion students (Rodriguez et al., 2021; Reimers, 2022). This global crisis required an immediate shift to remote learning. The United Nations Educational, Scientific and Cultural Organisation (UNESCO) advocated for online learning to mitigate the spread of the virus by decreasing direct human interaction (UNESCO, 2020).

The effectiveness of this transition varied across different countries and even within national education systems, revealing existing disparities in technological resources and access among different regions and socioeconomic groups, Countries like Brazil and Cambodia featured successes of multimodal and adaptable delivery systems (Rodriguez et al., 2021), illustrating how context-specific approaches could mitigate some of the challenges imposed by the pandemic. In other circumstances, as stated by Reimers (2022) "the interruption of in-person instruction in schools and universities limited opportunities to learn, which caused disengagement from schools, and in some cases, dropouts" (p. 2). These circumstances existed due to limited connectivity and accessibility to digital devices experienced by both teachers and students (Reimers, 2022). It is evident that across the board, the pandemic exposed and exacerbated pre-existing inequalities, especially regarding digital access and readiness for remote learning (OECD, 2019; Giannini, 2020), revealing the

interconnectedness of socio-economic status and the digital divide. The implications of this global scenario were felt in South Africa, which will be now addressed.

2.2.2 South African Context

Spaull and Jansen (2019) claim that South Africa is the most inequitable nation in the world. This is evident in the matriculant results of 2018, in which 3% of schools in South Africa produced more distinctions in mathematics than all other schools together. Most schools in which distinctions were achieved charge higher school fees (Spaull & Jansen, 2019), inferring an education system that perpetuates inequality and disadvantage. The educational disruption brought about by COVID-19 in South Africa emphasised these clearly pre-existing inequalities within the already fragile post-apartheid education system (Soudien et al., 2022; Le Grange, 2020).

The COVID-19-induced closure of schools was implemented in South Africa from March 18, 2020, by the DBE. In South Africa, it is the responsibility of the DBE to oversee the primary and secondary education in the country. The shift to ERT exposed the stark contrast between better-resourced schools and those lacking adequate infrastructure. This is confirmed by Soudien et al. (2022) as they state that the COVID-19 pandemic in South Africa "laid bare both the inequalities in provisions needed to continue learning from home, and the disparity in how well teachers, learners and parents have been equipped to do so" (p. 320). This stance by Soudien et al (2020) is supported by Dube (2020) who reports that learners in rural areas and poorer households were effectively excluded from schooling due to the unavailability of electricity and electronic devices, coupled with a dearth of qualified teachers to assist with online learning. The country's emergency plan involving a multimedia initiative—providing educational content through national television, radio, and private television providers, multimedia materials supported by mobile application, an upgraded DBE website—was limited by access. Shephard and Mohohlwane (2021) observed that "access to content under conditions of remote learning in South Africa was heavily contingent on possessing the right technology to take advantage of the free services", thus confirming how the stark pre-existing inequalities were magnified by the sudden shift to online education (p. 21). Soudien et al. (2022) believe firmly that to this day the current strategies implemented by the nation's education system are not vigorous or creative enough to steady the education system or promote real equality after the pandemic.

The critical analysis of both global and South African responses to COVID-19 provides the crucial backdrop for understanding the implementation of ERT, the specifics of which will are discussed next.

2.3 Emergency Remote Teaching

Now that the context of disruption is clear, the nature of ERT is defined and explored, distinguishing it from planned online learning.

2.3.1 Definition and Characteristics

Hodges et al. (2020) explain that a well-planned online course typically requires time to design and implement, an element that was missing during the rapid shift to ERT. As defined in Chapter 1, ERT represents a temporary crisis-driven mode of teaching. It incorporates pedagogical approaches linked to synchronous, asynchronous, and blended learning methods. Unlike planned online learning experiences, ERT aims to provide temporary access to instruction and support in a manner that is quick to set up and reliably available during an emergency (Hodges et al., 2020). Once the crisis abates, the original mode of instruction resumes (Hodges et al., 2020).

ERT differs from traditional online learning. As Hodges et al. (2020) emphasise that "well-planned online learning experiences are meaningfully distinct from courses offered online in response to a crisis or disaster" (p. 1). In addition, traditional online programs undergo careful design and planning, using systematic models that go beyond simply transmitting information. They integrate content selection and strategies to support the interactions necessary for effective learning. The sudden introduction of ERT did not allow for the systematic development of an online learning programme.

Varying levels of readiness to implement ERT surfaced globally. These variations are revealed in the extent to which countries were able to support their teachers and students in the development of their online teaching and learning capabilities. The availability of resources and the level of deployment of ERT varied across the countries (Reimers, 2022). South Africa's lack of sufficient investment in digital pedagogies resulted in the more challenging transition to ERT (Reimers, 2022).

2.3.2 Global Perspectives on ERT

The roll-out of ERT varied globally and affected equitable access to ERT. It was influenced by factors such as technological infrastructure, teacher preparedness, and existing fragmentation within institutions. According to Reimers (2022), “Education systems were in varying stages of readiness to sustain educational opportunities in the face of the disruptions caused by the pandemic” (p. 467). Countries such as Singapore and Finland were among the countries that were able to sustain the resources and connectivity required for ERT for the duration of the school closures. The extensive digital networks and resources possessed by countries like Japan and Norway ensured a smoother transition because they had the capacity to support education systems in the adoption of digital pedagogies (Reimers, 2022).

According to Shephard and Mohohlwane (2021), some countries successfully made the shift to ERT with limited resources and experience. This can be seen in circumstances where school systems in Lower to Middle Income Countries with less experience in remote learning rose to the challenge of implementing and sustaining ERT during the COVID-19 pandemic. Conversely, the effectiveness of ERT was hindered in places like Sub-Saharan Africa that faced challenges such as limited connectivity and digital skills to facilitate ERT effectively (Giannini, 2020).

2.4 Pedagogical Approaches Used in ERT

This section explores the pedagogical approaches adopted during the use of ERT.

2.4.1 Synchronous and Asynchronous Learning

Reimers (2022) reveals that teachers had to quickly adapt their pedagogical approaches to suit the ERT environment. This adaptation primarily involved the use of synchronous and asynchronous learning modalities.

According to Giesbers et al. (2013), synchronous learning methods, where teachers and students meet online on a specific platform at a set time, offer opportunities for immediate discussion, teacher-learner connection, and collaboration. These methods are well-suited for faster and clearer interaction and discussion. However, they may potentially present difficulties relating to technical issues and the scheduling of a suitable time for the learners to access the synchronous (live) lesson for scheduling and technical issues (Stanford University Graduate School of Education, n.d.).

Asynchronous learning methods provide greater flexibility by allowing students to access pre-recorded lessons and self-directed learning course content at their own pace (Mahmood (2021). It offers the advantage of being able to learn anywhere and at any time. This is particularly beneficial in contexts where students might not have reliable internet access or would need to share devices with family members (Perveen, 2016); a reality faced by learners as they engaged in ERT. Rodriguez et al. (2021) claim that asynchronous methods used in Brazil successfully reached a high percentage of learners.

By using blended learning strategies teachers can create a more engaging and interactive learning environment for their learners (Stanford University, n.d). For instance, teachers could use asynchronous methods for content delivery and then use synchronous sessions for discussions, clarifications, and collaborative activities (Stanford University, n.d.). Mahmood (2021) claims that the blended approach combines the benefits of both synchronous and asynchronous methods; offering the structure of synchronous sessions and the flexibility of the resources associated with asynchronous methods.

A blended learning strategy helps to maintain a sense of community and connection among students while also accommodating different learning styles and flexibility of access to the content material (Stanford University, n.d.). Furthermore, it has the potential to support the holistic development of learners through the use of pedagogical approaches that are learner-centred and encourage learner engagement and collaboration (Lee et al., 2004; DeCoito & Estaiteyeh, 2022).

2.4.2 Effective Teaching Practices in ERT

Impactful teaching practice in ERT requires a combination of online competencies, that include course design, choosing suitable curricula resources (DeCoito & Estaiteyeh, 2022; Recker et al., 2013) and the adoption of blended learning strategies (DeCoito & Estaiteyeh, 2022).

Lee et al. (2004) and DeCoito and Estaiteyeh (2022) state that effective pedagogical approaches for the creation of enriched online classrooms include digital content that is learner-centred, collaborative, media-rich, and engaging with the incorporation of multimedia, interactive tools, and virtual reality (VR) experiences. VR refers to the use of computer modelling and simulation that enables a person to interact with an artificial three-dimensional visual or other-sensory environment. Further enhancement to online

teaching could include the use of project-based learning methods (De Coito, 2015; De Coito & Estaiteyeh, 2022) and activities that foster interaction (Bond, 2020) and accommodate diverse learner needs (DeCoito & Estaiteyeh, 2022; Leire et al. 2016). Furthermore, Bond (2020) identifies teaching practices that are beneficial to learners as those that "increase accessibility" through the multiple use of digital learning materials (p. 214).

ERT teaching practices were not always effective. As stated by De Coito and Estaiteyeh (2022), "teachers had to prioritise content delivery at the expense of student-centred and creative teaching strategies" (p. 9). As a result, teachers failed to embrace approaches that encompassed more diverse pedagogies, such as inquiry-based learning (De Coito and Estaiteyeh, 2022). The contributing factors leading to the adoption of the more traditional, less student-centred modalities are linked to the unexpected transition to ERT and the associated teacher and system readiness for its implementation (Reimers, 2022).

This exploration of the pedagogical approaches used in ERT exposes the complex difficulties faced by teachers in adapting their teaching methods to a remote environment. It sets the stage for understanding the digital divide and access issues that further complicated the execution of these approaches, which will be discussed in the next section.

2.5 Digital Divide and Access to Technology

The gaps in access to technologies and its associated skills (van Dijk, 2020) exist. The digital divide refers to the gap between those who have access to ICT and those who do not. It extends to the use of ICT and the gaps the exist between those who can effectively use ICT and those who cannot (Van Dijk, 2017).

The digital divide affected learning opportunities during the implementation of ERT (Reimers, 2022). Therefore, it is crucial to explore the concept of the digital divide and its impact on ERT.

2.5.1 Concept of Digital Divide

Van Dijk (2017) identifies four successive dimensions that shape an individual's access to digital technology. These are motivational access, material or physical access, skills access, and usage access. Motivational access refers to the motivation to use digital technology, material or physical access refers to the possession of computers and internet connections, skills access refers to the possession of digital skills necessary to use technology effectively,

usage access refers to the number and diversity of applications of digital technology (van Dijk, 2017).

The digital divide is classified into three categories: the digital access divide, digital capability divide and the digital outcome divide (van Dijk, 2020; Faloye & Ajayi, 2022). The digital access divide refers to inequalities relating to physical access to technology and refers to access to both software and hardware. The digital capability divide relates to the differences in the use of technology and the skills associated with it. The digital outcome divide refers to disparities in the end result once an individual has used the technology (Faloye & Ajayi, 2022; Van Dijk, 2020).

This multifaceted understanding of the digital divide provides a more refined framework for analysing the challenges faced during ERT implementation.

2.5.2 Impact on ERT in South Africa

In South Africa, the digital divide is attributed to the legacy of apartheid and has resulted in the unequal distribution of basic technological structures (Faloye & Ajayi, 2022).

According to Reimers (2022), within the South African context the extensive school closures were not accompanied with a feasible strategy to shift to remote learning. Shephard and Mohohlwane (2021), explain that there was a stark disparity in digital access between "children in non-poor (food secure) households who accessed online content, and children in poor (food insecure) households who accessed radio content" (p. 22). This became evident when learners in rural contexts found themselves excluded from schooling and unable to access online resources due to a lack of infrastructure, unavailability of electricity and electronic gadgets, and a lack of qualified teachers who could assist with online learning (Dube, 2020).

Faloye and Ajayi (2022) found that factors contributing to digital disparities included infrastructure, age, gender, income, and urbanisation. They found that schools lacked basic technological infrastructure. Le Grange (2020) claims that the school closures exposed the inequalities of the South African education system.

2.5.3 Strategies for Addressing Digital Inequality

Several strategies aim to bridge South Africa's digital divide:

1. Government initiatives that address the need to bridge the digital divide are key. One such initiative is the DBE White Paper for e-Education (2004). This government initiative forms a policy framework for ICT in education targeting four key elements: equity, access to infrastructure, capacity-building, and norms and standards.

2. Public-private partnerships were established to address this divide in education. For example, the Western Cape Education Department, in partnership with the MTN Foundation, launched an online school to address this digital inequality and the 21st century learning needs of South African children (DBE, 2021e).

3. E-learning initiatives launched by the WCED in March 2022 aimed to implement various strategies to bridge digital inequality in ICT in schools (Western Cape Education Department, 2022).

4. Efforts aimed to develop infrastructure and thus improve internet connectivity and provide devices to disadvantaged students were made. For instance, the Virtual Classroom Solution, offered in partnership with cellular phone companies, aims to accelerate digital education access and inclusion in South African schools (DBE, 2021b).

5. Further strategies adopted by the DBE to address the divide are reflected in the approved changes in the curriculum relating to an amendment to include coding and robotics in the curriculum for Grade R-9, aiming to prepare learners for the changing world and careers of the future (DBE, 2021e).

These strategies present promising prospects for the future of digital education and equality in the South African education landscape. Ongoing evaluation of the effectiveness of the strategies in bridging the digital divide may be required. Soudien et al. (2022) state that South Africa's response to COVID-19 demonstrates that its educational system and the "most prevalent approaches being implemented are not sufficiently robust and innovative to deal with the first order of business of stabilising the system, let alone the difficulties of innovating towards greater equality (p. 321)."

This section has highlighted the issues relating to the divide and access to technology, providing context for understanding the challenges faced in implementing ERT, particularly

in South Africa. This understanding sets the stage for exploring the specific e-learning platforms and technologies used during ERT.

2.6 E-learning Platforms and Technologies

The e-learning platforms, the technologies used during ERT, and the factors that influenced their adoption are explored.

2.6.1 Popular Platforms Used in ERT: Benefits and Drawbacks

The rapid transition to ERT saw the adoption of e-learning platforms and technologies. An international study by Seraj et al. (2022) found that the more frequently used e-learning platforms included Google Classroom, Microsoft Teams, and WhatsApp. Zoom was used the most because of its ease of use. Its video conferencing capabilities enabled virtual school assemblies to take place, thus creating opportunities for real-time interactions within school communities.

Google Meet and Google Classroom offered integrated solutions for both synchronous and asynchronous learning. Google Classroom was praised for its user-friendly interface and ability to organise course materials (Seraj et al., 2022). Alternatively, Microsoft Teams offered a comprehensive suite of tools for online collaboration and learning. It was particularly popular in institutions that already used Microsoft products (Eroglu & Senol, 2021). Winter et al. (2021) state the advantages of Microsoft which include the fact that it is one of the "learning platforms that can be accessed by students at any time and used by the teacher to store resources and class materials" (p. 7). In certain contexts, especially where more sophisticated platforms were not accessible, Seraj et al. (2022) reveal that WhatsApp served as a simple yet effective tool for communication and sharing of learning materials. These platforms allowed for real-time interaction, ease of sharing resources, and tools for assessment and feedback.

As reported by Gouseti (2021), despite the functionality of these platforms, certain drawbacks arose. Initial security concerns were experienced. Furthermore, Gouseti (2021) claims that challenges relating to student engagement and monitoring during synchronous teaching persisted as teachers reported difficulties linked to students' hesitance to use their camera and microphone making it "difficult to gauge engagement and understanding", while "others described how turning off their cameras protected their own home and family privacy" (p. 12). Issues were reported with internet connectivity, difficulties monitoring student

engagement, and the need for both teachers and students to quickly learn modern technologies (Gouseti, 2021; Meletiou-Mavrotheris et al., 2023).

The conflicting benefits and drawbacks of the use of digital platforms in the adoption of ERT have been highlighted. These benefits and drawbacks may be contributing factors affecting teachers' choices of e-learning platforms. These factors are explored in the next section.

2.6.2 Factors Influencing Teachers' Choices

Teachers' choices of e-learning platforms depended on certain factors. These contributing factors include user-friendliness, institutional decisions, and its accessibility for learners.

DeCoito and Estaiteyeh (2022) report in a study conducted with 75 teachers in a province in Canada that user-friendliness proved to be a major factor in the platform choice of teachers, with 34% of teachers in the study citing it as the primary reason, followed by institutional decisions at 27%. Interactivity and the ability of the platform to facilitate student engagement was another factor which accounted for 17% of choices. Only 11% of teachers chose platforms specifically because they promoted learning, indicating a potential area for improvement in platform selection criteria. A study by Winter et al. (2021) involving thirty-eight Irish teachers reveal that the technologies that the teachers would most like to use include Microsoft Teams and OneNote. (p. 7). In the same study, learner accessibility was another factor influencing teacher choice. Teachers often gravitated towards learning platforms that were readily accessible to the students (Winter et al., 2021). In addition, study conducted by Almaiah et al. (2020) in Jordan reveals that the availability of technical support for a particular platform had an influence on the adoption of a technology by the students and learning institutions.

These studies highlight factors at play during the complex decision-making process involved in selecting appropriate technologies for ERT, balancing ease of use and accessibility with pedagogical effectiveness and institutional constraints.

This exploration of e-learning platforms and technologies provides insight into the tools used during ERT and the factors influencing their adoption. It sets the stage for understanding the experiences and perspectives of teachers as they negotiated these modern technologies, which are discussed in the next section.

2.7 Teacher Experiences and Perspectives

Following the review of the digital and pedagogical landscape of ERT, this section focuses on teachers' experiences, examining the challenges, opportunities, and emotional impacts of this transition.

2.7.1 Challenges and Opportunities Presented by ERT

Winter et al. (2021) reveal that teachers faced challenges during the transition to ERT, particularly with regard to maintaining student interest and participation in online settings.

According to Reimers (2022), the adaptation to ERT was a “sink or swim” approach (p. 462), linked to limited support that was hardly adequate to develop its implementation with optimal efficiency or boost teacher confidence in the facilitation thereof (Reimers, 2022). Winter et al. (2021identify difficulties in the use of digital technology that involved factors external to the teachers. These external factors included accessibility to the necessary resources, relevant teacher training and the offer of support to teachers. Unfamiliarity with digital tools and platforms contributed to teachers’ difficulties (Gouseti, 2021), along with the pedagogical challenges of adapting teaching methods to an online environment – particularly for subjects requiring hands-on learning (Rodriguez et al., 2021).

Within the context of ERT, teachers often experienced an increased workload due to the need to create new digital materials and manage online learning environments. It became evident that too much emphasis was placed on the teachers' administrative load. Rodriguez et al., 2021) reported that the pandemic “evidenced the need to recalibrate how teachers divide their time between direct teaching and administrative workload” (p. 12). The actuality of emotional and physical exhaustion exists and necessitates caution.

Reimers (2022) claims that learners found it difficult to engage in ERT due to “the inadequacy of government efforts to sustain education through alternative means and the circumstances of students” (p. 29). Furthermore, additional factors have been highlighted that relate to learners experiencing insubstantial support or inadequate explanations from their teachers. Within the South African context, Reimers (2022) explains that the difficulties experienced by the learners need to be interpreted with historical context: prior to the pandemic, the country had not made the necessary investments in digital pedagogies which resulted in the education system finding it “more challenging to adopt remote instructions” (p. 467).

The ERT experience also presented opportunities, such as the development and the acquisition of skills. Skill development emerged as a positive effect of ERT, as teachers reported increased engagement and confidence with technology (Winter et al., 2021). ERT thus exposed the extent of the possibilities associated with the use of technology (Winter et al., 2021) while teachers gained experience in digital pedagogies (Reimers, 2022). Innovative teaching methods were developed as the exceptional circumstances encouraged teachers to explore new, creative approaches to engage students (Gouseti, 2021). Teachers appreciated the flexibility offered by online teaching (Jansen & Farmer-Phillips, 2021) which afforded learners the opportunity to engage with academic content at any place or time.

Through the experience of ERT, learners, too, acquired technological skills. According to Winter et al. (2021), ERT "accelerated the rate of teacher engagement with technology" and students "gained skillsets useful for further education and the world of work " (p. 13).

2.7.2 Emotional and Psychological Impact

The rapid transition to ERT affected teachers emotionally and psychologically. Gouseti (2021) mentions that the lack of face-to-face interaction with colleagues and students led to feelings of isolation for teachers who experienced stress, anxiety, and the feeling of being overwhelmed by the abrupt change accompanied by the pressure to quickly adapt their teaching methods (Jansen & Farmer-Phillips, 2021). Winter et al. (2021) state that there were times when teachers expressed "a sense of frustration or a lack of self-confidence" (p. 6) relating to their level of technological skills during the COVID-19 pandemic.

Establishing a work-life balance became a challenge. According to DeCoito and Estaiteyeh (2022) the abrupt shift "increased the burden on teachers" (p. 2). The blurring of boundaries between work and home life was a common issue, with teachers struggling to switch off from work. Rodriguez et al. (2021) warned that "an excessive administrative workload may generate burnout and reduce pedagogical effectiveness" (p. 12). This underlines the need for teachers to also establish a balance between their administrative and teaching workloads, as a heavy administrative workload contributed emotional and physical exhaustion (Rodriguez et al., 2021). Rodriguez et al. (2021) found that heavy administrative loads during ERT drained teachers' energy and compromised the quality of their teaching.

Despite these challenges, resilience was evoked by teachers to overcome the obstacles presented by ERT (Jansen & Farmer-Phillips, 2021). Furthermore, teachers were provided

with opportunities for professional and personal development and growth (Jansen & Farmer Phillips, 2021;.Gouseti, 2021).

2.7.3 Professional Development and Support

Due to the implementation of ERT, teachers required rapid technological training in the use of digital tools and platforms (Gouseti, 2021). The urgent need to develop teachers' capacity in terms of online pedagogies led schools to support these efforts and work together collaboratively (Reimers, 2022). The nurturing of technological integration, continuous professional development within a supportive school culture along with the importance of mentoring and continuous professional development in the enhancement of the technological integration skills of teachers were highlighted as factors that would contribute to the improvement of teaching and learning experiences (Shambare & Simuja, 2024).

The level of institutional support provided by education administrators, according to (Reimers, 2022), included "strategies that prioritised academic learning and provided support for teachers" (p. 9). These support strategies for teachers included professional development opportunities "mostly relying on online platforms" and providing "access to resources, peer networks within schools and across schools, and timely guidance from leadership" (p. 9). According to Gouseti (2021), informal peer support groups or networks among teachers materialised as a resource for sharing experiences and best practices. In a study by Gouseti (2021), teachers reported how these groups were created for "sharing practice" and "giving each other little tutorials" as they "engaged in spontaneous peer learning" (p.18). The engagements relating to online teaching practices provided opportunities for teachers to enhance their TPACK (Masry-Herzallah, 2025) and acquire new knowledge and skills (Reimers, 2022).

While certain countries and institutions were able to provide support and training to its teachers, others struggled. Countries in which gaps in teacher capacity arose did not make sufficient investments in digital pedagogies (Reimers, 2022). This resulted in limited effectiveness in the adoption of ERT, leading to learning losses and student dropouts (Reimers, 2022). These factors highlight the urgent need for stronger systematic approaches to teacher professional development in digital education (OECD, 2019; Masry-Herzallah, 2025; Paetsch et al., 2023; Shambare & Simuja, 2024).

Winter et al. (2021) reveal that teachers used “the knowledge and skills of colleagues” during their use of digital technology (p. 12). This links to self-efficacy (Bandura,1977). Masry-Herzallah (2025) identified a connection between teachers’ experiences and their self-efficacy when engaging with technology. Self-efficacy linked to technology is defined as the confidence that the teachers possess in their ability to make effective use of technology (Bandura, 2006). The study by Masry-Herzallah (2025) highlights the importance of the integration of TPACK and the technological self-efficacy in online teaching in the formation a foundation for the improvement of online teaching.

This examination of teachers’ experiences and perspectives during ERT underscores the complex difficulties and opportunities faced by teachers. It provides context for understanding the policy landscape and future directions in digital education, which will be discussed in the next section.

2.8 Policy Landscape and Future Directions

Finally, the existing policies on digital education and the potential future developments in this area based on the lessons learned from ERT implemented during the COVID-19 pandemic are explored.

This section focuses on White Paper on e-Education of 2004, followed by the exploration of potential future developments in e-Education based on the lessons learned from ERT.

2.8.1 Existing Policies on Digital Education

In South Africa, The White Paper on e-Education: Transforming learning and teaching through information and communication technology is a policy framework that seeks to enhance the quality of teaching and learning through digital technology, with a focus on equity (DBE, 2004). It set the foundation for policies and strategies to close the gap in digital technology and facilitate equitable access (DBE, 2004; Mulaudzi, 2024). Its aim is to convert all schools in South Africa into schools that use ICT to enhance curriculum delivery, teaching and learning, and school administration systems (DBE, 2004). According to Mulaudzi (2024), the White Paper on e-Education is a representation of the government’s particular dedication to addressing inequalities and ensuring equitable access.

Scholar research and insights into the White Paper on e-Education indicates progress since its inception but also there exists gaps between the paper and the implementation of its policy

that need to be addressed (Ndebele, 2018 & 2022; Mulaudzi, 2024). Further, critical review of the policy reveals that although there is a policy and a plan in place, its implementation is slow and it has a minimal capacity (Meyer & Gent, 2016; Mulaudzi, 2024). Subsequently, it is advised that continuing efforts and transformations are crucial for paper's successful implementation (Mulaudzi, 2024).

2.8.2 Visions for the Future of Education

Looking ahead, key themes emerge in the literature regarding the future of education.

The growing recognition of the need to equip students with digital skills in South Africa, is evidenced by the White Paper on e-Education (DBE 2004) and introduction of coding and robotics into the curriculum (DBE, 2021d).

As mentioned previously, the goal of the White Paper on e-Education (DBE, 2004) is the use of ICT to support curriculum delivery, and the enhancement of teaching and learning. The aim of the inclusion of coding and robotics in South Africa's national curriculum (DBE, 2021d), is to mentor learners to apply and transfer ICT and digital skills everyday problems in a society that is transforming rapidly (DBE, 2021d). Coding and Robotics centres on the inter-related components of Information Technology and Engineering and plays a central role in an individual's effective functioning in a digital world (DBE, 2021d).

Furthermore, in the study by Ferri et al. (2020), the integration of Artificial Intelligence Virtual Reality technologies is envisioned to create "more personalised, inclusive, and participatory online learning paths" (p. 14). Visons for the future should also include should the addressing of digital inequality as crucial for ensuring equitable access to quality education (Bond, 2020). Reimers (2022), emphasises the significant role of "good central governance and support in ensuring consistent standards closing equity gaps".

Technological change is driving a vision of education as a lifelong process, with a need for continuous upskilling and reskilling, proving the importance of life-long learning. Bond (2020) encourages teachers "to undertake further professional development in the area of technological pedagogical knowledge" (p. 215).

According to Reimers (2022), gaining an understanding of the effects that the pandemic had on learners' opportunities to learn is crucial in the design of a plan of an essential "remediation and recovery" (p. 4).

These visions for the future of education emphasise the need for review, reflection, adaptability, technological integration, and a commitment to addressing educational inequalities. However, they also highlight the ongoing challenges in balancing technological advancement with equitable access and the preservation of valuable aspects of traditional education.

2.9 Conclusion

This review explored how ERT unfolded globally and in South Africa during COVID-19. It portrays a complex mix of challenge, change, and lasting impact of this period of major educational disruption. The review reveals three points of contention that are relevant to this study: (i) the abruptness of ERT design, (ii) the varying levels of teacher digital readiness, (iii) structural digital inequalities. These gaps inform the empirical focus on Grade 7 teachers in this study and justify the selection self-efficacy, TPACK and digital divide theories as lenses for analysis in this study. The next chapter presents this theoretical framework.

CHAPTER 3: THEORETICAL FRAMEWORK

This study is grounded in three key theories: self-efficacy, TPACK framework, and digital divide. This framework provides a lens to analyse the experiences of Grade 7 teachers during the implementation of ERT.

3.1 Introduction

The COVID-19 pandemic forced a shift in education, exposing deep-seated difficulties and inequalities, particularly in contexts like South Africa. While existing literature highlights the impacts of ERT, it often lacks a comprehensive lens through which to analyse the complexities of this experience, particularly concerning the personal, pedagogical, and societal dimensions faced by teachers. To address this gap, this study employed a framework of three inter-connected theories: self-efficacy theory, the TPACK framework, and digital divide theory. This framework enables analysis of the interconnected levels of the individual, society, and pedagogy to provide a multi-faceted understanding of teachers' experiences during the pandemic and engages the core issues related to teachers' experiences during ERT.

Self-efficacy theory offers a powerful lens for examining the internal beliefs that shaped teachers' adaptability and resilience, revealing how their confidence in their abilities influenced their actions in a new and challenging context. This focus on individual capabilities is, however, not enough. Teacher' abilities were constantly tested as they were forced to engage with new modes of teaching and learning. The TPACK framework (Mishra & Koehler, 2006) provides a vital perspective on the complexities of this teaching space, as it helps to explore how teachers integrated modern technologies with their existing knowledge and expertise. It examines the complex interactions between content, pedagogy, and technology. This pedagogical aspect would be insufficient without recognising that access to technology and technological skills were uneven in the South African education context. Digital divide theory (van Dijk, 2017) serves to contextualise these individual and pedagogical experiences within the broader societal context of technological access and inequality, particularly relevant in the context of South Africa where historical disparities persist. Digital divide theory allows one to see how the external factors of resources and access both impact and are impacted by teacher self-efficacy and TPACK development.

Integrating these three theoretical perspectives allowed this study to move beyond a surface-level analysis of ERT, revealing a more nuanced understanding of the complex interplay of

individual, pedagogical, and societal factors that shaped teachers' responses to the pandemic. Individually, each theory is useful, but it is through their intersection that the lived realities of teachers operating within the context of ERT in South Africa can be understood.

This theoretical framework guided both data collection and analysis, and helped to interpret teachers' experiences, pedagogical changes, and social inequalities that shaped the experiences of Grade 7 teachers during ERT. This enabled findings to be derived that were both theoretically informed and contextually relevant, which could guide the development of policies and practices that are grounded in a realistic and refined understanding of teacher experience during ERT.

The following sections discuss each theory in detail, exploring its key concepts, demonstrating its specific relevance to the context of ERT, delving into its collective ability to inform the understanding of Grade 7 teachers' experiences during the COVID-19 pandemic, and revealing its application to this study. The chapter concludes with a reflection on the study's potential to gain the most thorough and distinct findings through the lens of all three perspectives.

3.2 Self-Efficacy Theory

Self-efficacy, a core component of Bandura's social cognitive theory, is defined as an individual's belief in their capacity to organise and execute the actions required to produce specific attainments (Bandura, 1977). This belief is not merely a reflection of one's abilities but, as Bandura (1977) argues, is a powerful force that can influence one's achievement of success. The concept of self-efficacy is particularly pertinent in the context of education, as teachers' beliefs in their abilities may impact their pedagogical choices, their engagement with new teaching methodologies, and the learning environment they create for their students. In the specific case of ERT, teachers' self-efficacy became a critical factor in their ability to adapt to the sudden shift to online instruction and overcome the associated challenges. The level of success or failure experienced by teachers as they implemented new teaching strategies and technology had an impact on their sense of personal capability and, therefore, their beliefs regarding their self-efficacy and how this influenced their implementation of ERT.

Bandura and Wessels (1997) identify four primary sources of self-efficacy: mastery experiences, vicarious experiences, social persuasion, and emotional and physiological states These are discussed next to explain how this theory was applied to this study.

3.2.1 Sources of Self-Efficacy

The sources of self-efficacy refer to the four main sources that contribute to an individual's belief in their ability to achieve success. These sources are mastery experiences, vicarious experiences, social persuasion, and emotional and physiological states (Bandura & Wessels, 1997)

According to Bandura and Wessels (1997) "the most effective way of creating a strong sense of efficacy is through mastery experiences" (p. 2). In such experiences, where an individual successfully completes a task, they build a strong belief in their capabilities. Repeated failures can undermine this belief, particularly if these failures occur early in the learning process. In the context of ERT, the successful implementation of online teaching methods or the effective use of digital tools could contribute to mastery experiences, enhancing a teacher's self-efficacy. These experiences represent more than skill development: they provide tangible evidence of teachers' ability to implement ERT successfully. The acquisition and effective use of digital technology for online teaching, the roll-out of teaching strategies best suited for ERT, and the positive feedback from learners and parents could all contribute to mastery experiences. This highlights the importance of creating opportunities for teachers to feel successful in their own context. In this study, teachers reported experiences of success with teaching and technology were examined as key contributors to their sense of self-efficacy and special note was taken of the type of successes that were identified by the participants.

While mastery experiences are the most powerful source of self-efficacy, vicarious experiences also play a crucial part (Bandura & Wessels, 1997). Bandura and Wessels (1997) state, "The second way of creating and strengthening self-beliefs of efficacy is through the vicarious experiences provided by social models" (p. 2). Observing others – particularly colleagues who are perceived to be of similar skill and ability – successfully master a behaviour can enhance an individual's belief that they, too, are capable. This is especially true when a skilled model can demonstrate effective skills and strategies for managing challenging situations (Bandura & Wessels, 1997). In the context of ERT, when a teacher observes a colleague's successful integration of technology or creative approach to online

engagement this could serve as a skilled model and help to strengthen the teacher's own self-efficacy. This study sought to identify the modelling that participants were exposed to and the impact this had.

Social Persuasion. Verbal persuasion and social support also have important influences on self-efficacy. According to Hatlevik and Hatlevik (2018), collegial collaboration presents opportunities for both vicarious experiences and verbal support but can be hindered by the, a lack of facilitation by management. The study sought to uncover both positive and negative social supports. Positive and supportive encouragement from school leadership, colleagues, and even students can strengthen teachers' beliefs that they possess the capabilities to succeed and encourage them to keep working and developing their skills (Bandura & Wessels, 1997). Conversely a lack of support and encouragement may negatively impact their belief in their capabilities.

This study examined both the presence and impact of encouragement from school leadership, colleagues, and students as key factors influencing teachers' self-efficacy during ERT, noting not just whether it was present, but the type of encouragement and whether the support was perceived as sufficient.

Emotional and Physiological States. Finally, emotional, and physiological states impact self-efficacy (Bandura & Wessels, 1997). Anxiety or tension triggered by stress and emotional difficulties are examples of emotions that could negatively impact one's perceived inability to perform (Bandura & Wessels, 1997).. Alternatively, emotional, and physiological states such as confidence and excitement can enhance self-efficacy (Bandura & Wessels, 1997). This study was cognisant of the emotional states of the participants and actively sought to uncover the sources of these states. During the initial transition to ERT, teachers may have experienced feelings of uncertainty, stress, or anxiety, which could have negatively impacted teachers' judgments of their capabilities. As their familiarity with the technology and teaching strategies used for ERT, their stress may have decreased and their self-efficacy improved. Data collection considered both the nature and source of participants' emotional states within the context of ERT to determine whether a shift from negative emotional states to more positive ones increased self-efficacy.

3.2.2 Self-efficacy and ERT

In this study, Self-efficacy theory provided a framework for understanding how teachers' beliefs in their capabilities influenced their adaptation to ERT. The implementation of ERT is linked to the use of technology (Bandura, 2006). Teachers with a higher sense of self-efficacy were more likely to embrace new or modern technologies and teaching methods, persist in the face of challenges, and maintain a positive outlook, despite the difficulties encountered during the shift to ERT (Hatlevik & Hatlevik, 2018). This theory thus provided an insightful perspective into why teachers struggled more than others when presented with similar opportunities and support.

This application of self-efficacy theory enabled a nuanced interpretation of the data, identifying which factors and experiences most influenced teachers' beliefs in their ability to teach effectively in the ERT context. Importantly, this illuminated the ways in which self-efficacy may be a barrier, or a catalyst, to positive changes in teaching practices in the form of teacher professional development and growth (Jansen & Farmer Phillips, 2021;.Gouseti, 2021) and professional support (Reimers, 2022). This framework also allowed the interconnections between self-efficacy, TPACK, and the digital divide to be examined. By pointing out the impact of self-efficacy on the implementation of ERT, this theory created opportunities to explore how self-efficacy links with teacher technological skills (TPACK) or the resources available to them (digital divide theory).

3.3 TPACK

The TPACK framework provided a critical perspective for understanding the complexities of effective teaching, particularly when technology is involved. This framework extends the Shulman's (1986) conceptualisation of Pedagogical Content Knowledge (PCK). PCK represents the integration of Pedagogical Knowledge (PK) and Content Knowledge (CK) (Herring et al., 2016) and posits that teachers' knowledge of pedagogy and content cannot be viewed in isolation (Koehler, et al., 2013). Instead, as explained by Herring et al. (2016), TPACK "provides the structure needed to describe technology integration as the interplay between technology, pedagogy, and content" (p, 4). The framework illustrates the types of knowledge required by teachers for effective pedagogical practice in technology-enhanced learning environments, emphasising the interactions between these types of knowledge (Koehler et al., 2013). Therefore, rather than considering these concepts as separate elements, TPACK emphasised the complex interplay between content, pedagogy, and technology when

considering effective teaching. This interplay served as a lens for understanding the experiences of teachers in the context of ERT, an environment that places emphasis on the integration of digital technologies into teaching practice.

3.3.1 The Foundational Knowledge Bases of TPACK

At the heart of the TPACK framework are three primary forms of knowledge: Content Knowledge (CK), Pedagogical Knowledge (PK), and Technological Knowledge (TK) (Koehler et al., 2014). Understanding each of these components is important, but it is the interplay between them that forms the basis of effective teaching practices using technology.

- **Content Knowledge (CK)** refers to a teacher's knowledge of the subject matter they teach, encompassing the facts, concepts, theories, and procedures specific to that discipline (Koehler et al., 2013). CK is not simply knowing the material, but the ability to make sense of how to approach the specific mode of thinking of the discipline. Teacher content knowledge is vital for curriculum delivery and forms part of the core responsibilities of the teaching profession. In this study, CK was examined by analysing how the teachers articulated their understanding of the learning goals of the specific subjects they taught during ERT.
- **Pedagogical Knowledge (PK)** refers to teachers' understanding of the processes and practices of teaching and learning. This includes knowledge of teaching methodologies, classroom management, assessment, and motivational strategies (Koehler et al., 2013). While qualified teachers enter the profession with this knowledge, these pedagogies are geared towards in-person teaching and may not readily transfer to online environments. The study examined PK by analysing the specific methods teachers used during ERT and how they adjusted their teaching approaches for the online setting.
- **Technological Knowledge (TK)** encompasses an understanding of how to use both standard and emerging technologies for educational purposes, including computer hardware and software, and the ability to adapt and learn modern technologies (Koehler et al., 2013). As Koehler et al. (2013) state, TK is fluid, given the fast-changing nature of technology. This framework sees technology as a tool that can be used in a variety of ways, requiring flexibility and adaptation. The study examined TK by looking at how teachers used digital tools, adapted to new platforms, and integrated technologies into their teaching during ERT.

3.3.2 The Intersections of Knowledge in TPACK

The usefulness of the TPACK framework lies not only in these individual knowledge bases, but in their complex interactions. These interactions are represented by four additional forms of knowledge: Pedagogical Content Knowledge (PCK), Technological Content Knowledge (TCK), Technological Pedagogical Knowledge (TPK), and Technological Pedagogical Content Knowledge (TPACK). It is within these intersections that the complexities of teaching become apparent.

- **Pedagogical Content Knowledge (PCK)** According to Herring et al. (2016), PCK represents the integration of PK and CK (p.15). As Koehler et al. (2013) state, "PCK reflects Shulman's (1986) assertion that teaching requires more than just a separate "understanding of content and pedagogy" (p. 4). PCK acknowledges that the most effective teaching methods vary based on the content and how the content is best taught and learned. In this study, PCK was analysed by looking at how teachers adapted their teaching methods to the specific nature of the content they were teaching during ERT.

- **Technological Content Knowledge (TCK)** refers to the intersection of technology and content (Herring, et al., 2016) and according to Koehler et al. (2013) "describes the knowledge of the reciprocal relationship between technology and content" (p. 4). TCK recognises that technology has an influence on how content is understood, and that content has influence on the use of technology (Koehler et al., 2013) In this study, TCK was examined by considering the impact of varying technologies on the teachers' methods of presenting content and the new opportunities this may have created.

- **Technological Pedagogical Knowledge (TPK)** is formed by the interplay of technology and pedagogy (Herring et al., 2016), and as stated by Koehler et al. (2016) "identifies the reciprocal relationship between technology and pedagogy" (p. 4). TPK allows teachers to select the most suitable technologies that complement their chosen pedagogical approach. It encompasses the understanding of how teaching and learning can change when technologies are used in certain ways (Koehler et al., 2013). Within the context of this study, TPK was analysed in the data by examining the specific ways in which technology was incorporated into learning activities, what impact this had, and the reasons for the specific choices that were made.

- **Technological Pedagogical Content Knowledge (TPACK).** At the heart of the framework, TPACK encompasses the complex interplay of all three forms of knowledge: content, pedagogy, and technology. TPACK as explained by Koehler (2016) "describes the synthesised knowledge of each of the bodies of knowledge with a focus upon how technology can be uniquely crafted to meet pedagogical needs to teach certain content in specific contexts" (p. 4). TPACK is not just about using technology, but about the thoughtful integration of technology to meet specific pedagogical goals in relation to specific content. The teachers who possess TPACK are therefore able to combine and use their knowledge of technology, pedagogy, and content to design meaningful learning experiences. This, therefore, forms the basis for understanding the full complexity of teaching during ERT. The study explored the application of TPACK through a close examination of teachers' decision-making regarding technology use, emphasising how they integrated these components to design and deliver effective learning activities.

3.3.3 TPACK as a Framework for ERT

The TPACK framework is particularly relevant to the context of ERT because it provides a way to understand how teachers negotiated the rapid shift from in-person to online teaching. In ERT, teachers were required to apply their CK using modern technologies and adapted pedagogical strategies. Teachers were compelled to represent content using technologies (TCK), adapt their teaching strategies to the online environment (TPK) and make decisions about which technologies best suited their goals and content (TPACK). This study focused specifically on teachers' decision-making processes when integrating these three primary components.

Moreover, the TPACK framework can reveal how a lack of experience or knowledge in any of the areas of TPACK can create difficulties in the implementation of ERT. The framework shows the need for teacher development programs to emphasise the intersections of these three areas, rather than teaching them in isolation. Furthermore, if a teacher lacks self-efficacy in any of the key components of TPACK, this will limit their willingness to apply this in the classroom, showing how the lack of self-efficacy can directly impact the execution of TPACK. Additionally, and in conjunction with digital divide theory, lack of access to appropriate technology or the knowledge required to operate this technology effectively will impede the roll-out of TPACK in an equitable way.

Thus, this study used the TPACK lens to explore how teachers integrated their CK, pedagogical approaches, and technological skills to deliver effective ERT. The study also examined the interrelationships between TPACK and the other theories, particularly noting the way in which teachers' self-efficacy impacts their engagement with the areas of TPACK and the way that the digital divide could limit the extent to which the teachers were able to implement their TPACK.

3.4 Digital Divide Framework

The concept of the digital divide (van Dijk, 2017), provides a crucial lens for understanding the societal inequalities that impacted teachers' experiences during ERT. This is not simply about the presence or absence of technology (the gap between those who have access to and can make use of ICT and those who cannot), but also the complex interaction of resources, skills, motivation, and social context that shapes access to the benefits of digital technology. It is a concept that is best understood as existing on a societal level, influencing both individual experiences and pedagogical practices. Understanding the digital divide, therefore, forms a crucial element of the theoretical framework for this study. This theoretical lens highlights the inequities that are underpinned by broader societal factors.

3.4.1 Van Dijk's Resources and Appropriation Theory

Van Dijk's (2013) resources and appropriation theory offers a comprehensive understanding of the divide by positing that unequal access to digital technologies stems from broader social inequalities. This theory emphasises that *categorical inequalities* in society (e.g., age, gender, education level) result in an unequal distribution of resources (temporal, material, mental, social, and cultural) which, in turn, causes unequal access to digital technologies. Therefore, understanding the digital divide requires analysis not only of access, but also of the broader socio-economic context that has created these inequalities.

3.4.2 Dimensions of the Digital Divide

Having established the foundations of the divide within a broader socio-economic context, it is important to understand the dimensions that shape an individual's access to technology. Van Dijk (2017) identifies four successive dimensions that are key to understanding how the divide manifests itself: motivational access, material or physical access, skills access, and usage access. It is not enough to simply view these as distinct and separate; rather, it is important to see how these build upon each other and shape experience.

The digital divide has four nested levels, summarised below along with the indicators used in this study.

- **Motivational Access:** According to van Dijk (2017), this refers to an individual's "motivation, attitudes, and expectations" regarding technology use (p. 5). It is an important first step, as a lack of motivation will limit both the desire to obtain access to technology and the use of technology when access is available. Issues such as anxiety about using digital technologies – or technophobia – may negatively impact motivational access. This study used the concept of motivational access to analyse how teachers felt about the use of technology during ERT, and what influenced their feelings of usefulness and ease of use. The study looked specifically for overt expressions of motivation and desire to engage with technology, alongside expressions of unease, fear, or stress. The study also analysed how learners responded to the use of technology, their expressions of motivation to engage with the technology, and the resulting impact on ERT.

  Indicator: Teachers and learners expressed enthusiasm or anxiety about online work.

- **Material or Physical Access:** This refers to the actual possession of digital devices, access to digital infrastructure and internet connectivity (van Dijk, 2017). Physical access, influenced by complex factors including financial resources and infrastructure, differs from material access, which, according to van Dijk (2013), refers to access beyond that of "a device and includes the peripheral equipment and the expenses that go along with it" (p. 39). The study analysed the specific types of material access available to teachers, including devices, internet connections, and peripheral equipment. This study specifically noted the types of support that were provided to the teachers and the extent to which they were able to access adequate equipment and internet connection during the period of ERT. The study also analysed the specific types of material access available to the learners and its impact on the delivery of ERT.

  Indicator: The type and reliability of hardware, bandwidth, and school-supplied resources.

- **Skills Access:** Physical access alone is not enough; to use technology effectively, individuals also require the skills to do so (van Dijk, 2017). This includes both

medium-related skills (e.g. operational knowledge of how to use digital media) and *content-related skills* (e.g. knowledge of how to find, evaluate, and create content online). It is here that the overlap between the digital divide and TPACK becomes most clear, as access is not enough, but the skills to use the technology must also be available. The presence of 'skills access' was analysed in the data by focusing specifically on whether teachers had access to training and support to use the technologies that were introduced during ERT, and what impact this may have had on their teaching practices.

Indicator: Prior training, informal peer help, and confidence with core platforms.

- **Usage Access:** This final dimension refers to how individuals use the technologies they have access to, which can be measured by "time spent, frequency of use, the variety of applications, and the level of engagement" (van Dijk, 2017, p. 7). Usage access is not merely about having access but is about the meaningful use and engagement with technology. This dimension was analysed in this study by observing the type of technologies used, the ways in which they were used, and the teachers' perceived value of the roll-out of the technology. This focused on the way in which the teachers actively employed the technologies within their teaching practices, as well as the types of opportunities it may have afforded them. The study analysed the learners' meaningful use and engagement with technology and its impact on ERT.

  Indicator: Frequency of logins, variety of tools employed, and examples of creative tasks.

3.4.3 Digital Divide and ERT in South Africa

Digital divide theory is especially relevant to understanding the implementation of ERT in South Africa. Pre-existing social and economic inequalities within South Africa stemming from the legacy of apartheid translate directly into digital inequalities. digital divide theory reveals that it is not enough to simply provide access to devices and internet connectivity – issues of motivation, skills, and usage patterns must also be addressed. These issues, in combination, have the potential to reinforce existing educational inequalities. An understanding of how societal and economic factors created limitations added value to the findings of this study.

Digital divide theory enabled an examination of data specifically focused on the systemic barriers that limited the success of ERT in South Africa, highlighting how these inequities reinforce existing inequalities, and demonstrating the critical need for more equitable access to technology and digital literacy. Using this theory enabled the study to move beyond a simple examination of individual capabilities and consider the societal factors that create or limit opportunities within the education sector. The theory provided a lens for viewing how societal inequalities influenced teachers' experiences, self-efficacy, and the execution of the areas of knowledge that comprise TPACK.

3.5 Application of Theoretical Concepts to the Study

The table below summarises the key theoretical concepts associated with the three theories used in this study. The table defines the concept, links it to a source, and notes its application to the study.

Table 1: Application of Theoretical Concepts

Concept	Definition	Quote	Application
		Self-Efficacy (Section 3.5.1)	
Self-Efficacy	An individual's belief in their capacity to organise and execute actions to produce desired outcomes.	"Self-efficacy refers to a belief in one's capabilities to organise and execute the courses of action to produce given attainments" (Bandura, 1977, p. 3); "Self-efficacy…influences expected outcomes of behaviours" (Nabavi, 2012, p. 15; Bandura, 1986, 2006).	Analyses teachers' interview data to explore how their sense of self-efficacy impacted their decisions, practices and behaviours regarding ERT.
Mastery Experiences	Successes in completing a task that build a robust sense of self-efficacy.	"The most effective way of creating a strong sense of efficacy is through mastery experiences." Successes build a robust belief in one's efficacy (Bandura & Wessels, 1997, p. 2).	Examines interview data to identify the specific types of 'mastery experiences' the teachers cited as contributing to their sense of self-efficacy within the context of ERT.
Vicarious Experiences	Observing similar others succeed, which raises beliefs in one's own capabilities.	"The second way of creating and strengthening self-beliefs of efficacy is through the vicarious experiences provided by social models" (Bandura & Wessels,	Uncovers how teachers' self-efficacy was influenced by observing and learning from their colleagues' successes

		1997, p. 2). "Modelling influences... transmit knowledge and teach observers effective skills" (Bandura & Wessels, 1997, p. 2).	during ERT, through analysis of interview data.
Social Persuasion	Verbal encouragement and social support that strengthens beliefs in one's capabilities.	“Lead people to try hard enough to succeed, they promote development of skills and a sense of personal efficacy” (Bandura & Wessels, 1997, p. 3).	Identifies how teachers' self-efficacy was impacted by the level of support from their peers, school leadership, or students and analyses the impact that this had on their overall experience of ERT.
Emotional and Physiological States	Reliance on feelings when judging one’s capabilities.	"To reduce people's stress reactions and alter their negative emotional proclivities" (Bandura & Wessels, 1997, p. 3).	Explores how feelings of stress, anxiety or confidence influenced teachers' self-efficacy beliefs and impacted their approach to teaching during ERT.
		TPACK (Section 3.5.2)	
CK	Refer to Chapter 3.3	CK refers to the "knowledge or specific nature of a discipline" (Koehler et al., 2013, p. 3).	Examines how the teachers articulated their understanding of the learning goals of their curricula, during the period of ERT.
PK	Refer to Chapter 3.3	PK "provides a description of the “general purpose” knowledge unique to teaching" (Koehler et al., 2013, p. 3).	Analyses the specific methods teachers used during ERT, and how they adjusted their teaching approaches for the online setting.
TK	Refer to Chapter 3.3	TK "enables a person to accomplish a variety of different tasks using information technology" (Koehler et al., 2013, p. 15).	Examines how teachers used digital tools, adapted to new platforms, and integrated technologies into their teaching during ERT.
PCK	Refer to Chapter 3.3	“PCK reflects Shulman’s (1986) assertion that teaching requires more than separate understanding	Examines how teachers adapted their subject-specific teaching methods

		of content and pedagogy" (Koehler et al., 2013, p. 4).	to the online environment.
TCK	Refer to Chapter 3.3	"TCK describes the knowledge of the reciprocal relationship between technology and content" (Koehler et al., 2013, p. 4).	Explores how teachers used technology to represent and deliver their subject content during ERT.
TPK	Refer to Chapter 3.3	TPK "identifies the reciprocal relationship between technology and pedagogy" (Koehler et al., 2013, p. 4).	Investigates how teachers adapted their teaching methods to leverage the affordances of online platforms during ERT.
TPACK	Refer to Chapter 3.3	TPACK "describes the synthesised knowledge of each of the bodies of knowledge with a focus upon how technology can be uniquely crafted" (Koehler et al., 2013, p. 4).	Examines how teachers integrated their knowledge of technology, pedagogy, and content to deliver effective instruction during ERT.
		Digital Divide (Section 3.5.3)	
Digital Divide	The gap between those who have access to and can effectively use ICT and those who cannot.	"The digital divide is usually defined as the gap between people who do and do not have access to forms of ICT" (van Dijk, 2017, p. 1).	Explores how disparities in access to technology affected the implementation of ERT for Grade 7 teachers and their students.
Motivational Access	The motivation to use digital technology.	"Motivation and attitudes regarding the intention to get access can be explained by factors such as perceived usefulness, ease of use" (van Dijk, 2017, p. 5).	Examines the teachers' feelings about the use of technology, including any feelings of usefulness or ease of use, during the period of ERT.
Material or Physical Access	The possession of computers and internet connections.	"The overwhelming part of digital divide research focuses on the observation of the divide of physical access to personal computers and the Internet across demographic categories" (van Dijk, 2017, p. 5).	Examines the types of access to devices, connectivity, and peripheral devices that teachers had, and the role that this played in their implementation of ERT.
Skills Access	The possession of digital skills	"People need skills to command and use digital media" called	Examines whether teachers had access to the

	necessary to use technology effectively.	digital literacy" (van Dijk, 2017, p. 7).	training and support they needed to use digital technologies effectively during the period of ERT.
Usage Access	The number and diversity of applications of digital technology.	"Usage can be measured as usage time and frequency; number and diversity of usage... and more or less active or creative use" (van Dijk, 2017, p. 7).	Analyses the types of technologies the teachers employed in their teaching, the reasons for these choices, and the way that it impacted their practices during ERT.
Categorical Inequalities	Societal inequalities that produce an unequal distribution of resources.	“Include personal categories such as “age, gender, race/ethnicity...and positional categories such as “labour position, education" (van Dijk, 2013, p. 33).	Examines how pre-existing social and economic inequalities in South Africa translated into digital inequalities during ERT and contributed to differences in teacher experiences.

3.6 Conclusion

In conclusion, the theories in this study were used to provide a comprehensive understanding of the challenges, adaptations, and outcomes of this shift in educational practice. This framework allows for a detailed and thorough analysis of the personal (self-efficacy), technological (TPACK), and societal factors (digital divide) that influenced the adoption of ERT and its impact on teaching and learning.

Next, Chapter 4 details the methodological steps undertaken to systematically study the experiences of Grade 7 teachers who were active in implementing ERT during COVID-19-induced school closures.

CHAPTER 4: METHODOLOGY

4.1 Introduction

This chapter presents the methodology used in this study. It begins by describing the qualitative research design, interpretivist paradigm, and hermeneutic phenomenological framework. It discusses the sampling strategy, participant recruitment procedures, and data collection methods. Finally, it explains how the data were analysed and the procedures that were used to assure the trustworthiness of the findings and discusses the ethical considerations that guided each phase of the research process.

4.2 Research Design

This study used a qualitative research design within an interpretivist paradigm, with hermeneutic phenomenology as its methodological approach. This design was chosen to gain a deep understanding of Grade 7 teachers' lived experiences during the implementation of ERT.

4.2.1 Qualitative Approach

In alignment with Creswell's (2009) recommendation, the qualitative method was most ideal for this study as the educational researcher sought to gain the "understandings and experiences" of the Grade 7 teachers (p. 4). Therefore, the qualitative approach was adopted for its ability to deeply explore complex phenomena in depth and to capture the distinct experiences of participants. This approach aligned well with the study's objectives, allowing for a rich exploration of teachers' experiences, challenges, and adaptations during ERT. It provided the flexibility to uncover unexpected themes and to delve into the contextual factors that influenced teachers' experiences.

4.2.2 Interpretivist Paradigm

The interpretivist paradigm grounded the study in the notion that individuals make sense of their world in unique ways – particularly in times of sudden change. By viewing participants' perceptions as valuable data, the research design sought to capture not just what teachers did to adapt to ERT, but also how they internalised and interpreted those experiences.

According to Merriam (2002), in the interpretive approach one of the questions that the researchers must ask is, "how do people make sense of their experiences" (p. 5). In this

approach, the researchers endeavour to gain an understanding of the meaning that people have constructed about their world and experiences" (Merriam, 2002, p. 5). The use of the interpretivist paradigm in this study therefore, enabled an understanding of how Grade 7 teachers experienced and perceived ERT (Thanh & Thanh, 2015).

This study involved the acceptance and search of multiple perspectives, the practice of iterative and emergent data collection techniques, and the promotion of holistic research (Willis, 2007; Thanh & Thanh, 2015). The interpretivist paradigm was particularly suitable for this study as it allowed for the exploration of the subjective experiences and interpretations of Grade 7 teachers regarding their ERT experiences. The interpretivist approach enabled the researcher to appreciate the differences in teachers' experiences and gain an understanding of how these differences informed their interpretations of these experiences (Wellington & Szczerbinski, 2007).

Interpretivism allowed the researcher to gain a deeper understanding of these phenomena in a social context. Questioning was used to elicit a deeper understanding of teachers' first-hand experiences. This assisted with the analysis of the participants' lifeworld, accentuating individual differences and how these differences informed the meanings they made (Wellington & Szczerbinski, 2007). Through the emphasis on multiple perspectives, interpretivism allowed for a rich and in-depth interpretation of the realities coexisting within the ERT context, (Willis, 2007; Thanh & Thanh, 2015).

Interpretivism, therefore, let the study capture a holistic tapestry of teachers' experiences.

4.2.3 Hermeneutical Phenomenological Methodology- Interpretation and Exploration of Phenomena

The study sought rich, deep descriptions and understandings of teachers' lived experiences with ERT. After selecting a qualitative research design and interpretivist paradigm, hermeneutic phenomenology was selected to attain an in-depth understanding of teachers' lived ERT experiences. This methodology emphasises interpretation (hermeneutics) alongside the exploration of phenomena (phenomenology), allowing the researcher to remain aware of their own context while making sense of participants' stories.

Christine Ralston (2012) states that, "the primary purpose of hermeneutic phenomenology is to create rich descriptions of the individuals who are engaged in the phenomenology being

studied" (p. 31). Additionally, it seeks to understand the lived experiences of participants and the meanings they attach to these experiences (Friesen et al., 2012). Hermeneutic phenomenology was best suited to the study because the purpose of the study was to explore, interpret, and richly describe the lived experiences of participants whilst emphasising the feelings they associate with the phenomenon (Ralston, 2012). The study identified the participants' experiences and provided a deeper understanding of thereof. The researcher's own personal experiences and knowledge as a Grade 7 teacher who had implemented and experienced ERT were acknowledged as part of the interpretive process (Ajjawi & Higgs, 2007; Ralston, 2012). In practical terms, hermeneutic phenomenology encouraged the researcher to maintain an open mind while analysing participants' narratives.

The methodology allowed for new insights, constant revision, and re-interpretation. Through iterative reading, note-taking, and thematic coding, the final findings emerged as a co-creation of participant realities, systematically interpreted by someone who had lived through a similar situation.

4.3 Research Setting and Sample

To make this study meaningful and relevant, the researcher selected schools located in the WCED (Metro Central and Metro South Education Districts). These areas offered a diverse blend of school contexts with varying degrees of technological integration. By focusing on Grade 7 teachers in these districts, the researcher was able to capture a broad scope of ERT experiences without diluting the study's specificity.

4.3.1 Study Location and Context

Merriam (2002) explains that qualitative researchers seek to gain knowledge of how people comprehend and experience their world "at a point in time and in a particular context" (p. 4). This research was conducted in primary schools within the WCED (Metro Central and Metro South Education Districts). This setting was chosen to provide a diverse range of school contexts within an urban environment, allowing for exploration of how school settings influenced teachers' ERT experiences.

An additional reason for focusing on these districts was that they represented a mix of resource availability, as some schools had well-established digital infrastructures while others had limited technology. Observing how ERT unfolded within such contexts provided valuable comparative insights.

4.3.2 Sampling Strategy

The study employed purposive sampling. As stated by Creswell (2012), purposive sampling is a qualitative method of sampling in which research sites and participants are purposefully chosen "to understand the central phenomenon" (p. 206). According to Ramsook (2018) the participants in a study "should be selected based on the certainty that participants possess real experiences and intimate knowledge about the phenomenon that is studied" (p. 16); therefore, only certain individuals were regarded as suitable respondents for the data collection.

The purposive sampling strategy was implemented by choosing participants who had experiences as Grade 7 teachers with ERT during the COVID-19 closures. This method was intended to ensure that the documented voices mirrored the phenomenon under investigation; it allowed for the intentional choice of participants based on the characteristics (Etikan et al., 2016) and experiences they possessed (Ramsook, 2018). Thus, the inclusion criteria stipulate that the only teachers who were eligible for the study were those who taught in Grade 7 during the COVID-19 closures in Metro Central or Metro South and agreed to be interviewed. Exclusion criteria were applied to ensure the relevance of the sample. Teachers were excluded if they declined consent, did not teach Grade 7, or had no direct, ERT experience.

The study was designed to include at least one Grade 7 teacher from each selected school, with a maximum of ten schools participating. This sample size was in line with recommendations for phenomenological studies, which suggest between 6 and 20 participants (Ellis, 2016). The number of participants was chosen to allow the researcher the opportunity to delve deeply into the lived experiences of the participants of the study and thus gain a detailed and nuanced description and understanding of the phenomenon (Creswell, 2012; Ramsook, 2018). Participants were selected based on their direct experience with ERT and their ability to provide rich data (Ramsook, 2018). The participants were selected according to their availability (Creswell, 2012; Ramsook, 2018) and their possession of the prerequisite experiences (Denzin & Lincoln, 2013; Merriam, 2009; Ramsook, 2018) relating to the phenomenon. The number of participants of this study was seven Grade 7 teachers in primary schools in the WCED (Metro Central and Metro South Education Districts). Purposive sampling was used, with the aim of including between six and ten Grade 7 teachers with at least one Grade 7 teacher from each selected school within the WCED (Metro Central and Metro South Education Districts), with a maximum of ten schools.

By selecting teachers from different schools, the research captured a breadth of experiences while exploring each participant's experiences in depth to uncover the full composition of their ERT encounters.

4.3.3 Participant Recruitment and Selection

A structured recruitment process guaranteed that all teachers who joined did so with full knowledge of the research aims and methods. Following the guidelines offered by Ramsook (2018) that "informed consent must be sought from all the participants" and that "the purpose of the research should be clearly outlined to them" (p. 17), the steps involved obtaining permission from relevant educational authorities and engaging in clear communication about the study's goals.

The recruitment process involved the following steps:

1. Obtaining permission from the WCED, School Governing Bodies, principals, and the School Management Team.
2. Sending invitations to eligible teachers at the selected schools
3. Providing detailed information about the study to potential participants
4. Obtaining informed consent from those who agreed to participate

This transparent process respected the autonomy of teachers, allowed them to opt out if desired, and ensured that only individuals with direct ERT experience took part.

Firstly, application was made to the university for ethical approval. Once this was granted a letter requesting permission to conduct the research was sent to the WCED. The WCED granted permission for the study to be conducted in the selected school. Letters were then sent to Principals, SMTs and the School Governing Bodies of the selected schools in the WCED (Metro Central and Metro South Education Districts). All participants filled out a consent form, once the permissions were granted by the Principals, SMTs and the School Governing Bodies of the respective schools.

4.4 Data Collection Methods

Ramsook (2018) explains that a multitude of investigative instruments must be used in the hermeneutical phenomenological method when gathering data on experiences,

interpretations, and understandings participants. Because of the study's hermeneutic phenomenological nature, understanding participants' experiences in their own words was paramount. Thus, data collection avenues were employed to gather comprehensive information.

The data collection methods used took the form of semi-structured interviews, focus group discussions and document (resource) analysis. The collection of the data was guided by a semi-structured interview guide, a focus group discussion guide, and a document (resource) analysis guide. Collectively, the purpose of these three methods and instruments was to explore and gain an in-depth understanding the lived experiences of Grade 7 teachers relating to the implementation of ERT during the COVID-19-induced school closures, the factors that shaped their decisions to persist with, adapt, or discontinue specific digital technologies, the lessons teachers believed they learnt from the ERT experience, and the changes, policy actions, or support structures they propose for stronger digital integration in South African primary schooling.

The data collection plan was implemented once the university granted ethical approval, and the necessary permissions were secured from the WCED, principals, SMTs, and School Governing Bodies. All participants provided informed consent prior to engaging in interviews or focus groups (Ramsook, 2018).

4.4.1 Semi-structured Interviews

The purpose of the interviews was to provide opportunities for the interviewees (participant of the study) to render their own descriptions of their actions, experiences and opinions relating to the phenomenon. The interviews assisted the researcher in attaining, access to the unique experiences of the participants of the study (Kvale, 2018). As a result, the interviews enabled participants to converse openly about their experiences while allowing the researcher the flexibility probe deeper into these unique experiences (Longhurst, 2003) Structured and purposeful conversations were constructed between the interviewer (researcher) and the interviewees (participants) in which knowledge was constructed (Kvale, 2012). Therefore, the semi-structured interviews formed the foundation of the data collection process.

A semi-structured interview was conducted with each participant. Venues, dates and meeting times with the Grade 7 teachers at the selected schools were set up. Appropriate times and venues were agreed upon between the researcher and the participants. Dates and times of the

semi-structured interviews were based on the availability of the participants of the study. These dates and times were agreed upon and confirmed by both the researcher and the participants of the study. Seven interview times were arranged over a time-period of one month. The interviews were recorded and transcribed with participant consent. The participants signed a confidentiality agreement regarding all the views which were discussed in the semi-structured interviews. There were six in-person interviews and one virtual interview via Microsoft Teams. These interviews lasted for 50- 90 minutes each and were guided by a semi-structured interview guide (Appendix A). This allowed for flexibility to explore emerging themes.

While the prepared questions ensured consistency across interviews, the researchers followed up with spontaneous queries to clarify or expand on critical points raised by participants. Careful listening and questioning were practised with the purpose of obtaining thoroughly tested knowledge (Kvale, 2012). The participants were given opportunities to go into greater detail about aspects that were important to them (Longhurst, 2010). This flexibility aligned with the interpretivist paradigm, which values depth and the emergent nature of knowledge.

4.4.2 Focus Group Discussions

Focus group discussions were used as another data collection tool in this study. In this research methodology small groups of participants meet to engage in discussion around a certain topic guided by questions presented to them by the researcher. Data would be generated from these discussions (Wong, 2008). The collective interaction amongst the members of the focus group discussions provided an additional dimension to the in-depth exploration and understanding of the participants' experiences (Wong, 2008).

Each focus group discussion followed a focus group discussion guide (Appendix B). These discussions allowed for the exploration of shared experiences and the generation of insights through group interaction (Kitzinger, 1995). The questions were predetermined by the researcher. The discussion was both directive and non-directive and enabled the group to engage in deeper discussion around the subject from different perspectives (Longhurst, 2010).

Venues, dates and meeting times with the Grade 7 teachers at the selected schools were set up based on the availability of the participants. These dates and times were agreed upon and confirmed by both the researcher and the participants of the study. The focus group discussions lasted for 60-90 minutes each. The discussions were recorded and transcribed with participant consent and were conducted in-person. The participants signed a confidentiality agreement regarding all the views which were discussed in the focus group discussions. The focus group discussions consisted of at least two Grade 7 teachers who discussed their lived experiences relating to the implementation of ERT during the COVID-19-induced school closures. Two focus group discussions took place in which two teachers were able to attend each focus group. This was due to the collective demands that the teachers experienced in the first semester of the academic year.

4.4.3 Document (Resource) Analysis

Document analysis was employed as a systematic procedure for analysing the documents and resources the teachers used during the implementation of ERT (Bowen, 2009). Within the context of ERT and the use of digital technology which extends beyond the use of documents, the study included the analysis of alternative resources used by teachers.

The aim was to analyse the document and resource used by teachers during ERT, including teaching and learning materials developed for ERT such as lessons, worksheets, and PowerPoint presentations. Document and resource analysis enabled an examination of aspects of ERT implementation. Teachers shared their lessons, presentations, worksheets that they had created or adapted for online delivery. The teachers verbally explained their use of documents and resources with the researcher, guided by the questions in Appendix C. These were analysed to determine how the teachers reconfigured their normal classroom resources during the disruption. Concrete examples of how teachers adapted their teaching materials for the online environment were extracted to complement the data collected during the semi-structured interviews and focus group discussions. This data assisted the researcher with the analysis and understanding of the documents and resources that were used by the teachers.

The resources and documents were not studied in isolation but were interpreted with consideration for what participants had shared in the semi-structured interviews and focus group discussions. By triangulating data from interviews, focus groups, and document/ resource analysis, the researcher assembled a multi-layered portrayal of how ERT had been executed.

4.5 Data Analysis

Data analysis proceeded methodically, guided by a thematic analysis framework. Following Braun and Clarke (2006), the author familiarised herself with transcripts, generated codes, searched for themes, reviewed and named them and produced a report. Throughout, the researcher strove for careful interpretation, referring to recordings, transcriptions, and reflexive journaling to ensure that personal biases did not overshadow participants' voices.

4.5.1 Thematic Analysis Approach

According to Braun and Clarke (2006), "thematic analysis is a method for identifying, analysing, and reporting patterns (themes) within data (p. 6). The approach can be used to organise and describe the generated set of data with in-depth detail. Based on the objective of the study to explore and obtain deeper meaning of the lived experiences of the Grade 7 teachers in relation to ERT, the study employed the thematic analysis. Braun and Clarke (2006) state that "thematic analysis should be seen as a foundational method for qualitative analysis" and "should be considered a method in its own right" (p. 4). Thematic analysis therefore formed the basis of the study as it could gain in-depth and complex data (Braun & Clarke, 2006).

Thematic analysis followed the six-phase approach outlined by Braun and Clarke (2006), which allowed for the identification of patterns and themes across the dataset, providing a rich, detailed, and nuanced account of the data (Braun & Clarke, 2006). The steps are as follows:

1. Familiarisation with the data

According to Braun and Clarke (2006, p. 16), "It is vital that you immerse yourself in the data to the extent that you are familiar with the depth and breadth of the content." The researcher became familiar with all aspects of the data through the reading and re-reading of the entire data, which guided the identification of patterns (Braun & Clarke, 2006).

The verbal data from the semi-structured interviews, the focus group discussions, and the verbal answers to the questions of Annexure C were transcribed, enabling a thorough understanding of the data during the early stages of the analysis (Braun & Clarke, 2006).

2. Generating initial codes

Phase two began with the reading and familiarisation with the data, followed by the generation of the first ideas presented by the data (Braun & Clarke 2006). The researcher worked systematically through the data and identified interesting aspects that could contribute to the identification of repeated patterns or themes. The coding process relied on both inductive and deductive elements. The researcher made use of electronic software (NVivo) to assist with data management and coding, and to ensure consistency in coding.

3. Searching for themes

During this phase, the researcher sorted the identified codes across the data into themes (Braun & Clarke, 2006). Initially, the researcher allowed themes to emerge naturally from the data, but pre-existing concepts—like ERT, teacher self-efficacy, TPACK, or aspects of the digital divide—also guided the selection of certain codes. This blending ensured that the analysis remained closely tied to the raw data while drawing on established theoretical frameworks.

4. Reviewing themes

The fourth step entailed the formation of a logical pattern based on the data and extracts that were collated for each theme (Braun & Clarke, 2006). Findings across the data sources (semi-structured interviews, focus group discussions, and document /resource analysis were synthesised.

5. Defining and naming themes

In this phase the themes that would be used in the analysis were defined and analysed. Consideration was taken into how these themes fitted into the broader overall narrative of the data in relation to the research question (Braun & Clarke, 2006). Through ongoing comparison, patterns began to emerge. The final list of themes went beyond surface-level observations, attempting to provide deeper insights into the emotional, practical, and contextual dimensions of teachers' ERT experiences. Concept maps were created to visually represent relationships between themes. Review of codes and themes by the researcher's supervisor occurred to enhance reliability.

6. Producing the report

This final phase involved the identification of all the themes, its final analysis and compilation of the concluding report (Braun & Clarke, 2006). The result was a set of themes that linked participants' experiences in meaningful ways. These themes were not final until they underwent revision, reflection, and discussions with the researcher's supervisor.

4.6 Trustworthiness

The trustworthiness of the study reflects the ethical and competent manner the study was conducted (Lichtman, 2006; Ramsook, 2018). To ensure trustworthiness and rigor, at each methodological step, care was taken to ensure that the study's findings were credible, transferable, dependable, and confirmable. Checks and balances – such as member checking and supervisor debriefing – guarded against oversights, ensuring that the interpretations remained as faithful as possible to participants' intended meanings. An audit trail was conducted and a record of activities and who performed the activities was held.

4.6.1 Credibility

Credibility refers to the extent in which the study reflects the truth of the data and its findings (Denzin and Lincoln, 2011; Ramsook; 2018). Credibility was ensured through the audio-recording and verbatim transcription of all interviews, focus group discussions and the verbal answers to the questions in Appendix C (Ramsook (2018). This clearly captured clear descriptions of the teachers' personal accounts. The researcher continued collecting data until no new information was evident. Once recorded, the audio files were transcribed, and categories were used to organise themes. The researcher used member checking which allowed teachers to confirm whether the researcher's understanding matched their own. Credibility was strengthened by triangulating data from semi-structured interviews, focus group discussions, and document/resource analysis. The teachers' documents/resources were examined to see how they had been adapted for ERT, and conversations about these resources were recorded and transcribed. Finally, debriefing involved consulting the researcher's supervisor. The transcripts were reviewed and identified themes examined in the coding process. The codes were agreed upon. This external feedback ensured that the interpretations did not depend on a single viewpoint.

4.6.2 Transferability

Transferability refers to the concept that other researchers may transfer the outcomes or results of one study to another context or environment (Denzin & Lincoln, 2011; Ramsook,

2018). Transferability was addressed by providing a clear account of the research context and by selecting participants who had experiences relevant to the topic. Data collection continued until saturation. Audio recordings were transcribed verbatim, and the researcher was cognisant of any meaningful points raised by participants. Documents and resources were meaningfully analysed. Because ERT had been implemented worldwide, results obtained from this study may have application to other settings. Those interested in remote or technology-based teaching can assess the relevance of these findings to their context. The WCED and participating schools will receive the final report, which may assist them with planning for future disruptions of teaching and learning.

4.6.3 Dependability and Confirmability

To ensure the confirmability, the findings of the study focused on the meanings revealed by the participants' perspectives and not that of the researcher (Denzin & Lincoln, 2011; Lincoln & Guba, 1995; Ramsook, 2018). The transcripts were examined by the supervisor, who helped to refine and confirm the coding of themes. Confirmability was achieved by documenting each phase of data analysis and by keeping a reflexive journal. In this journal, the researcher noted personal assumptions and biases to prevent them from affecting the interpretation of the data.

Dependability was achieved by the application of best practice (Merriam, 2009; Ramsook, 2018) and by providing detailed explanations of the findings for the use in future research (Lichtman, 2006; Ramsook, 2018).

Data collection and analysis were monitored by the supervisor, strengthening the dependability of the study.

4.7 Ethical Considerations

Throughout the data collection process, the researcher made sure that participants were treated ethically. The participants' information was safeguarded, and they were assured that the information that was shared would be treated with confidentiality. The researcher ensured that participants remained comfortable expressing their true opinions. Written informed consent was received from all participants and the voluntary nature of participation and the right to withdraw at any time were emphasised. Detailed information about the study was provided to all potential participants. All participants had the right to opt out at any stage

without consequence. This respect for personal autonomy underlined the ethical foundation of the study.

Confidentiality and anonymity were ensured using pseudonyms for all participants and schools (Patton, 2002). All data was securely stored on an external device stored and in a safe location on a password-protected device. All identifying information was removed from transcripts and reports. The data management plan strictly controlled access to raw data, and all personal identifiers were stripped from the final reported findings.

To minimise potential risks to participants, interviews and focus groups were conducted in safe, comfortable environments. The researcher was sensitive to potential emotional distress when discussing challenging experiences.

Participants were reminded that if they felt uncomfortable during the discussion, they were free to pause or end the discussion. Being mindful of emotional triggers was particularly important given the stressful environment teachers had faced during school closures.

The data was treated with strict confidentiality and was only used for the purpose of the study.

4.8 Conclusion

This chapter has presented the methodology used in this study. Grounding the study in a qualitative, interpretivist framework and employing hermeneutic phenomenology enabled the capture of the rich, intricate experiences of teachers. Semi-structured interviews, focus group discussions, and document/ resource analysis formed a coherent triad of data collection methods, while the thematic analysis process ensured depth and rigor in interpreting the findings. All findings were thus anchored in the authentic voices of those who taught in an unprecedented time of upheaval, ensuring the research captures not only the “what” but also the essential “why” and “how” of their ERT journey. Finally, stringent trustworthiness measures and ethical considerations supported the reliability and integrity of the overall study.

The findings of the study are presented in Chapter 5.

CHAPTER 5: FINDINGS AND DISCUSSION

5.1 Introduction

Seven themes emerged from the data, offering a rich, multifaceted exploration of Grade 7 teachers' experiences with ERT during the COVID-19 pandemic:

1. Impact of COVID-19 on teaching and learning and adaptation to ERT
2. Challenges and successes in ERT implementation
3. Emotional and psychological experiences of teachers
4. Reflections on pedagogical practices
5. Evolution of digital technology use post-ERT
6. Teacher development and capacity-building
7. Envisioning the future of digital education

These themes are interconnected and inform each other, offering a tapestry of experiences that illustrate the complex journey of teachers as they managed the remarkable shift to ERT and revealing the multidimensional nature of the educational transformation brought about by the pandemic.

The first theme, ‘Impact of COVID-19 on Teaching and Learning and adaptation to ERT’, sets the stage, describing the initial shock and rapid changes that teachers had to contend with. This includes the practical steps and strategies teachers employed to continue education in a remote setting for which they were not all well-prepared to implement. As teachers adapted to the unanticipated pedagogical shift, the theme ‘Challenges and Successes in ERT Implementation’ emerged. This theme is closely tied to the theme, ‘Emotional and Psychological Experiences of Teachers,’ as the professional challenges experienced by teachers often had profound impacts on their personal lives. These experiences, in turn, gave rise to the theme ‘Reflections on Pedagogical Practices,’ where teachers re-evaluated their teaching methods and the role of technology in education and the possibilities of digital integration in education.

The theme ‘Evolution of Digital Technology Use Post-ERT’ emerged as teachers described how their experiences during the pandemic influenced and impacted their teaching practices after the period of ERT. This theme is intrinsically linked to the theme ‘Teacher Development and Capacity-building,’ as formal training, peer support, and experiential learning during ERT often contributed to teachers experiencing greater competence with

digital tools. These collective experiences gave rise to the final theme: ‘Envisioning the Future of Digital Education.’ This forward-looking theme draws on all the previous themes, as teachers' visions for the future were informed by the difficulties and successes they experienced, their emotional journeys, and their evolving pedagogical practices.

In this chapter, each theme is explored in detail, presenting the rich, lived experiences of Grade 7 teachers as they traversed this unprecedented period in education. Their stories of resilience, innovation, and reflection offer insights into the future of education in an increasingly digital world.

5.2 Theme 1: Classroom Disruption Caused by COVID-19 and Resulting Adaptations to ERT

This theme explored the complex impact of COVID-19 on educational practices, emphasising the experiences, adaptations, and short-and long-term effects on teachers and student engagement due to pandemic-induced school closures. The impact of COVID-19 on teaching and learning was characterised by rapid transition to ERT amidst school closures, presenting exceptional difficulties and necessitating rapid adaptations to online or blended learning environments within the educational sector. The varied strategies, tools, and digital platforms that teachers employed to maintain teaching efficacy and student engagement form the core of this theme. The approaches adopted by schools to manage this transition varied widely, from deploying exclusively online solutions to adopting hybrid models that combined online teaching with traditional methods (Cahapay, 2020; Reimers, 2022).

The data insights revealed that as teachers manoeuvred the transition to ERT, their experiences were characterised by initial reactions and emotions, apprehensions around technological adaptations, and a growing comfort with online teaching methodologies.

One teacher (Participant 1) described the experience as follows: “I think the first thing that comes to mind for me is the just the fear that it [COVID-19] instilled in us.”

Another teacher (Participant 6) stated: “There was a lot of apprehension because we were not quite sure what to expect and we were not quite sure how long it [would last]. ... I had no experience with any kind of online teaching before ... and I guess a bit of nervousness, but a lot of uncertainty because we were applying methods which we weren't even aware of and sharing information which we weren't clear about how to do so.”

The data insights reflected that the abrupt move to ERT demanded adaptations to pedagogical approaches and teaching methods, with teachers facing a steep learning curve as they adopted new technologies and methodologies (Schleicher, 2020). These reflections of the emotions and initial reactions of the teachers captured not only the initial shock but also the personal and professional anxieties that teachers faced as they grappled with the extraordinary times, the fear of illness, and the responsibility of continuing with the education of their learners under drastically altered conditions.

The fear and uncertainty expressed by (Participant 1, 6) illustrated the impact on teachers' emotional states, a key factor affecting the emotional and physiological state of one's self-efficacy beliefs (Bandura & Wessels, 1997). According to self-efficacy theory, abrupt changes in teaching contexts can undermine mastery experiences. Without these familiar routines, teachers sometimes questioned their capabilities. This unanticipated shift disrupted established mastery experiences gained through years of in-person teaching, forcing teachers back into a novice position regarding their immediate teaching environment, potentially lowering self-efficacy. Simultaneously, limited access to devices and internet access (digital divide) exacerbated these uncertainties, emphasising how structural factors interact with personal beliefs.

5.2.2 Adaptation to Digital Technology and Pedagogy

The integration of digital technology into the pedagogy of ERT impacted the delivery of education during school closures. Following the initial shock, teachers faced the challenge of mastering modern technologies and adapting their teaching methods to fit the online format. Thrust into an unfamiliar mode of instruction, teachers had to customise their pedagogical approaches to incorporate available digital technologies, ensuring that teaching and learning could continue.

The process was often fraught with difficulties. Participant 6 noted: "It was daunting at first ... because I've always been an in-person teacher." This sentiment was echoed by Participant 5: "I found it exciting and yet daunting." Participant 1 said: "It was quite daunting in the sense that, if you are not used to it, then you were limited to use certain platforms. My expectations from the start I was not too keen on it. The stress on you to impart the content was very difficult."

The sense of being overwhelmed was a common sentiment, accentuating the abrupt nature of the transition to digital tools. Another Participant (3) noted: “Teaching online as well as sending videos and exercises was a huge learning experience from our point of view”. Participant 4 stated: “We were in a degree ill-prepared.”

Teachers who were accustomed to face-to-face teaching for many years had to adapt to ERT. This was expressed by Participant 4: “We had to teach online, and it was something totally new for us. And there were a lot of things that we had to learn about the different platforms we could use. Being an old teacher, I think is one of the first occasions that education was put or came to a halt. But then, also being old school being roped into an approach of technology. And then, obviously, having to scramble to try and make it work as best I can. We were not prepared for this kind of approach.”

There were situations in which the Grade 7 teachers were tasked with pioneering ERT with their learners, as noted by Participant 5: “And so we had a rushed two weeks – especially for the Grade 7s – because we had to start the process... We [Grade 7 teachers] were the guinea pigs.” This suggests that the Grade 7 teachers took a lead role within their contexts, despite their own steep learning curves and the initial challenges they faced.

Teachers devised learning and teaching strategies to support their pedagogy as they embarked on teaching from home, adapting to the situation with creativity and agility. The improvisation extended to their digital setups. Participant 5 said: “Making little videos was difficult, but you needed to do what you had to do. I have always enjoyed making the little videos for the children. … But it is just how you are going to get it across.”

Teachers adapted and improved their teaching strategies to encourage learner participation and provide the necessary support. Another teacher (Participant 2) commented, “We had to devise different learning and teaching strategies to teach from home in order to equip learners with the essential needs and had to do some emergency thinking around how we could best deal with the situation that was put before us.” Participant 2 added that Class Dojo was used to communicate with learners and send online work to them. They had to negotiate the memory limit on Class Dojo: “We came up with short, simple ideas on Class Dojo, taking photos. Typing out the notes.” Learners could make comments or ask questions on the work via the Class Dojo app. Teachers could respond accordingly.

Weekly and individual meetings were set up to ensure that each student received the necessary attention and help. Participant 6 said: “We had a weekly class meeting where our classes were divided into two groups. So, we had weekly meetings with each group, but then also set up individual meetings and smaller group meetings with those kids that I knew needed that little bit of extra help.”

The challenge was not just technological, but also pedagogical, as teachers sought to maintain learner interest and interaction. Zoom lesson times were extended. Participant 2 explained: “Buying more time through Zoom, with the assistance of the SGB, so that you could teach for longer periods with regard to the Zoom lessons.” Teachers created lessons that would gain more learner interest and interaction by using a variety of digital platforms like Google, Google Sheets, and PowerPoint. Participant 7 reported exploring platforms like Flip Grid and Storyboard to maintain learner excitement and creativity: "I didn't even know that you can put a background on Flip Grid – you know, just have a nice place as a background. Some of them are floating on an ocean. That is exciting for them and encourages them to say ‘I want to do this project because I want to make my videos. I want to edit it and make it nice.’"

The unexpected transition to ERT forced teachers to adapt quickly to a radically different teaching environment. This shift not only involved mastering modern technologies but also adjusting to a new, unfamiliar pedagogical landscape. This swift adaptation to digital tools aligned with the TK dimension of TPACK (Mishra & Koehler, 2009). The process described by Participant 5 where the “making little videos was difficult”, reflected the difficulty of developing not just TK but, more specifically, TCK and TPK – the knowledge of how to represent content effectively with technology and use it for pedagogical purposes (Mishra & Koehler, 2009). Participants noted that the interplay of TK with PK was uneven, illustrating the difficulties of merging technology with effective teaching strategies under ERT conditions.

The teachers’ remarks highlighted the steep learning curve and the initial reluctance or hesitation that they felt about adopting unfamiliar digital tools. The stress of delivering content effectively through these new mediums underscored the pedagogical shifts required by ERT, marked by trial, error, and gradual adaptation. The participants included teachers with many years of teaching experience during which they had made minimal use of digital technology in the classroom, and who suddenly had to adapt to ERT.

The daunting nature of the experience related directly to low initial self-efficacy when faced with tasks requiring new skills and integration. The emotional and pedagogical responses to ERT were influenced by teachers' initial inexperience with digital technologies and online pedagogies. Albert Bandura's (1977) theory of self-efficacy provided a useful lens here. As teachers progressed in their ERT practices, their increasing familiarity with multiple digital tools contributed to their mastery experiences, enhancing their self-efficacy and enabling more confident engagement, leading to more effective teaching practices. It was evident that the teachers actively employed the technologies in their teaching practices, using digital platforms like Flipgrid and Storyboard. The teachers' exploration of the digital platforms highlighted the skills usage dimension of the digital divide theory.

The categorical inequalities (van Dijk, 2013) of digital divide theory with reference to age level became evident as older teachers with multiple years of teaching experience had to face the task of adapting to the use of technology in the implementation of ERT.

Adaptations made by teachers to accommodate learning platform limitations showed teachers drawing simultaneously on content knowledge (which topics could be focused on), pedagogical knowledge (where to encourage comments for understanding), and the technical constraint of file size—evidence of PCK blending with TCK.

The data revealed the adaptability of the teachers as they adopted online teaching and learning methods, despite the process being fraught with difficult emotions and challenges. Teachers described the experience as overwhelming and daunting, particularly for those who had little previous experience with digital technologies. New teaching strategies had to be developed; one teacher (Participant 2) noted that it was necessary to "devise different learning and teaching strategies," pointing out the proactive yet strenuous efforts required to maintain educational continuity.

5.2.3 Increasing Ease Leading to Positive Shifts in Online Teaching

Despite the initial challenges, the teachers gradually found their footing in the digital classroom environment. One teacher (Participant 6) shared: "Initially I was scared about it [ERT] because I was not the best, technologically. So, it was a bit scary, initially, but once you got into it – once you understood the way things were done – I felt more at ease. And, obviously, the children could feel it."

Another teacher (Participant 5) commented: “It was enjoyable once everything was sorted out. I mean, we even had the parent who gave us a webcam so that we could actually use – I think it was because they [the learners] couldn't see my whiteboard properly and they couldn't hear me properly –and the parent came and actually gave us a webcam to use so that we would be more effective and efficient, because we were just using our laptops webcams. So yeah: it was wonderful.”

As teachers adapted to online teaching, they experienced a transformation in their instructional approach. One teacher, Participant 2, reflected: “It was a bit difficult in the beginning, but as we went on we became more comfortable with learners raising their hands and asking questions. It sort of brought me out of my shell of teaching online.” Participant 1 supported this notion: “I think what I didn't know then, I'm more comfortable now." Participant 4 reported a similar experience: “The more you are doing it ... on your own, the better you become at it. ... It was just the ... software and becoming more familiar with the use of ... this software and using it effectively ... . Yes it does help with my confidence level.”

The quotes above captured the gradual shift from initial discomfort to a more dynamic, participatory online classroom environment and illustrated the tenacious nature of teachers. The emotional support from peers and the formation of teacher support groups for sharing ideas, experiences, and best practices were essential in mitigating the stress associated with the transition to ERT.

This shift from apprehension to ease may have stemmed from accumulating mastery experiences but, also, potentially from positive social persuasion, such as encouraging feedback from parents or students, and vicarious experiences gained from observing colleagues manage similar challenges (Bandura & Wessels, 1997). The improvement in engagement was not only beneficial for the students but also helped teachers overcome their initial hesitation and lack of confidence about online teaching, leading to a richer educational experience. The growing confidence experienced by teachers can be interpreted as improved self-efficacy and enabled a more dynamic application of TPACK. Mastery experiences—defined by Bandura and Wessels (1997) as successful task completions—may have reinforced teachers’ beliefs in their own competence as they learned new digital platforms and integrated new technologies into their teaching. Overcoming these hurdles also shows how teachers’ TK and PK converged to strengthen their TPACK. The TPACK framework

(Herring et al., 2016) is particularly relevant for understanding how teachers managed this integration.

5.2.4 Building Connections Beyond Academics

The pandemic highlighted the importance of emotional and social support in the educational context, prompting teachers to focus on building personal connections with their students beyond the academic content. This was articulated by one teacher (Participant 6), who noted, "It was not about the academics at all. It was about actually just having that connect—that personal connection with the kids."

Additionally, the communal spirit extended to the broader school community, as another teacher (Participant 1) shared: "Another memorable experience is just seeing the learners and they are fine and none of [them] got COVID-19. That they are fine. And the ones who got COVID-19: that they were fine too." Teachers adopted ERT with the mindset in which the learners' education (albeit both social and educational) was a priority, and in the process created memorable experiences.

These reflections underscored the prioritisation of well-being and emotional support during remote learning, highlighting the role of teachers as not only instructors but also as key figures in maintaining the morale and mental health of their students. The contact with the learners and among the learners via the synchronous methods reinforced essential connections during a period of social isolation. This aligned with literature indicating that the social-emotional aspects of learning became important during the pandemic (Reimers, 2022). This highlighted the central role of socio-emotional support in learner success.

The emotional stress that students may have experienced during this unpredictable period also may have impacted teachers' experiences and their self-efficacy in the management of ERT.

5.2.5 Digital Citizenship: Learner Engagement and Etiquette

The choice of platforms and the methods employed varied widely among teachers, depending on their previous familiarity with digital tools and the training they received. Google Classroom, Google Meet, Microsoft Teams, Zoom, and Microsoft SharePoint were commonly used to facilitate both synchronous and asynchronous interactions.

Teacher professional development took place to assist and support the teachers as they took on the tasks of implementing ERT—albeit in varying degrees across the schools. In situations where professional development in digital technology took place prior to the school closures, teachers were more prepared for ERT. As indicated by one teacher (Participant 7): “We were at an advantageous position because of the nature of our school: we implemented things like Google Classroom.” “We did Google Classroom One courses, so that came in handy—because as soon as we finished that course then COVID-19 hit; so, we just implemented those skills of learning” and “ we implemented them in online lessons.”

A teacher (Participant 4) shared the experience with the institutional support that facilitated a smoother transition: “We were very fortunate, because prior to that we were really busy with infrastructure in terms of remote teaching. Being on that journey, some people were equipped and trained in Google, so we went along the route of creating Google classrooms.” In another circumstance, a teacher (Participant 2) shared: “We opted for Zoom, and most people were happy with Zoom because it was so much so easy to use. People felt comfortable with it.”

The blend of synchronous and asynchronous methods catered to distinct learning needs. Participant 1 reported: “Most of us then were familiar with Google Classroom. Although some of them could use Zoom, and those who were more experienced in it, the learners were familiar with Google Classroom, and I think that is why we use Google Classroom as the starting block for online teaching.”

Despite the advancements and adaptations, difficulties remained in the form of learner engagement and the understanding of online etiquette. One teacher (Participant 5) explained: “So, as I said, the children were not taught how to do online learning. They did not know their expectations; they did not know the etiquette of it. ...We could not blame them because they never knew the etiquette of those kinds of teaching and learning online.”

Another (Participant 2) explained the practical implications of this gap: “Learners didn't follow what you wanted them to do; learners came too late into the online Zoom lesson.” Participant 7 noted: “Sometimes they might not do their homework.”

The adoption of synchronous and asynchronous methods provided the needed structure and flexibility to address the diverse needs of students. While synchronous tools helped recreate the interactive dynamics of traditional classrooms, they also introduced complications such as scheduling conflicts and the dependency on stable internet connections. Asynchronous tools

offered flexibility but relied heavily on students' self-motivation, which was not always consistent. The combination of these methods, though theoretically effective, presented practical difficulties in execution and student engagement.

Even when learners and teachers feel comfortable with technology, this does not ensure that it is used appropriately (Ribble, 2015). Teachers reported that the learners did not always complete the tasks that were assigned to them on the asynchronous platforms. Their view of the computer as a learning device was not as developed as anticipated by the teachers as the learners' lived experience with computers was related to gaming and not to academic purposes.

This lack of familiarity with digital etiquette posed substantial barriers to effective teaching and learning, pinpointing a crucial area for future development in remote education settings. These difficulties highlighted the need for comprehensive digital literacy training for both teachers and students, as emphasised in the TPACK framework. The lack of established digital etiquette among learners (Participant 5) presented a hindrance to effective pedagogical practice (PK) within the technological environment (TK). The hampering of the successful application of TPACK strategies linked to the skills usage dimension of the digital divide, where the lack of learner digital etiquette impacted the teachers' effective implementation of ERT (van Dijk, 2017). Moreover, the difficulties with monitoring learner participation and progress highlight the limitations of existing digital tools in replicating the nuanced interactions of traditional classrooms. The gaps in learner motivation to participate in lessons impacted attitude, influencing the learners' desire to interact with the technology and participate in ERT.

Key findings from this theme included the experiences that the rapid transition to ERT required adaptations in the form of both technological skills and pedagogical approaches. In the rapid transition to ERT, teachers' self-efficacy played a crucial role in their ability to adapt to and implement ERT effectively. These experiences highlighted the importance of social-emotional connections in education, extending the teacher's role beyond academic instruction. Accompanying the transition to ERT were the challenges that teachers experienced with learner engagement and digital etiquette. The line between the personal and educational use of technology became blurred Both students and teachers were required to manage this new digital landscape responsibly, a skill that was underdeveloped in educational settings prior to the pandemic. These challenges emerged as serious issues, pointing to the

need for comprehensive digital citizenship education to ensure that participants could engage safely and effectively in digital spaces.

Despite these difficulties, the integration of technology into teaching practices improved over time, with teachers reporting increased confidence and skill in their use of digital tools. These experiences had lasting impacts on the teachers' approaches to education, influencing their later teaching practices and their views on the future of education. The resilience and adaptability demonstrated by teachers during this period set the stage for ongoing innovations in teaching and learning, particularly in the integration of digital technologies in education.

The next themes will explore in more detail how teachers adapted to ERT, the specific challenges and successes they encountered, and how these experiences have shaped their current practices and outlook on education. Implications for cross-theme synthesis are taken up in Chapter 6.

5.3 Theme 2: Difficulties Confronted and Gains Achieved During ERT

This theme delved into the difficulties faced during the implementation of ERT and the successes achieved despite these challenges. It encompassed technological barriers, student accessibility issues, teacher preparedness, and the effectiveness of ERT methods. These difficulties reflected varying dimensions of the digital divide (van Dijk, 2017), including not just physical access to devices but also motivational barriers and skills gaps. As teachers experienced these inequities, their sense of self-efficacy was tested, indicating a strong convergence between personal beliefs and larger systemic constraints.

5.3.1 Difficulties Associated with Digital Access: Devices, Connectivity

The transition to ERT highlighted digital access issues that impacted the effectiveness of online lessons. Teachers reported challenges related to inadequate internet connectivity and insufficient access to the necessary devices. One teacher, Participant 2, explained: "The lessons weren't done effectively, and sometimes it was very rushed, [we] only had a certain time [on Zoom]." Another Participant (5) noted the sporadic nature of their own internet connection: "I myself didn't have a fantastic internet connection at that time either; so, it was very hit and miss sometimes." Participant 7 reiterated this point: "So I find myself being challenged for connectivity."

Learners experienced this problem as well, according to Participant 7: “But there was also talk about if kids are struggling to connect because of internet connection.” Participant 4 supported this: “Yeah, those children whose parents were suffering financial constraints were able to appeal to the principal and then financial assistance was given to them so they could have internet access.”

Scheduling also became problematic due to device sharing within families. Participant 7 stated: “When exactly should we start the lessons, learners are available in different times because of their sharing devices with their siblings and their parents.” Moreover, some students were unable to participate in online classes due to lack of data or poor connections; one teacher (Participant 5) emphasised that learners could “potentially even not meet online because they have no data or poor connection.” In this situation, teachers adapted their teaching strategies to asynchronous activities to accommodate these learners. As stated by Participant 2: “We had the SharePoint where work was uploaded for the children to work from home. And the learners had easy access.”

Technical issues with equipment were common; for example, according to Participant 5 “the laptop camera was ineffective for board work; a more suitable camera had to be sourced. And there were microphone problems ... distortions in background.”

This lack of reliable access to digital resources (van Dijk, 2017) directly constrained teachers’ pedagogical choices, restricting their ability to implement synchronous strategies or use bandwidth-intensive tools, thereby hampering the development and application of more advanced TPACK. Furthermore, the constant struggle with connectivity negatively impacted teachers’ emotional states, potentially lowering their self-efficacy regarding ERT (Bandura & Wessels, 1997).

The challenges associated with access to devices and internet connectivity were experienced by both teachers and learners. To address this challenge, schools took steps to close the technological gap by increasing learner access to ERT, affording the learners and teachers the opportunity to engage in learning activities during school closures.

These challenges aligned with digital divide theory, in which disparities in access to technology could have had a profound impact on educational outcomes. The varied experiences of teachers and students underlined the complex nature of this divide, encompassing not just access to devices but also the quality of internet connection and the

ability to use devices effectively for educational purposes. Within van Dijk's (2017) framework, this gap highlights the 'material or physical access' dimension of the divide. Even teachers with strong TPACK or self-belief found their strategies limited when a subset of learners lacked stable internet connectivity or adequate devices.

The adaptation of teaching strategies to accommodate learners with limited digital access aligned with the material-access gap. The limited infrastructure led to lower confidence that learners could join via synchronous tools and therefore a switch from interactive TPK to static PK resources was made. The incident shows why addressing the physical layer of the digital divide was more than an equity gesture; it directly impacted which pedagogical moves a teacher considered viable and, by extension, how much self-efficacy one could sustain.

5.3.2 Student Accessibility and Participation

Engaging students and maintaining discipline in a virtual classroom presented unique difficulties, especially when students turned off their cameras to save data, leaving teachers uncertain about their engagement. One teacher shared: "They will start the camera saying that the network might work much better if the camera is off. And after that, you have no control, and you do not know if you are really getting into the moment." Another (Participant 4) observed: "Some of them just closed the video, but the sound is on, so you did not know what they were doing. They could have been doing anything. So, I think, in that way, I think the system failed." This lack of visual feedback made it (Participant 2) "difficult to monitor the learning of the learners. There was not this face-to-face teaching and that made things difficult too."

Teachers also faced challenges with student behaviour and participation, as stated by Participant 2: "Teaching was a challenge. Learners did not follow what you wanted them to do; it was difficult to monitor the learning of the learners. It was difficult to ascertain what the learners were doing and whether they were coping with regard to the things that you set out for them to do."

The challenges related to student etiquette resulted in teachers not being able to confirm the reasons learners did not attend live lessons or turned off their cameras and microphones. These challenges demonstrated the importance of digital citizenship education to prepare students for the unique demands and responsibilities of online learning environments and digital equity. They also stressed the limited capacity of ERT to replicate the monitoring of

learners' engagement, and the accountability of traditional classroom settings. New strategies for online engagement and assessment were needed to support the learners. The effective use of TPACK may have mitigated these outcomes. Teachers' familiarity with, and effective implementation of TK and PK may have supported optimal learner engagement and improved monitoring of learner engagement.

5.3.3 ERT and In-person Teaching

Despite the difficulties discussed in this section, there were notable successes with ERT that teachers experienced. These accomplishments provided learning opportunities and showcased the potential of online education. One teacher (Participant 2) shared innovative approaches to engaging students: "With regard to the Zoom lessons, I thought of creative ways to reach out to learners to make the lessons a bit more fun online. I also found that I was experimenting on Zoom." This experimentation led to more dynamic interactions, as noted by another teacher (Participant 4): "There were learners who worked effectively; they were focused. They knew what they needed to do. They knew what the purpose was; most of my class were pretty good about making their meetings, and most of them were pretty good about submitting work that was required on time."

These experiences emphasised the adaptability of teachers and their ability to overcome their initial fears of online teaching. As Participant 2 stated: "The more I did the online teaching, the more comfortable [I became] with it: it sort of brought me out of my shell of teaching online—and I think that was most of the teachers' fears."

Teachers enjoyed the opportunity to connect with their learners during live online lessons. Eventually, their level of comfort and confidence in delivery increased, illustrating skill acquisition and the evolution of teacher self-efficacy regarding digital pedagogy. It also a confirmation of teachers trying to implement effective pedagogical methods (PK) to create effective lessons using digital tools (TK).

Comparing ERT to traditional in-person teaching, teachers noted pedagogical difficulties. The lack of physical presence and the in-person teacher cues made it difficult to gauge learners' understanding and maintain engagement. One teacher (Participant 1) explained the difficulty with ensuring learners were paying attention: "It was challenging and frustrating when you know that these learners—they are online, but the video is not on. Then you wonder if they are actually sitting and listening..." Participant 2 stated: "The real interaction

that you have that is necessary for the job—like you got to asking questions, debating things, writing down things and doing things on the board for learning to understand and effectively, and that—was very minimal." Participant 2 continues: "I felt that was a problem for me; and I felt like I was more lecturing than teaching. I felt that tangible activeness that I would like to have with the child was lost—I was not getting to every child—and that the hands-on approach with the child was not any there longer."

These experiences highlighted the unique strengths and limitations of both ERT and in-person teaching. While ERT offered new opportunities for creativity and flexibility, it could not replicate the immediacy and interactivity of traditional classroom settings. This highlights the need for a balanced approach that uses the strengths of both modalities.

5.3.4 Collaborative Efforts and Support Systems

The role of SGBs and SMTs was crucial in mitigating the digital access difficulties faced by teachers and students. The proactive measures taken by schools ensured that the necessary infrastructure was in place to support ERT effectively. A teacher (Participant 4) comments on the support that was provided: "The SGB obviously played the role in making sure that the infrastructure was of the best quality, that we could make sure we could maintain that contact with the kids. The SGB and management team went to the point of making sure that learners who did not have devices at home received the device that they could use."

Moreover, efforts were made to ensure that all students had access to the Internet, as confirmed by Participant 4: "We got people who could not afford data to get sponsored. And so, we have got some sponsors so the learners could stay abreast and stay online." Financial and technical support extended to teachers as well, ensuring that they had the necessary tools to conduct online lessons effectively. Participant 6 reported: "Those teachers who were financially challenged or had no access to the Internet, and the school provided financial assistance for those teachers."

Feedback from parents and learners played a crucial role in adjusting and improving the delivery of ERT. Positive feedback encouraged teachers and validated their efforts. Participant 2 said: "I found out a lot that when you were doing it, the more I did the online teaching, the more comfortable I was with it, the more the more and the more I went on, the more and more I found this interaction between myself and the learners where learners opted to put up there hand to ask question, after the lesson they [learners] would actually, you

know, thank us for doing this. It sort of brought me out of my shell of teaching online" This aligned with self-efficacy theory in which positive verbal feedback (social persuasion) received from others has an influence on the person's beliefs in their capabilities and therefore will have an impact on the implementation of the pedagogy (Bandura & Wessels, 1997).

Teachers noted that their self-efficacy improved when they successfully implemented new digital tools in their classrooms. For instance, one teacher (Participant 4) explained: "We have acquired more skills and are more confident to use them in class. I am not scared to go onto the Internet." Another teacher (Participant 2) reported that while they struggled at first with conducting live online lessons, this improved after successful sessions: "I feel more confident that I do not mind plugging in the device. I do not mind shooting something up on the screen. I do not mind, like, a video. I can do all of that. I can use that information. I can do that. I can enhance my lessons." The sense of achievement through the successful adoption of new digital technology improved the teachers' self-efficacy and the motivation to continue with ERT. These mastery experiences reinforced their belief in their capacity to manage ERT despite their initial uncertainty.

In addition to personal mastery experiences, teachers frequently mentioned learning from their colleagues as a key source of self-efficacy. One participant (Participant 2) stated, "I was very much dependent on friends and colleagues to assist you with classes and sometimes I had to phone HOD a lot of times to ask for assistance." One teacher (Participant 7) emphasised the role of peer learning: "Sometimes we can have the overall meetings with the whole school and then people started to share ideas that 'this works for me', 'I've tried to do that with my classes'." The same teacher reflected: "If you see somebody doing something creative and you want to do it, they would explain it to you, how you can do that."

These observations aligned with Bandura and Wessels's (1997) assertion that witnessing others succeed fosters one's own belief in one's capabilities. The observation of the colleague's successful use of digital technology was a stimulus for the teacher's innovative use of digital platforms. The data suggested that vicarious experiences played a role in reducing apprehension and motivating teachers to engage with digital teaching strategies.

Collaboration among teachers was also a key element in navigating the challenges and delivery of ERT. Participant 1 reported: "As a grade, obviously, we always share ideas. There

were meetings that were held on a weekly basis with SMT, and ideas were shared among the staff and support offered." These meetings proved to be beneficial, as mentioned by this teacher: "You know, things start to change—things start to flow as the time goes, because of the ideas that we share among each other." Participant 1 reported: "I remember as SMT we used to meet every single week. We used to meet online and have our meeting. … As a grade we met." This participant commented further on the collegial support offered between teachers: "I post something. I will post it for four [classes] instead of for just for my class. So, it was that kind of sharing."

The support from school management and governance bodies was instrumental in providing the necessary infrastructure and training to facilitate ERT as stated by Participant 7.6: "The SGB obviously played the role in making sure that the infrastructure was of the best quality that we could make sure we could maintain that contact with the kids. And all teachers had school-issued laptops." Another teacher (Participant 4) reiterates this point, "We were very fortunate because prior to that we were really busy with infrastructure in terms of remote teaching, you know, in terms of e-learning."

Teacher professional development was offered in the digital technologies in place at the schools, as pointed out by a teacher (Participant 6): "We were given very basic training before lockdown. There was not a lot of time, so it was very basic training. But then we also had our IT specialists available online at any time. We could contact them, and they would support us online. They ensured that the infrastructure was in place in order to ensure that your Microsoft 365 was in place." In addition, another teacher commented, "being on that journey, some people were equipped and trained on Google (platforms)."

Additionally, the levels of support extended beyond the digital technology into the realm of pedagogical and collegial support (Participant 7), "So the resources and we were well provided for, the teachers, for the students to run as well, they can, they can connect. I feel like some of the senior members were available for teachers support if you needed to express some, if you needed to ask something, if you needed them to connect to you, you provide the assistance and guidance."

Institutional support, such as providing devices and training (Participant 7.4, 7.6), directly addressed the material and skills access dimensions of the divide, while also providing the foundational TK necessary for TPACK development. Collegial sharing of resources, like

PowerPoint lessons (Participant 7.6), enabled the advancement of TCK and TPK across the grade level.

These detailed accounts illuminate how teachers not only adapted to using digital technologies but also actively worked to refine and enhance their pedagogical strategies to better serve their students under challenging circumstances. The collective effort and offer of support and collaboration across the levels of school management and among teachers themselves reveal the dynamic response to the unexpected shift to ERT necessitated by the pandemic.

Support from colleagues and feedback from parents played crucial roles in navigating the transition to ERT and contributed to the further development in ERT and the execution thereof. The teachers' skills and abilities in ERT were enhanced and refined. These support systems helped mitigate some of the difficulties faced by teachers and eased the transition to ERT. The effectiveness of these support mechanisms varied across institutions. Schools with pre-pandemic training and infrastructure in place reported a smoother transition, underscoring the importance of preparedness. Conversely, schools lacking such resources faced greater hurdles, emphasising the disparity in educational equity.

The data stresses the decisive role of SMTs and SGBs in facilitating teacher development and access to essential digital tools, and infrastructure during the transition to ERT which are critical components of the Digital Divide framework. By securing these resources, SGBs and SMTs helped bridge the gap between teachers with varying levels of access to technology, ensuring a more equitable transition to ERT.

Collegial support in the form of peer support groups and informal mentorship programs surfaced as a vital component of teacher development and fostered a collaborative learning environment. This grassroots approach to professional development underscores the importance of community and peer networks in adapting to new teaching modalities. The collaboration and support experienced by teachers resulted in strengthened approaches to ERT and the continued refinement and enhancement of pedagogies with the use of digital integration in education.

The formation of WhatsApp groups and peer support networks demonstrates how teachers used existing communication channels to support one another, emphasising the importance of social capital, in the form of professional networking and peer support, in professional

development in the educational landscape. According to Bandura (1997), such collaboration can serve as “vicarious experiences”, boosting self-efficacy when teachers see colleagues succeed with unfamiliar technologies. Additionally, peer support often mitigated the skills-access gap in digital inequality by pooling resources and knowledge at the school level.

The quotes from participants illustrate the practical impact of the initiatives established by the SMTs and SGB’s. Teachers appreciated support provided by SMTs and SGBs. These efforts by educational institutions played a critical role in the execution of ERT, pinpointing the importance of adequate support systems in overcoming the barriers to effective online education. The commitment to maintaining a level of equity in access to education during the pandemic was evident through these initiatives, demonstrating the potential for supportive infrastructure to enhance the effectiveness of remote teaching and learning. The support that teachers experienced impacts their self-efficacy and the belief in their ability to implement ERT.

These institutional efforts align with the recommendations in the literature for addressing the technological gap and ensuring equitable access to education during crises (Reimers, 2022). They also demonstrate the practical application of the TPACK framework, as schools worked to provide not just technological tools, but also the support needed for effective pedagogical integration of these tools.

While ERT highlighted teachers’ adaptability, it also exposed difficulties for future crisis response relating to advance planning in pedagogical approaches and support systems in education.

The swift adoption of digital platforms and tools, the development of new teaching strategies, and the formation of support networks all contributed to the successful implementation of ERT but highlighted existing inequalities relating to digital access and readiness among both teachers and students.

The adjustment to ERT reveals the complex interplay between technological, pedagogical, and social factors in education. It shows the importance of not only providing the necessary tools and infrastructure but also fostering a supportive environment that encourages collaboration, continuous learning, and innovation among teachers.

The difficulties and achievements in ERT roll-out reveal a complex landscape of adaptation and innovation in education. While the difficulties, particularly those related to digital access and student engagement, were evident, they also spurred creative problem-solving and collaboration among teachers and school administrators.

The experiences shared by teachers highlight the importance of institutional support, technological infrastructure, and pedagogical flexibility in successfully navigating the transition to ERT. They also reinforce the ongoing need for digital literacy education, both for learners and teachers, to fully leverage the potential of online learning environments.

Moving forward, these insights can inform more robust and equitable approaches to digital integration in education, preparing schools and teachers for future disruptions while also augmenting everyday teaching and learning practices. Implications for cross-theme synthesis are taken up in Chapter 6.

5.4 Theme 3: Emotional and Psychological Experiences of Teachers

In this theme, the emotional and psychological impacts of the transition to ERT on teachers, the adaptation to new teaching methods and the eventual return to in-person teaching are delved into. For teachers moving from traditional classroom settings to ERT was a shift that took them out of their comfort zones, resulting in difficulties and opportunities for growth and development (Jansen & Farmer-Phillips, 2021). This transition was not uniformly experienced; there were teachers who adapted more easily than others, often depending on their previous familiarity with digital tools and online teaching methods (Gouseti, 2021; Schleicher, 2020). Simultaneously, teachers were tasked with the setting up of remote teaching practices under pressure and with limited or no previous experience with online education (Gouseti, 2021).

5.4.1 Initial Reactions and Concerns

Initially, teachers met the transition to ERT with apprehension. Some of these teachers had had decades of experience in traditional classroom settings.

The emotional and psychological states of teachers played a vital role in shaping their self-efficacy during ERT. Anxiety and stress were common reactions at the onset, with one teacher (Participant 2) recalling, “Quite a few teachers’ fears at school, was to teach online.” Another reflected on their transformation from fear to ease: “So it was a bit scary initially,

but once you got into it once you understood the way why things were done I felt more at ease" (Participant 4). As teachers grew more comfortable with the digital tools, they reported reduced anxiety and increased confidence. Another teacher (Participant 5) reflected: "At first, I was overwhelmed, but once I got used to it, I felt much more in control." The sentiment was echoed by another teacher, who celebrated the novelty and success of engaging online: "Just to do something on that platform was memorable and great— that I could do something on the platform that I'm not used to" (Participant 4). This aligned with Bandura and Wessels's (1997) argument that emotional regulation (emotional and physiological states) influences perceived self-efficacy, as those who managed their stress more effectively were able to sustain their engagement with ERT.

The acquisition of knowledge and skills was evident, resulting in apprehension evolving to a sense of accomplishment. Participant 4 said: "what was memorable was that we went from knowing nothing to knowing quite a lot. So that was there. So, we were empowered with another tool that we thought was initially fearful."

These experiences emphasised a shift in teachers' self-perception and capabilities as they moved from trepidation to mastery of new digital tools. The emotional journey was also marked by an expeditious transition from anxiety to a profound sense of achievement and empowerment. Participant 4 said: "[It] was initially fearful. But after day 2 or day 3, I became more confident". This illustrates how quickly teachers adapted, finding new confidence in their abilities to connect with students in innovative ways. Another teacher (Participant 1) reported a sense of pride in their accomplishment: "That was memorable because it was new, and it was awesome. I have done it. I can tick that box."

The emotional impact of ERT on teachers did not result solely from overcoming fear but also from the satisfaction they derived from ensuring the safety and engagement of their learners during such unprecedented times. One teacher (Participant 1) expressed relief about knowing their students were safe:"… just to know that the learners were safe. So that was nice to see that they were there, and they are OK."

In addition, teachers found satisfaction and enjoyment in the connection they established with their learners in the ERT classroom environment which afforded them the opportunity for a more nuanced engagement with their learners. Participant 5 said: " [I] just enjoy the opportunity to be able to connect with them, despite not seeing them in-person, but was able

to connect with them and connect with them in a more relaxed way in their own environment."

The prospect of learning something new beyond the traditional ways of teaching, whilst maintaining a connection with the learners, proved to be exhilarating and exciting for some teachers. Participant 7 said: "So I really feel excited to say, 'Oh, I have this once in a lifetime opportunity to learn about new ways of teaching. The excitement really came from learning about something new and learning it with the kids. That was also exciting because the kids, sometimes, they might know as much as you do, or they might get it faster. So, we had that bond over that new thing that we both were doing." Participant 5 reported: "Once we actually did the online, I enjoyed it. It was challenging but exciting."

Teachers' experiences of excitement and trepidation (Participant 5, 7) highlighted the complex interplay of self-efficacy beliefs: teachers may have felt confident in their pedagogical abilities (PK) but anxious about their technological skills (TK). Anger and frustration directed at the SGB (Participant 5) might have stemmed from a perceived lack of positive social persuasion (a teachers' self-efficacy may be impacted by the level of support from their peers, school leadership or learners) or frustration with institutional inaction relating to the technological gaps affecting their students. The emotional journey of teachers during the transition to ERT aligned closely with self-efficacy theory. Bandura and Wessels's (1997) concept of emotional and physiological states helped clarify why teachers feeling anxiety or stress may have doubted their efficacy. The abrupt move to remote instruction combined with connectivity disparities compounded these emotional hurdles—illustrating how subjective experiences and systemic inequalities intersect. The initial fear and anxiety experienced by teachers reflected low self-efficacy beliefs regarding their ability to teach in a digital environment. However, as teachers gained mastery experiences through successful online teaching sessions, their self-efficacy increased, leading to greater enjoyment of the process.

This transformation from fear to confidence demonstrates the dynamic nature of teacher identity in the face of inevitable educational changes. The pride and sense of accomplishment and resilience expressed by teachers after overcoming initial challenges point out the potential for crisis-induced changes to foster innovative growth in teaching practices. This transformation aligns with the mastery pathway (Bandura & Wessels, 1997): hands-on practice during the ERT sessions produced small but visible successes, which raised personal

efficacy expectations. Collegial demonstrations that took place operated as social persuasion; seeing a colleague model the exact steps for setting up Zoom meetings, for example, reduced anxiety about 'pressing the wrong button.' The change from being "overwhelmed" to feeling "more in control" (Participant 5) illustrates the skills-access layer of the digital divide: once training opportunities were provided, teachers could move from hesitant TK to deliberate TPK, selecting asynchronous methods to complement their synchronous methods.

The satisfaction derived from maintaining connections with students and ensuring their safety during the pandemic underscores the multifaceted role of teachers, extending beyond mere instructional duties to encompass emotional support for students' well-being. This aligned with research indicating the increased importance of teachers' social-emotional competencies during crisis periods in education (Schleicher, 2020).

The application of ERT also surfaced feelings of anger and frustration, particularly when teachers felt undervalued or misunderstood by school governance bodies. One teacher (Participant 5) expressed frustration with the school's governing body, which seemed dismissive of the logistical and emotional challenges teachers faced: "I think at times I was angry; at times I felt they, the SGB, didn't really appreciate what you were trying to do. … they did not take the teachers' feelings into consideration." This sentiment highlights the emotional toll of navigating educational policy and parental expectations under crisis conditions.

Conflicts also arose from the disparities in resource distribution, with teachers feeling that the needs of disadvantaged students were being overlooked Participant 5 reported: "There's nothing else that we could do. Our SGB felt that we were privileged enough to be able to have parents that have Wi-Fi. And even though they, at the time, did not want to ensure that the children who did not have access were actually given access. "So, this is one of the things that SMT had mentioned that maybe we could assist those parents. And they were like, 'Well if they do not have, they do not have. They can fetch a booklet.' The parent body's lack of empathy to digital inequality was met with opposing teacher opinions as stated by Participant 5, "So that was irritating and, for me, a joke."

These challenges were compounded by the pressures of adapting to public and parental scrutiny over new teaching methods: "[Teachers] felt they didn't want to expose themselves to the parents because our parents can also be very judgmental" (Participant 5). Contrasting

reactions to parent pressures emerged, where the scrutiny by parents evoked a challenge to attain intrinsic high standards of teaching, thus viewed as having a positive impact on curriculum delivery and pedagogy. This was reflected in comments by Participant 7 who was aware of parent scrutiny, "I was trying to impress not only the kids, but whoever might be listening, they should know that in our school we give the best lessons. That is the only chance that they [parents] have, to see how we teach at this school ... and it becomes the best lesson." Another comment by Participant 5 provides additional insight into the extent of parent scrutiny: "[They] felt they could tell us how to do our teaching, whether it be done using booklets or online. I found that stressful."

Despite the challenges, teachers were able to channel their frustrations into proactive adjustments to their teaching methods, finding a path forward: "I think the Grade 7s, we maybe took the ball, and we ran with it. Once we actually did the online, I enjoyed it. It was challenging but exciting"(Participant 5).

The anger and frustration experienced by teachers revealed the complex interplay between personal, professional, and institutional factors in the implementation of ERT. These emotional responses reinforced the importance of effective communication and support from school leadership during times of educational crisis.

The conflicts that arose from resource distribution disparities reflected broader issues of educational equity, exacerbated by the abrupt shift to online learning. This aligned with digital divide theory, illustrating how existing socio-economic inequalities can be amplified in crisis situations, particularly when it comes to access to digital resources for education.

The contrasting reactions to parental scrutiny – from stress to motivation for excellence – demonstrate the varied ways teachers internalised and responded to external pressures. This variation in response reveals the importance of considering individual differences in the resilient adaptability of teachers when implementing large-scale educational changes.

The teachers' ability to channel their frustrations into proactive improvements in their teaching methods exhibits the potential for adversity to drive innovation and professional growth. This resilience and adaptability aligned with the concept of teacher agency, where teachers actively shape their professional practices in response to challenging circumstances (Priestley et al., 2015).

5.4.2 The Knowledge Gap: Concern and Contentment

The transition to ERT raised serious concerns about potential knowledge gaps due to varied access to digital resources and differing levels of learner engagement. There were concerns about learner access to online learning; teachers were also worried about the students who were less engaged or had limited access to technology. Participant 4 expressed concern: “I think the other challenge was the fact that some learners could not get online because of various reasons, so they lost out on the opportunity of learning.” This gap was not just about connectivity but also about engagement and parental support, as reflected in the frustration over the lack of parental concern for their children's education during this period. Participant 4 said: “So the one sad thing for me was that parents knew that the learners were not online. And as we sent out many invites.” Comments by another teacher supported this notion (Participant 5): “But we found something, that the learners did not always work on what we are going to post. And I think that is where the gap started to appear, because there was not proper monitoring from parents at home with regard to the work that we posted on Class Dojo.” Further comments reflected the gaps in learning that surfaced due to varying levels of learner engagement. Participant 2 states, “What quite a few of them did not do what was expected from them. Learners did not learn structurally.” Teachers empathised with learners, as teachers felt it that the lack of digital citizenship education affected the level of learner engagement. Participant 7 explains, “So, our learners are not that mature they are 12 to 13 years old. So, you would not expect much cooperation for most of them,” and (Participant 5) “And I suppose we could not blame them because they never knew the etiquette of those kinds of teaching and learning online. Yeah. So, as I said, the children were not taught how to do online learning. They did not know their expectations; they did not know the etiquette of it.”

Despite these difficulties, there was also a sense of contentment among teachers with how students managed to keep up with their studies. Participant 4 pointed out: “I think the success was the fact that, in my opinion, when the children came back. There was not a lack of knowledge. It was not the gap that needed to be filled.” This implies that while there were learners who fell behind, others adapted well to the new learning environment, maintaining their diligence despite the unconventional setting.

The concerns about knowledge gaps highlighted the complex difficulties of ensuring educational continuity and equity during crisis-induced remote learning. These concerns

aligned with broader discussions in educational research about the potential for educational disruptions to exacerbate existing achievement gaps (Reimers, 2022).

The varying levels of student engagement and parental support highlighted the importance of a holistic approach to remote education, one that considers the home learning environment and family circumstances. This aligned with ecological systems theory in education, which places emphasis on the interconnectedness of the environmental factors in a child's learning process (Bronfenbrenner, 1979).

The teachers' empathy towards students' lack of familiarity with online learning etiquette pointed to a critical gap in digital citizenship education. Ribble (2015) acknowledges the need for comprehensive digital literacy programs that prepare students not just for the technical aspects of online learning, but also for the social and ethical dimensions of digital engagement.

The learners' meaningful use and engagement with technology and its impact on ERT linked to the dimension of usage access of the digital divide. The reality that there were learners who were engaging positively with the digital technology and the content made available to them indicated that the access to technology extended beyond the material and physical accessibility to the usage access, where learners were able to keep up with the studies.

The paradox between concern and contentment epitomised the complex experience of ERT. Teachers negotiated their roles amid unprecedented challenges, working to bridge gaps and adapt to the demands of remote teaching. There were students who thrived and stayed engaged, and those who struggled with the transition which magnified the uneven impact of the sudden shift to online learning environments.

5.4.3 Coping Mechanisms and Resilience

In the shift to ERT, teachers grappled with the new dynamics of their roles. Initially, they were uncertain of what was expected from them, both academically and socially. Participant 2 reflected on this transformation: "[I was] not sure what to expect; not sure what was going to be, what was expected from you. This is the sense of uncertainty." This sense of uncertainty was a common theme as teachers managed the new educational landscape.

However, as ERT progressed, teachers discovered a profound sense of purpose. They recognised their dual role in providing not only academic instruction but also a social

connection platform for their students. One teacher (Participant 4) noted: “That was really challenging. And to engage with us when they could. I think that it was not just one occasion that stood really out for me, but it was just their willingness to be part of the process.” This willingness translated into a mutual desire for interaction, marking a definite shift in the traditional student-teacher dynamic.

The emotional response from the learners was particularly telling. As Participant 1 recounted: “Then I think also they couldn't wait to meet with us because they couldn’t socialise with their friends and now, they see their friends online.” Participant 5 supported this notion: “And of course, for them, it was also a wonderful time to interact with their class and their peers, as they've been away from each other for so long.” This not only emphasises the social isolation experienced by students but also underscores the classroom's evolution into a social space. The role of the teacher now extended beyond the academics, as noted by one teacher (Participant 4): “Definitely they were excited. They could talk to one another. They could engage with one another. Then you were like the mediator. I mean, you were, like, in the middle of this, watching these kids and engaging and talking.” Teachers adopted the role of mediators in this new virtual environment, facilitating not just education but also essential social interactions among students who were otherwise isolated.

The evolution of teachers’ roles during ERT reflected the resilience of teachers in the face of unparalleled difficulties. The initial uncertainty experienced by teachers aligned with research on crisis management in education, which emphasise the importance of clear communication and guidance during periods of rapid change (Schleicher, 2020). In Bandura and Wessels’s (1997) terms, resilience in this context can arise from mastery experiences (for example, repeated success with an e-learning platform) or social persuasion (for example, encouraging feedback from a departmental head). Both pathways helped stabilise teacher self-efficacy under crisis conditions.

As teachers discovered a new sense of purpose in facilitating both academic and social connections, they demonstrated the expansion of their professional identity. This aligned with the concept of teacher agency, where teachers actively shape their roles in response to changing educational contexts (Priestley et al., 2015).

The mutual desire for interaction between teachers and learners exemplified the social-emotional aspect of learning, which became particularly important during the period of social

isolation. This finding supported research emphasising the importance of maintaining social connections in online learning environments (Borup et al., 2020).

The teachers' role as mediators in the virtual environment demonstrated the application of social constructivist principles in online settings. By facilitating peer interactions and creating a sense of community, teachers were able to support not just academic learning but also the social-emotional development of their learners (Vygotsky, 1978).

Furthermore, the support system within the school community played a crucial role in the adaptation to ERT. Teachers relied heavily on the solidarity and encouragement from their colleagues to cope with the challenges of remote instruction. Participant 4 emphasised the collective effort, noting, "I think just the support from all of us supporting one another if I needed something, I would ask someone how you do this. So just a general support from our staff at school was great." This sentiment was echoed by another teacher who headlined the positive atmosphere among staff, "Everybody grabbed it because it was something new. And the positivity within each other as a staff, that is what made this successful" (Participant 1).

Social persuasion became evident as a crucial factor in reinforcing teachers' self-efficacy during ERT. Teachers stressed the importance of verbal encouragement from colleagues, school leaders, and even students. One participant (Participant 5) stated, "There are parents, who are going to be very accommodating, very accepting, and they're going to appreciate everything that you do". Another teacher (Participant 6) shared how student feedback contributed to their confidence: "When my students told me they preferred my online lessons over pre-recorded ones, it made me feel like I was actually making a difference." These positive reinforcements and affirmations from colleagues, learners, parents, and other stakeholders helped sustain motivation and encouraged teachers to persist despite technical and logistical difficulties.

These difficulties inferred a transition to ERT that was not seamless. For teachers, like Participant 5, the adaptation process involved overcoming initial resistance and scepticism from certain members of the school governance: "From the beginning, the governing body was trying to put pressure on the staff members to impose certain platforms." This led to a struggle over the decision of which digital platforms to adopt, with ongoing debates about the appropriateness of these technologies for the school's specific needs.

Despite these difficulties, the collaborative spirit within the school community provided a foundation for the successful application of ERT, as teachers shared resources and teaching strategies. As Participant 5 described, “All rallied together, you could pick up and ask anyone for advice on how to do something. If you see somebody doing something creative and you want to do it, they will explain it to you how you can do that.”

The importance of collegial support and a positive school culture in facilitating the transition to ERT aligned with research on teacher resilience and adaptability (Gu & Day, 2013). The collective effort and mutual support described by teachers demonstrate the power of Professional Learning Communities in times of educational crisis.

The difficulties faced in decision-making regarding digital platforms highlighted the complexities of implementing large-scale educational changes. This situation reinforced the importance of inclusive decision-making processes and clear communication channels between school leadership and teaching staff (Fullan, 2007).

The collaborative spirit and sharing of resources among teachers reflected the principles of distributed leadership and collective efficacy in education. This approach, where expertise is shared across the teaching staff, has been shown to enhance overall school effectiveness, particularly during periods of change (Leithwood et al., 2020).

The positive attitude and willingness to embrace modern technologies demonstrated by teachers were in alignment with the concept of growth mindset in professional development (Dweck, 2006). This openness to learning and adaptation played a crucial role in the successful application of ERT.

5.4.4 Impact on Well-being and Work-Life Balance

Balancing professional responsibilities with personal life was clearly a challenge for teachers during the ERT period. The blurring of boundaries between work and home life became a recurring issue, as students reached out to their teachers at all hours. As shared by one of the teachers, “[What] I felt with online teaching is the fact that children could make contact with you anytime of the night, which was not cool... That is your family time” (Participant 4). This intrusion into personal time was felt deeply by the teacher, who struggled to maintain a balance while still providing the necessary support to their students.

The pressure to be constantly available extended beyond the usual school hours, as reflected by another teacher, “You do not want to lose them, yeah. It is always like you understood the circumstances you had to answer them. You had to just teach the syllabus. So, it was important for us like. To try and answer them as soon as possible” (Participant 4). The commitment to supporting students often meant responding to queries late into the night, further encroaching on personal time.

Yet, despite these difficulties, the teachers recognised the importance of their role during this period. They felt a sense of duty, understanding that learners’ learning time might coincide with the only time a parent could assist. Participant 4 noted, “If the learner is working, then I should assist him where I can.”

While teachers demonstrated commitment, the consumption of personal time represented a consequential threat to their well-being. This constant availability and pressure could have had a negative impact on teachers' emotional and physiological states, potentially offsetting gains in self-efficacy (Bandura & Wessels, 1997) derived from mastering ERT skills and leading to burnout. The pressure to be constantly available reflected the intensification of teachers’ work during the pandemic, a phenomenon observed in various educational contexts globally (Reimers, 2022). This intensification raised important questions about sustainable workloads and the potential for burnout among teachers.

The blurring of boundaries between work and personal life that were experienced by teachers during ERT aligned with literature on the difficulties of remote work, particularly in the context of education (Hodges et al., 2020). There was a need for clear guidelines and expectations regarding teacher availability and response times in remote learning environments.

The sense of duty expressed by teachers, even in the face of personal difficulties, demonstrated the deep commitment of teachers to their learners’ well-being and academic progress. This aligned with research on teacher motivation and professional identity, which often emphasises the intrinsic rewards of teaching and the sense of moral purpose that drives teachers (Day et al., 2006).

The complex interplay between personal well-being and professional responsibilities in teaching and learning accentuates the importance of systemic support for teacher well-being, particularly during periods of educational crisis (Schleicher, 2020).

In summary, this theme on the emotional and psychological experiences of teachers revealed that the transition to ERT elicited a range of emotions experienced by teachers, from initial anxiety to eventual empowerment. Teachers' self-efficacy was impacted and played a crucial role in their ability to adapt to and find satisfaction in new teaching modalities.

The emotional and psychological experiences of teachers during the application of ERT revealed a complex landscape of difficulties, adaptations, and personal growth. The journey from initial fear and uncertainty to increased confidence and a sense of accomplishment demonstrated the resilience and adaptability of teachers in the face of unparalleled difficulties. Collegial support and a positive school culture were critical factors in helping teachers manage the challenges of ERT.

The blurring of work-life boundaries presented certain difficulties and led to an expanded understanding of the teacher's role, encompassing not just academic instruction but also social-emotional support for learners.

Moving forward, these insights can inform policies and practices that better support teachers in navigating future educational disruptions and in integrating digital technologies into their teaching in a sustainable and effective manner. Implications for cross-theme synthesis are taken up in Chapter 6.

5.5 Theme 4: Reflections on Pedagogical Practices

This theme examined the pedagogical reflections of teachers during ERT, focusing on their evaluation of which pedagogical approaches were effective, and which were less so. It provides insights into the adaptations and innovations teachers applied in response to the unforeseen shift to online education due to COVID-19. Teachers had to navigate between synchronous and asynchronous teaching methods, blending these approaches to optimise learner engagement and learning outcomes. Synchronous teaching allowed for immediate interaction, creating a sense of community among isolated learners, while asynchronous methods offered flexibility, allowing students to learn at their own pace.

5.5.1 Use of Different Teaching Strategies to Cater to Diverse Learner Needs

As teachers navigated through the complexities of ERT, they observed that students responded differently to the online learning environment. One teacher (Participant 4) reflected on the adaptability of the students: " I think also just learned that different children

thrive in different teaching methods and some children who you least expect in the class who potentially don't like the class environment, thrived in another environment which is online. So, they did far better than they were. They were more eager to take on more work because that was their way of learning." Participant 4 further supported this notion: "But some learners will find it extremely difficult to learn. So unfortunately, within education, you got to do different ways of teaching. Some people are visual, and some people will learn through technology."

Participant 5 acknowledged these sentiments: "They are technologically inclined. We should be using it, and they actually would possibly be more willing to learn the content if we are doing it in that way... And it will make teaching and learning so... much for more... fun than what it is right now."

These insights emphasise the need for flexibility in teaching methods. The teacher's observation that certain students thrived online suggests that digital environments might offer unique advantages for certain learners, particularly those who may not engage as well in traditional classroom settings.

The acknowledgment of varied learning styles—visual, auditory, kinaesthetic—brought to the fore the necessity for teachers to employ suitable strategies to reach all students effectively. Participant 4 echoed the need for diverse pedagogical approaches by emphasising the importance of adaptability: "I think there was also some flexibility in terms of learning modes and learning styles, or whatever. So, there's various people who learn differently. And so, we need to be able to adapt, and we need to be able to look at different ways."

Participant 5 said: "And there are some of our learners who are struggling, and they are at risk...But if they were using the iPads or even their phones, I feel they'd be more willing to learn and they'd be more involved."

The teachers' reflections on their pedagogical practices revealed a nuanced understanding of the learning needs and preferences of their students. This was in alignment with the principles of differentiated instruction, which emphasise the importance of adapting teaching methods to suit individual learner characteristics (Tomlinson, 2014).

The observation that students thrived in the online environment, particularly those who may struggle in traditional classroom settings, drew attention to the potential of digital learning to

cater to diverse learning styles. This finding supports research on the benefits of technology-enhanced learning for students with different learning preferences (Means et al., 2014).

Recognising that students thrived differently online (Participant 4) necessitated the development of strong TPK – the ability to select and implement appropriate digital tools and strategies for learners in a remote context (Mishra & Koehler, 2009). Successfully catering to these varied needs may have served as powerful mastery experiences, boosting teachers' self-efficacy.

The teachers' recognition of the need for flexibility and adaptability in their teaching methods demonstrated a shift towards a more student-centred approach to pedagogy. This aligned with constructivist learning theories, which emphasise the active role of the learner in constructing knowledge and the importance of tailoring instruction to individual needs (Vygotsky, 1978).

The insight that digital tools can make learning more engaging and "fun" for technologically inclined students reflected the growing importance of digital literacy in education. It also aligned with research on the motivational aspects of technology integration in learning (Malone & Lepper, 1987).

5.5.2 Insights for Future Pedagogical Approaches

The shift to ERT also spotlighted the critical role of digital technology in education and its challenges. Teachers noticed a gap in students' readiness to transition from using technology for leisure to employing it as a learning tool.

Participant 5 stated, "And so obviously for them, it was something new and it was something that they didn't expect" According to Participant 1, "It did highlight the fact that we needed to create consciousness: knowledge around the benefits of online teaching." The swift change exposed a lack of mental preparation among students for online learning, emphasising the need for orientation regarding the educational benefits and effective use of digital platforms.

Participant 4 explained, "They were not mentally prepared. We were not mentally explaining to them or trying to get them to understand how the system works and what the benefits are of the system. It was Boom! There you go." Participant 4 reiterated that this swift move to ERT was new to the learners, "That was a first for them too. They had to sit in front of that laptop or device and listen to us, so they had to be disciplined. Yes, they play with their

devices and play games. But now it is a different ball game. Now you have to listen to a teacher that is not physically in front of you."

This adaptation was not just a technical challenge but also a behavioural shift for students, who had to learn a new form of discipline and engagement without the physical presence of a teacher.

The teachers' observations regarding learners' lack of readiness for online learning displayed a critical gap in digital literacy education. This aligned with research accentuating the need for comprehensive digital citizenship education that goes beyond technical skills to include responsible and effective use of technology for learning (Ribble, 2015). The lack of student preparedness for online learning created a direct impediment for teachers trying to implement effective pedagogical strategies (PK) using digital tools (TK). This disconnect hindered the smooth integration envisaged by the TPACK framework, as learner behaviour and understanding did not align with the pedagogical goal.

The astounding shift to ERT exposed the disconnect between learners' recreational use of technology and their ability to apply it for academic purposes. This finding supported the argument by Mishra and Koehler (2009) for a more integrated approach to technology in education, where digital skills are developed in tandem with academic content.

The challenge of maintaining learner discipline and engagement in an online environment reflected the need for new classroom management strategies in digital spaces. This aligned with research by Borup et al. (2020) on the unique challenges of managing virtual classrooms and the importance of establishing clear norms and expectations for online learning.

The teachers' reflections on the need to prepare learners mentally for online learning emphasised the importance of metacognitive skills in digital education. This supported the idea by Zimmerman and Schunk (2011) that effective online learning demanded not only technical skills, but also self-regulation and independent learning strategies.

These insights contributed to the ongoing discourse on digital citizenship and the role of schools in preparing learners for the digital world. They pointed out the need for a more holistic or integrated approach to technology integration in education, one that addresses not just the technical aspects but also the social, ethical, and cognitive dimensions of digital learning.

Additionally, teachers also reflected on the inherent value of in-person teaching, noting its irreplaceable role in effective education. The move to ERT illuminated challenges that revealed the benefits of traditional classroom settings.

Participant 1 shared, “The one insight that really stands out for me is the fact that nothing can replace a physical teacher standing in front of the learners. And the online platform, it is just not the same.” This sentiment was reflected throughout the discussion, showcasing the struggle with maintaining discipline and engagement remotely: “The learners just did not pitch up for lessons... A lot of them did not do homework.”

The lack of physical presence made it difficult for teachers to manage and monitor student behaviour effectively. A participant (Participant 1) further noted, “So with the online activity, there was not as nearly as much control as the actual physical class because a lot of the learners may or may not be there. You did not even have the control to know whether they were physically listening or physically there.”

These comments revealed a clear preference among teachers for in-person interactions, where they felt more effective and engaged: “But your children who were struggling... They need that extra time, the extra assistance. And you could not do that online.”

The teachers’ reflections on the value of in-person teaching aligned with research underscoring the importance of physical presence and face-to-face interactions in education. These reflections supported the argument that although digital tools can be used to enhance learning, they cannot fully replace the rich, complex experience of in-person instruction (Garrison et al., 2010).

The difficulties in maintaining student discipline and engagement during ERT reinforced the complex role of teachers in classroom management. This aligned with research on the importance of teacher presence in fostering student engagement and motivation (Garrison & Akyol, 2013).

The difficulty in providing individualised support to struggling learners in an online environment highlighted the limitations of ERT in addressing diversity. This supported the argument for a blended approach to education that combines the benefits of both online and in-person instruction (Horn & Staker, 2014).

The teachers' observations about the lack of control online reflected the need for new virtual classroom management strategies. This aligned with research on the unique challenges of maintaining student engagement in online learning settings (Martin et al., 2019).

These insights informed the debate about the future role of technology in education. They suggested that while digital tools offer opportunities for enhancing education, the human element of teaching remains crucial for effective learning outcomes.

The insights of this theme aligned with developing TPACK more fully—specifically TPK, where technology informs new pedagogical strategies like flipped learning. Without stable digital access, however, even the most innovative TPACK-based plan remains limited, again accentuating the divide's powerful influence.

5.5.3 Various Strategies Used to Enhance and Refine Pedagogy

Teachers emphasised the importance of adaptability and a positive mindset in navigating the difficulties of ERT. Participant 5 remarked on the need for a mindset change: "You have to be open to learning firstly and to adapting and changing with regards to technology and other things... It is a mindset change first, so that you have to do all [that you can] to get online and know what you are doing."

This adaptability was not without its difficulties, as the same participant acknowledged the potential for feeling overwhelmed: "You could easily be broken because it was so new to us. It was more the mindset than anything else." These difficulties could result in teachers doubting their abilities to teach online. A good mindset was key, as Participant 5 stated, "You know, we had certain skills. It was just that you have to expand your arsenal a little bit and so...Knowing your worth as a teacher, you comfortable and confident in yourself?" Participant 1 reiterated the importance of the impact of support, training, and a growth mindset on one's confidence: "The workshops that we have attended with the use of devices-that made you confident to explore and to use. We still make mistakes. We still lack a lot of knowledge. But you know what? It does make you confident."

The communal effort and supportive attitude among colleagues were crucial in overcoming these difficulties. Teachers shared resources and strategies, fostering a collaborative environment that was vital for their collective success in implementing ERT.

Participant 2 acknowledged, “We pulled together as a staff to educate or to teach remotely.” Another participant (Participant 1) also experienced the communal support: “Obviously, the school, we sat down, the SGB sat down, the SMT sat down, the teachers sat down. When we knew that this was imminent to happen, we sat down, and we devised plans.”

The teachers’ emphasis on adaptability and a positive mindset aligned with research by Gu and Day (2013) on teacher resilience and professional growth in times of educational change. It reflected the importance of psychological resources in navigating difficulties and implementing new pedagogical approaches.

The acknowledgment of the need for a mindset change echoed the concept of growth mindset in professional development (Dweck, 2006). This openness to learning and adaptation played a crucial role in the successful application of ERT and demonstrates the potential for crisis situations to foster professional growth.

The collaborative efforts described by teachers reflected the principles of Professional Learning Communities in education (DuFour & Eaker, 1998). This communal approach to problem-solving and resource-sharing demonstrated the power of collective efficacy in overcoming educational challenges.

Teachers who observed colleagues using interactive quiz tools, screen-sharing demos, or synchronous discussions, for example, experienced ‘vicarious mastery’ (Bandura & Wessels, 1997). This boosted their confidence and willingness to experiment—demonstrating the interplay between social persuasion and improved TPK. Furthermore, the recognition of the importance of support and training in building confidence illuminated how mastery experiences and social persuasion (Bandura & Wessels, 1997) enhanced teachers’ beliefs in their capabilities to implement new teaching methods effectively .

These insights contributed to an understanding of the psychological and social factors that influence teachers’ ability to adapt to sudden educational changes underscoring the importance of fostering a supportive professional environment and providing opportunities for continuous learning and growth in the teaching profession.

Furthermore, the development of digital technology skills was a definite aspect of teachers’ adaptation to ERT. Participant 2 highlighted the focus on mastering new tools: “It was the opposite to me. That is just one thing to master the usage of the tool that to me was more

important... for me to learn how to use the software effectively and to incorporate it in my lesson."

Teachers underlined how technology fundamentally altered their pedagogical strategies. Teachers adapted their teaching strategies to suit the application of ERT. One of the ways in which they transitioned to digital pedagogy was by transferring content usually presented on a whiteboard, chalk board, or worksheets during the face-to-face lessons to digital platforms like Google Suite, PowerPoint presentations, Zoom or self-made videos. One participant (Participant 7) explained that before ERT learners presented their oral presentations during face-to-face lessons, but during school closures they learners used Flipgrid and Storyboard to present orals and written work. Another teacher (Participant 6) described how digital polling tools enhanced formative assessment: "I used Google Forms for quick quizzes, and it actually gave me better insight into what students understood than traditional hand-raising in class." These examples illustrate how teachers adapted their instructional methods to leverage technology effectively, demonstrating an evolving understanding of TPK.

The integration of technology not only facilitated educational delivery but also enhanced the engagement and interest of both students and teachers. A participant shared how this novel approach transformed their teaching: "These resources enhanced my teaching. It made me more interested in my subject as a teacher and the feedback that I got back from the parents was more positive."

Another teacher (Participant 7) reiterates the above, "So some of the things we have learned from there I am still implementing them even now that things are normal. So, it was quite exciting, I must say, I have enjoyed learning about new things." Participant 7 provides further insight, "I did not even know that you can put a background on Flip Grid, you know, just have a nice place as a background. Some of them are floating on an ocean. That is exciting for them and encourages them to say... 'I want to do this project because I want to make my videos. I want to edit it and make it nice'... so it encourages them to do their homework because there is also... Some sort of playing with learning in it."

The teachers' focus on mastering digital tools aligns with the TPACK framework (Mishra & Koehler, 2009). This emphasis on integrating TK with PCK demonstrated the complex skill set required for effective online teaching.

The observation that technology enhanced teaching and increased teacher interest in their subject reflected the potential of digital tools to reinvigorate pedagogical practices. This aligned with research on the motivational aspects of technology integration for both teachers and students (Tondeur et al., 2017).

The continued implementation of digital tools post-ERT suggested a lasting impact on teaching practices and supported the idea by Fullan (2020) that crisis-induced changes can lead to long-term innovations in education.

The excitement around creative uses of technology, such as virtual backgrounds in Flipgrid, highlighted the potential of digital tools to make learning more engaging and interactive, aligning with research on the importance of student engagement in online learning environments (Bolliger & Martin, 2018).

These insights contributed to the understanding of how teachers developed digital competencies and integrate technology into their pedagogical practices. They augmented the potential for technology to not only support but also transform the teaching and learning processes.

Moreover, teachers' reflections on their experiences during the pandemic have spurred discussions on how to better prepare for future disruptions to schooling, emphasising the importance of readiness and equality in educational access.

Participant 4 drew attention to the learning curve experienced during COVID-19, "We've learned a lot. But how are we going to help the schools where schooling never happened? We lost our learners for one term. We got them back after one term." This reflection brings to light the disparity between schools that could continue normally and those that could not.

The comments revealed concerns about the systemic inequalities that became more evident during the pandemic. The same participant noted, "We can learn a lot and we can continue if anything happens now, we will continue again the haves are going to improve and then the have nots will still be where our problem is. We need to look at that as our focus as an Education Department and as teachers; the focus needs to be on those who do not have so they do not lag behind, they are behind us, they are a year behind us already."

The practical aspects of preparedness were also discussed. Participant 5 raised a valid point about the lack of contingency plans in schools, “So if you look at our school improvement plan, one of the things, do you have a contingency plan? A lot of schools do not have one. So, if we are struck by the next wave, which is extremely serious, a lot of us are still not going to have those [technologies].”

The perspective on online learning as primarily a social platform rather than an educational one was also noted. Participant 5 stated, , “but we still need to sit with the same problems of children not engaging. It is going to be that social thing because that is how they see online platforms. It is a social thing, it is not [regarded as] a learning platform.”

The teachers’ reflections on the disparities in educational continuity during the pandemic aligned with research on the divide and its impact on educational equity (van Dijk, 2020). This brought to the fore the urgent need for systemic interventions to address technological and socio-economic inequalities in education.

The concern about the widening gap between “haves” and “have-nots” in education echoed broader discussions about the potential for crisis situations to exacerbate existing inequalities (Reimers et al., 2022, Schleicher, 2020). The importance of targeted support for disadvantaged schools and students in educational policy and practice was highlighted.

The observation about the lack of contingency plans in schools reflected a broader issue of crisis preparedness in education systems and aligned with calls for strengthened disaster response planning in education, as spotlighted in research on educational resilience (Azzi-Huck & Shmis, 2020).

The insight about learners viewing online platforms primarily as social rather than educational tools pointed to a need for more comprehensive digital citizenship education. This aligned with research emphasising the importance of teaching students how to navigate digital spaces for learning purposes (Ribble, 2015).

These reflections on learners’ use of online platforms, the lack of a contingency plan, and digital disparities contributed to an understanding of the long-term implications of the pandemic on education. They highlighted the need for systemic changes to address inequalities, improve crisis preparedness, and foster a more effective integration of digital technologies in learning.

The pedagogical reflection and insights on the experiences of teachers during ERT depicted a complex interplay of challenges and adjustments in pedagogical practices. This theme brought to light how teachers managed the shift to online education prompted by the COVID-19 pandemic, adapting to both synchronous and asynchronous teaching methods to maintain educational continuity.

This theme revealed the importance of the recognition of diverse learning needs and the potential of digital tools to cater to distinct learning styles along with the importance of digital citizenship education and preparing students for online learning environments. The enduring value of in-person teaching and the traditional classroom, despite the advantages offered by digital tools, were revealed.

Teacher mindset and adaptability were role-players in the lasting impact of ERT on teaching practices and the integration of digital tools in post-pandemic teaching and learning.

Moving forward, these reflections can inform more robust and equitable approaches to digital integration in education, preparing schools, teachers, and students for a future where technology plays an increasingly central role in learning. Implications for cross-theme synthesis are taken up in Chapter 6.

5.6 Theme 5: Evolution of Digital Technology Use Post-ERT

This theme examines how the experiences of ERT have influenced the ongoing use of digital technology in teaching and learning. It includes the integration of digital tools in post-COVID-19 education, the perceived benefits and drawbacks, and the potential for future educational transformation.

5.6.1 Continued Integration of Digital Tools

Teachers who participated in the study continued to use digital technology in their teaching practice after ERT ended, integrating digital technology into their lessons and in the use of asynchronous learning methods. One teacher (Participant 1) stated: “I think what I did not know then I am more comfortable now: like Google Classroom, posting things, showing videos, using the Internet. So, you are a bit more comfortable with certain things, whereas just before COVID-19, we did not always use those platforms. But now we are all comfortable using it. So, there are definitely skills that I have carried on, and there are more of the skills that we have acquired post-COVID that we are still using.”

Teachers also reflected on how technology changed the way they represented subject content. One Mathematics teacher (Participant 5) shared, “I created my own Math videos.” These replaced the face-to-face lessons and provided the learners with the opportunity to rewatch the videos at their own pace. Similarly, a Geography teacher (Participant 1) mentioned that when he used technology like YouTube videos, he was able to enhance his lessons, as the videos helped students grasp the concepts more effectively than traditional explanations. These adaptations accentuate how teachers developed TCK by identifying and integrating subject-specific digital tools to enhance conceptual understanding.

The extensive use of digital technology during ERT resulted in one teacher (Participant 4) feeling “more confident that I do not mind plugging in the device. I do not mind shooting something up on the screen... like a video. I can do all of that. I can use that information. I can do that.” These positive experiences impacted the teacher's self-efficacy, resulting in the delivery of an enhanced pedagogy.

Participant 1 shared: “It is at our fingertips and that made me confident. COVID-19 and what I have experienced and all the workshops that we have attended using devices that made you confident to explore and to use, we still make mistakes. We still lack a lot of knowledge. But you know what it does ... make you confident.”

The sharp learning curves that teachers experienced contributed to their refinement of their teaching methodology and strategies. As pointed out by Participant 1: "So yes, we've learned a lot. Previously, I would teach you Geography. That was it. Now I can stop at earthquakes. I say, ‘Come, let me show you an earthquake. Come, let me show you how it erupts; show you how the lava flows out’.” This teacher also commented: “If I think of how I came back to school [after the school closures], I wasn't really a PowerPoint person and I wasn't a person who would refer to YouTube, but I found myself referring to a lot of YouTube clips [when I returned to school] .”

Participant 7 integrated digital technology into lessons to make them more interactive for the learners. They said: “And some of the applications that I have learned from COVID-19, I am still using such as your Google Classroom that I still use. I still use the Flip Grid that I mentioned. I use a Storyboard—that is a platform that I used to use where learners can make their own comics however they want.” Learners thus benefitted from the enriched learning opportunities.

Teachers grasped the opportunities for professional development, and this supported the integration of digital technology in their post-ERT pedagogy. Participant 1 stated: “The workshops that we have attended using devices that made you confident to explore and to use, we still make mistakes. We still lack a lot of knowledge. But you know what it does to make you confident.” Participant 6 stated: “So it has helped us tremendously, certainly sped it up. Our online learning methods helped out a lot because, as I mentioned before, we knew nothing in regard to online.”

The integration of digital technology into education assisted with providing teachers with insights into learner progress. Participant 6 explained: “We also have made quite a lot of useful informal assessments using Microsoft quizzes and forms [that used] self-marking and this instant feedback for the kids and we can do the form [Google Form], discuss the questions, discuss the answers. And it is something we probably would not have considered beforehand.”

The integration of digital tools in post-ERT teaching practices aligned with research by Fullan (2020) on the lasting impact of crisis-induced educational changes. The continued use of tools like Google Classroom or specific assessment platforms suggested teachers perceived them as effectively integrating technology with their pedagogical goals and content delivery (TPACK). The teachers’ increased confidence and willingness to explore new digital tools reflected an improvement in their TPK, a key component of the TPACK framework (Mishra & Koehler, 2009**).** The ongoing digital tool integration indicated a growing synergy among CK, PK, and TK—that is, stronger TPACK. Yet for rural or low-resource schools, the divide persisted: minimal connectivity slowed or halted these advancements, curtailing the potential for long-term transformation.

The persistence in the use of digital tools was also bolstered by the high self-efficacy developed through mastery during ERT. The enhanced learning opportunities provided through digital integration, such as interactive visualisations in geography lessons, support findings on the potential of technology to enrich subject-specific teaching (Mayer, 2019). This demonstrated how teachers harnessed the use of technology not just as a delivery mechanism, but to enhance content representation and student engagement.

The teachers’ positive experiences with the application of digital technology for assessment and feedback aligned with research on the benefits of technology for formative assessment

practices (Gikandi et al., 2011) and suggested a shift towards more data-driven and responsive teaching approaches. The recognition of learners as digital persons and the need to balance digital and traditional methods reflected ongoing debates in educational technology about the role of digital tools in learning (Selwyn, 2016), suggesting that teachers critically engage with questions of how to best integrate technology in ways that complement rather than replace traditional pedagogical approaches.

The emphasis on finding a balance between digital and traditional methods aligned with research on blended learning approaches, which aim to combine the benefits of both online and face-to-face instruction (Graham, 2013). This balanced approach suggested that teachers can develop more nuanced understandings of the strengths and limitations of digital tools in education.

5.6.2 Perceived Benefits and Drawbacks

The participants in the study experienced benefits when integrating digital technology into their teaching practices after ERT.

Participant 3 mentioned that the use of digital technology is "…far more effective. It is a good form of communication with the learners. It is a good way of making sure that the learners have all the information they need, that they have, they have books, but they also have online versions. It also works effectively as a backup tool...to access, so that he does not lag behind or fall behind." Teachers would also use the digital technology to make the work directly accessible to learners that were absent. Participant 4 explains, "But when I know a learner is going to be absent for the long period of time that I would post it directly to him, so that at least he is not left behind and he can work. Even though he's at home sick, he can still at least work and stay on par with his classmates." Participant 6 found "that the PowerPoints had huge value. So, I have kept going with PowerPoints. So, I have a PowerPoint per week ...which really helps if I have got a child who has left for music [lesson] or absent, or she is off playing water polo somewhere. At least the work is there, and they can go back to it."

Teachers adopted varying pedagogies to encourage the participation of all learners, as indicated by one participant (Participant 7), "I use Storyboard, so I do not have to always be the one speaking and speak to them. They can kind of do something with their time in between playing and learning."

Digital Technology also assisted teachers with the systematic organisation of planning, content, and pedagogy. According to Participant 6, “I just found the organisation of giving them a whole unit or a week's work on a PowerPoint is beneficial for everybody. And because I do the planning for Afrikaans for myself and three other teachers it is just, I know that everybody is on the same page.”

Digital technology proved invaluable in optimising use of teaching time and integration of educational experiences, as indicated by Participant 7: “I used to use a Storyboard where learners can make their own comics, however, they want and start creating. It is good for language because they are making comics, and they are learning about writing and spelling.” Participant 7 also said: “So I use those devices, and I continue to use them now because they save a lot of teaching time, (they can) complete the task not in school time. The learning time is saved, and they can do that remotely. I can also mark it remotely. I mean not only do we save time.”

The benefits identified by teachers align with key areas of research in educational technology. These include enhanced communication and access to materials. The use of digital technology as a communication tool and a means of providing continuous access to learning materials aligns with research by Coates et al. (2005) on the benefits of Learner Management Systems in education. This reflects a shift towards more flexible and accessible learning environments.

The support of absent students by their teachers was revealed. The ability to provide materials to absent students reflected the potential of technology to support continuity of learning, a benefit that has been highlighted in literature by Graham (2013) on blended learning approaches.

Another key area related to pedagogical approaches. The adoption of varied digital tools to encourage participation aligned with research on the use of technology to support differentiated instruction and universal design for learning principles (Rose & Meyer, 2002). The implementation of digital tools for planning and content organisation reflected research on how technology can enhance teacher efficiency and collaboration (Starkey, 2020). Teachers consistently found that mastering e-learning platforms built their self-efficacy. Their sense of capability, underpinned by successful experiences, reflected Bandura and

Wessels's (1997) notion of mastery experiences. At the same time, it illustrated the potential of TPACK to enhance pedagogical repertoire when conditions permit.

Digital technologies were reported to save time. The perception that digital tools saved teaching time and allowed for more efficient use of class time aligned with research on the flipped classroom model and other technology-enhanced pedagogical approaches (Bergmann & Sams, 2012).

These benefits suggested that teachers leverage digital technology not just as a substitute for traditional methods, but to enhance and transform their teaching practices. This aligned with the SAMR (Substitution, Augmentation, Modification, Redefinition) model of technology integration; a framework that can be used to help teachers integrate technology into teaching and learning (Puentedura, 2006).

The participants also identified drawbacks to integrating digital technology into their teaching practices once ERT during the COVID-19 pandemic had ended.

Teachers shared concerns about the impact of digital integration and its effect on learner attendance at school. Participant 2 said: "I am finding myself now more using Google Docs, posting an explanation online on a Google platform ... but I do not do it too often because it has its advantages and disadvantages. Learners can stay absent regularly, and they rely too much on that [google] drive. … learners need to come to school because they need that interaction between and learner to learn effectively and COVID-19 was a good indication or yardstick that learners struggle to learn remotely from home, especially if it is not in a structured environment." Another teacher (Participant 4) expressed a similar sentiment: "Then also so now and then, if they feel that the absentee rate or learners, were absent too regularly, whatever, I try to post work on Google Classroom so that he doesn't lag behind or fall behind, but I am sceptical about it. I do not want children to believe that it is OK to be at home, and you can still continue with your work."

Another concern that became evident was the potential impact of digital technology on learners' attention levels. Participant 4 said: "I do not use it as often as I used to use it, and so I do use certain aspects—sometimes some visuals that would enhance learning. But I get children to focus more with less screen time, more teaching time." Participant 1 expanded on this concern: "I do not know what the future holds for them. I am scared that if we expose them to too much technology, we are going to lose. We are going to lose the primary stuff.

But yes, how much are we going to expose our young minds to digital technology? Is it going to be harmful? I do not know."

It was concerning for teachers that learners and parents were not accessing the important educational content shared by teachers on digital platforms. Participant 5 said: "So now I share links with them rather, it is just easier that way. And so, I spent a lot of time looking for the good things to share. There is a drawback to that, because even though I share the content on Dojo, the parents feel that they are not going to use it." The teacher provides a deeper insight, "Because it [ERT] provides the child with an opportunity to go online and then they watch whatever they want to. There is also the child that would just watch it once. It is not beneficial to them. And there's parents who do not share it with their children."

The drawbacks identified by teachers reflect concerns about educational technology. Firstly, there is the impact on attendance. The concern about digital resources potentially encouraging absenteeism aligned with research on the challenges of maintaining student engagement in blended and online learning environments (Borup et al., 2020). It spotlighted the need for strategies to balance flexibility with accountability in digital learning.

Drawbacks such as managing absenteeism or maintaining learner focus highlighted the ongoing difficulties in translating effective PK into the online environment, a core aspect of TPACK. Furthermore, issues like non-engagement with shared resources may indicate a broader technological gap affecting the households: lack of skills, motivation, or time to support digital learning .

There was a loss of in-person interaction in the online learning setting. Teachers' emphasis on the importance of in-person interaction reflected ongoing debates, including those by Garrison et al. (2010), about the social and emotional aspects of learning that may be difficult to replicate in fully online environments.

Another shortcoming relates to the learners' attention levels and amount of screen time they experienced. The concern relating to the potential harm of overexposure to digital tools and technology, and the impact of increased screen time on the level of student attention aligned with research on cognitive load and digital distraction in learning (Sana et al., 2013). This reflects the need for thoughtful integration of technology that considers cognitive and developmental factors. The worry about potential harm from overexposure to technology reflected broader societal concerns about the impact of digital media on child development

(Livingstone & Franklin, 2018). On the other hand, the observation that learners and parents were not maximising the use of shared digital resources reflected challenges in digital literacy and the home-school connection in digital learning environments (Hohlfeld et al., 2017).

These drawbacks illuminated the complex difficulties of effectively and equitably integrating digital technology in education. They heightened the need for a balanced approach that optimises the benefits of technology while addressing potential negative impacts on learning, social interaction, and child development.

5.6.3 Implications for Future Implementation

In the study the teachers acknowledged that the learners are digitally oriented. They accepted the reality that digital integration in education would be inevitable but believed establishing a balance between traditional and modern methods is vital. Participant 1 stated the following about digital technology: “It is useful, I think because, obviously, the learners are exposed to all these apps and different things on social media. How we learn, and I suppose because of the times that we find ourselves in, we do need to change with time. We need to progress.”

Participant 6 said: “They are digital kids. They really are. So, moving into more digital-based stuff, but without losing the valuable basics of actually, you still need to write with a pen on paper at some stage. So, trying to find a balance.” Participant 2 provided additional support for this notion: “We are now living in a technological age where learners need to be focused in class, and you need to keep them interesting. You need to have them locked to your lesson at all times. The modern learner is very much interested in images—software images on a projector, lips that they like to watch, clips and short reels that are running while you are teaching.” Participant 5 emphasised, “To try and create the balance with them and for them and teach them differently to what we used to do. ... So that they are not just exposed to that visual thing. Getting the balance between the two.”

Participant 2 provides additional support of this notion: “We are now living in a technological age where learners need to be focused in class, and you need to keep them interesting. You need to have them locked to your lesson at all times. The modern learner is very much interested in images software images on a projector. Clips that they like to watch, clips and real short reels that are running while you are teaching.” Participant 5 emphasises, “To try and create the balance with them and for them and teach them differently to what we used to

do...So that they aren't just exposed to that visual thing...Getting the balance between the two."

Teachers acknowledged that digital technology could play a definite role in catering to the distinct learning styles and the appropriate pedagogy.

Participant 5 stated: "There are these some of our learners who are struggling, and they are at risk. But if they were using the iPads or even their phones, I feel they would be more willing to learn they would be more involved. But you put a laptop or an iPad or a phone in front of them...And they were more focused...The book and the pen did nothing for them."

In addition, Participant 4 expressed: "It does affect how I teach. I find it very, you know, so yeah, not I am not able to reach every single one of them. But I mean if you got a bit of visual and a bit of digital and a bit of people who like board and chalk kind of thing, you kind of get, if you assess your class, you kind of get a balance...And you can see the strengths and the weaknesses. You can see some children, if an exercise is digital or whatever, they can do exceptionally well. But yeah, I find that I kind of get the balance if I try and use a bit of all of them."

Teachers' use of digital technology varied widely, both in frequency and diversity. There were teachers who relied solely on the Google suite for communication, while others experimented with multiple platforms. One teacher (Participant 4) explained, "People were equipped and trained in Google. Some people were pretty tech savvy, so we went along the route of creating Google classrooms."

Others were more proactive in exploring digital tools: "During COVID-19 , I remember this, and they are still used now, it is Flipgrid. I did not know about Flipgrid before COVID-19, but kids can record a video or maybe they are doing an oral representation." These variations reflect unequal usage access. There were teachers who had the capacity and willingness to explore multiple tools. There were also those who remained confined to basic platforms due to limited familiarity or external constraints.

The teachers' reflections on the future application of digital technology in education highlighted key themes that align with research and debates in educational technology.

Digital nativity and changing learning styles developed as a key theme. The recognition of learners as digital children reflected the concept of digital natives (Prensky, 2001), although this notion has been critically analysed in research by Kirschner and De Bruyckere (2017). The teachers' observations suggested a need to adapt pedagogical approaches to match the perceived digital orientation of learners. This emphasis placed on finding a balance between digital and traditional teaching methods aligned with research on blended learning approaches (Graham, 2013). It reflects an understanding that technology should complement, rather than replace, traditional pedagogical techniques. The desire for balance reflected a pedagogical judgement (PK) about the importance of preserving non-digital skills like handwriting or certain forms of face-to-face interaction, even amidst technological advancement.

Engaging the modern learner accentuated the importance of focusing on using digital tools to maintain learner interest and engagement and reflected research on the motivational aspects of technology in education (Malone & Lepper, 1987). The study revealed that teachers adapted their practices to meet the perceived diverse needs of their learners and hence addressing these learning needs emerges as a key theme. The recognition that digital tools can support struggling learners and cater to distinct learning styles aligned with research on universal design for learning and differentiated instruction in digital environments (Rose & Meyer, 2002). This denoted a shift towards more personalised and inclusive teaching approaches.

Addressing diverse learning needs and the transition to the integration of digital technology in education inferred pedagogical transformation. The acknowledgement that digital technology affected teaching methods reflected the transformative potential of technology in education, as described in models like Puentedura's (2006) SAMR model (Substitution, Augmentation, Modification, Redefinition). This further suggested that teachers not only used technology as a substitute for traditional methods but were rethinking their pedagogical approaches.

The evolution of digital technology use during the post-ERT period reflected a complex landscape of opportunities and difficulties. Teachers embraced digital tools as additions to their pedagogical repertoire, recognising their potential to enhance engagement, support diversity, and create more flexible learning environments. However, they also expressed valid

concerns about the potential drawbacks of digital integration, including impacts on attendance, attention, and the social aspects of learning.

The key to successful future implementation appears to lie in finding a balanced approach that maximised the benefits of digital technology while preserving valuable aspects of traditional teaching methods, ongoing professional development, critical reflection on pedagogical practices, and a commitment to addressing issues of digital equity and literacy.

As education continues to evolve in the digital age, the insights provided by these teachers offer guidance for shaping policies and practices that effectively integrate technology in ways that enhance learning outcomes for all students. The future of education, as envisioned by these teachers, is one that embraces technological innovation while remaining grounded in sound pedagogical principles and a deep understanding of students' needs and learning styles. Implications for cross-theme synthesis are taken up in Chapter 6.

5.7 Theme 6: Teacher Development and Capacity-building

This theme delved into the development of new skills and competencies due to the shift to ERT. This included digital literacy, online pedagogy, and adaptability skills, and how these skills were being applied in current teaching practices. Reimers et al. (2022) reveal that teacher skills development and support existed to varying extents prior to COVID-19.

5.7.1 Teacher Development through Supportive Strategies

Teacher development efforts during the shift to ERT were varied, involving support from SMTs, SGBs, and colleagues. The data revealed strategies and initiatives aimed at equipping teachers with the necessary skills and resources to engage in ERT. Teachers' ability to effectively use digital tools varied based on their prior experience and the training they received. One teacher (Participant 2) noted that the school offered a once-off training, but it was not enough. In contrast, another teacher (Participant 7) who had prior experience with online tools found the change smoother: "We are fortunate that we have learned about online teaching and using the online tools or classroom came in handy because we used it to deliver the information. And we just learned about Google Meet, as well, so, we used that platform to connect." These differences highlighted disparities in skills access, as teachers entered ERT with more digital competencies than others. The findings suggested that ongoing, structured professional development is critical for improving digital literacy and confidence among teachers.

SMTs played a decisive role in organising professional development sessions focused on digital tools and online teaching methodologies while SGBs provided additional resources, such as funding for technology upgrades and access to online teaching platforms and the provision of the infrastructure required for the effective delivery of ERT.

Participant 1 confirmed that support was received from the SMT: “The SMT organised regular training sessions on using Zoom and Google Classroom, which were incredibly helpful.” Participant 4 stated, “Because people were not sure about what was going to be done and how things were going to pan out from there, management obviously had to step up and fulfil that role in deciding what the school would do from then on. The SGB obviously played a role in making sure that the infrastructure was of the best quality, that we could make sure we could maintain that contact with the kids.”

The SGB managed to secure funds to provide each teacher with a laptop and an internet stipend, as explained by Participant 6: “Those teachers who were financially challenged or had no access to the Internet, and the school provided financial assistance for that. We were given very basic training before lockdown. All teachers had school issued laptops.”

The SMT provided support to the teachers via regular meetings, as reported by Participant 4: “So from the SMT side, there was always a chat or catch up once a week to try and make sure that people were doing what they were expected to do and that the grades were on par with where they should be in terms of the academic plans that we had in place for them.” Participant 7 reiterated this: “There were meetings that were held on weekly basis with SMT, and ideas were shared among the staff and people who just have the input.” In addition, Participant 5 said: “The SMT held meetings with regard to how are we going to solve the problem with regard to COVID-19 and how we're going to reach out to learners in order for them to learn effectively and, hence, we came up with short, simple ideas.”

Teachers formed peer support groups to share best practices and troubleshoot common issues related to online teaching Participant 7 said: “As a grade, obviously, we always share ideas. People decide to share some of the resources that we did not even know about.”

Informal mentorship programs arose, where more tech-savvy teachers guided their colleagues in using new digital tools, as expressed by Participant 1, “The then head of academics, he obviously gave us a whole list of platforms and we got training,” along with Participant 4, “Some people were pretty tech savvy, so we went along the route of creating Google

Classrooms." Participant 6 stated "We also had our IT specialists available online at any time. We could contact them, and they would support us online."

In addition, WhatsApp groups were created where teachers could quickly share tips and resources with each other. Participant 5 explained: "There were lots of resources actually that the Curriculum Advisor was sending out during the COVID-19 period on the WhatsApp groups and via e-mail."

Participants in this study experienced opportunities for professional development and capacity-building to assist them with the application of ERT at their schools.

The data spotlighted the decisive role of SMTs and SGBs in facilitating teacher development during the move to ERT. SMTs were proactive in organising training sessions, ensuring that teachers had access to essential digital tools and were comfortable using them.

Teachers received support from their SMT, SGB, colleagues and the IT departments in the form of sharing of best practice, ideas, pedagogy, hardware (staff were allocated digital devices), software (access to digital platforms and tools) and the necessary infrastructure that assisted with overcoming some of the challenges (digital access and teacher training and support) they experienced. This aligned with the TPACK framework, emphasising the integration of technology, pedagogy, and content knowledge.

These capacity-building efforts brought to the fore how formal professional development targeted TPK—training teachers not just in technical expertise but also in how those tools interface with pedagogical strategies. The successful capacity-building exercises served as social persuasion (Bandura & Wessels, 1997), further elevating teacher self-efficacy.

Further support was offered in the form of the addressing of infrastructural challenges by School Governing Bodies. This support included the provision of laptops and internet access, which are critical components of digital divide theory. By securing these resources, School Governing Bodies helped bridge the gap between teachers with varying levels of access to technology.

Collegial support emerged as a vital component of teacher development. The collaboration and support experienced by teachers resulted in strengthened approaches to ERT and the

continued refinement and enhancement of pedagogies with the use of digital integration in education.

The data suggested that it was the combination of formal support (addressing structural and knowledge gaps related to the digital divide and TK) and informal collegial support (boosting self-efficacy and sharing practical TPACK strategies) that proved most effective in building teacher capacity during this period. The quotes from participants illustrated the practical impact of these initiatives and emphasised the importance of social capital in professional development in the educational landscape, in the form of professional networking and peer support.

Once the material and physical access dimension of digital divide theory was resolved, the dimensions of skills usage and access usage came to the fore. The presence of professional development and support in the implementation of ERT and the associated technologies linked to the dimensions of usage access and skills access of the digital divide theory (van Dijk, 2017). The skills access dimension (van Dijk, 2017) was evident in teachers' access to training and support to use the technologies that were introduced during ERT. This was evident in the collegial support, SMT and SGB support offered to the teachers. Skills access (van Dijk, 2017) was reflected in the training and support teachers experienced in their teaching practices. The presence of usage access (van Dijk, 2017) became evident as teachers engaged meaningfully with the technology made available to them to develop digital content and learning materials.

5.7.2 Teacher Opportunities for Innovation and Growth

Teachers' experiences during the change to ERT were varied, reflecting a range of challenges and accomplishments. The data provided insights into their initial reactions, ongoing struggles, and eventual adaptations to the new teaching environment.

Teachers felt overwhelmed by the sudden shift to online teaching, reporting a lack of preparation and training. Participant 5 stated "Sometimes it can become overwhelming."

These reactions were accompanied by anxiety and stress as teachers managed unfamiliar digital platforms and tools. Participant 5 reflects on the experience: "It was a bit of anxiety that first lesson and how they can be taught online... that was daunting for us." Participant 1 found that "It was a fearful period and an anxious period."

While there were teachers who embraced digital technology enthusiastically, there were those who hesitated due to initial frustration and lack of confidence. One teacher admitted, “At first, I was not keen on using all these digital tools. It felt overwhelming, and I was not sure if I could manage.” However, those who perceived digital tools as beneficial were more likely to persist. Another teacher shared, “Once I realised that online quizzes made assessment easier, I became more motivated to learn new tools.” These findings align with literature by van Dijk (2017) suggesting that perceived usefulness and ease of use influence motivational access to digital technologies.

Over time, teachers developed innovative strategies to engage students. Participant 5 shared one experience: “Our school did not have the proper lighting. We did not have the proper webcam.” In this case, a parent provided a webcam. Participant 6 shared another experience: “We put together PowerPoints with voice overs, so we actually were teaching the lesson via PowerPoint and then those were shared on Teams”. Participant 7 reiterates, “I still use the Flipgrid. I use Storyboard where learners can make their own comics however they want.”

Teachers reported increased confidence and proficiency with digital tools as they gained more experience. Participant 2 stated: “It was just the software and becoming more familiar with the use of this software and using it effectively. It helps with your confidence level.” Participant 1 reported: “What I didn't know then I'm more comfortable now like Google Classroom posting things, showing videos, using the Internet.”

The initial reactions of teachers to the shift to ERT highlighted the unpreparedness and anxiety that teachers faced. This aligned with the literature on crisis management in education, which places emphasises on the importance of preparedness and support systems in mitigating stress during abrupt changes.

The journey from being overwhelmed to feeling more confident represented more than just the acquisition of skill. It signified a transformation in teachers’ self-efficacy and professional identity regarding digital pedagogy. However, the persistent work-life balance challenges raised concerns about the long-term sustainability of this innovation without systemic changes to support teacher well-being.

The ongoing struggles experienced by teachers underscored the usefulness of digital divide theory (van Dijk, 2017), which posits that disparities in access to technology and digital resources can have a profound impact on educational outcomes. Technical issues and

balancing professional and personal responsibilities were prominent difficulties, reflecting the broader systemic issues that need to be addressed to support effective remote teaching.

Despite these challenges, teachers' eventual adaptations demonstrated resilience and innovation. Over time, teachers developed strategies to engage students more effectively and manage their workload, illustrating the application of the TPACK framework in practice where the emphasis is on the integration of technology, pedagogy, and content knowledge, which teachers gradually achieved through experience and experimentation.

The participant quotes reported in this theme provided a narrative of growth and adaptation. Initial chaos and stress gave way to increased confidence and proficiency as teachers became more familiar and comfortable with digital tools and online teaching methodologies. This transition underscored the dynamic nature of professional development, where experiential learning played an important role in building capacity and confidence.

Overall, the combined efforts of SMTs, SGBs, and collegial support facilitated a smoother transition to ERT, enabling teachers to acquire and apply new skills effectively. These initiatives not only addressed immediate challenges but also contributed to a longer-term shift in teaching practices, underscoring the versatility of the education community in response to the pandemic.

Teachers' experiences during the movement to ERT were marked by certain difficulties but also notable growth and adaptation. The initial unpreparedness and ongoing struggles were mitigated by the resilience and innovative approaches developed over time. Teachers in the study adopted the mindset of lifelong learners. They grasped the opportunities to gain skills and abilities which were manifested in both soft and hard skills. They displayed courage in the face of uncertainty and the adaptation to technologies and pedagogies that were new to them. They adopted the view that they needed to reach their learners and ensure the continuation of teaching and learning.

The need for dedicated support systems, adequate training, and resources to facilitate effective remote teaching surfaced. The data illustrated the critical role of experiential learning and adaptation in overcoming challenges and enhancing teaching practices in a crisis context. Implications for cross-theme synthesis are taken up in Chapter 6.

5.8 Theme 7: Envisioning the Future of Digital Education

This theme is based on teachers' experiences during ERT and perspectives on the future role of digital technology in education.

Within the South African education landscape future directions include project-based learning (DBE, 2018; DBE, 2021c), teacher professional development programs in digital technology (Western Cape Education Department, 2023) and the introduction of Coding and Robotics as a new subject (DBE, 2021d).

5.8.1 Ongoing Learning and Reflective Practice on the Future of Digital Education

The Grade 7 teachers acknowledged the importance of digital technology in the future of education. The integration of digital technology into the curriculum was regarded as beneficial to the education of the learners as it would encourage collaborative learning, independent learning opportunities and enhanced future employment opportunities. Effective use of TPACK supported successful digital integration.

Participant 1 emphasised the need for integration of digital technology into education and the benefits to learners and teachers, "It's useful because obviously the learners are exposed to all these apps and different things on social media. That is how they learn, and I suppose because of the times that we find ourselves in, we do need to change with time. We need to progress." Participant 5 reiterated this notion: "You need to move with the times. Children are more digitally and technologically inclined. You need to do these things, move with the times, so that you stay relevant as a teacher."

Another teacher (Participant 2) expressed excitement regarding the prospects and further benefits of digital technology integration in education: "Yes, there are so many programs out there, software programs. Everyone would love to have an interactive white board. I know it's in the foreseeable future. So, an interactive board would be a great help... I'm excited for these things to transpire."

The educational benefits acted as a source of motivation for teachers to integrate digital technology in their pedagogy. Participant 4 explained: "You want to do this with technology; it can allow for a lot of collaborative learning. I think you can get to do better learning and better understanding and different views and stuff. So, I think collaborative learning is

something that can enhance the communication abilities and you can make learning more exciting as well."

Teachers stated that learning could be more fun and interesting for the learners with the use of digital technology. Participant 5 said: "It will make teaching and learning so much more fun than what it is right now because they are technologically inclined. We should be using it, and they actually would possibly be more willing to learn the content if we are doing it in that way."

According to Participant 3, the use of digital technology in education encouraged a growth mindset, where the learners can learn through their mistakes: "But if you give the learners your online assessment or that they can repeat and do. They're learning by making mistakes. So, the learning is something by doing as opposed to learning by being taught which is actually a very effective [method]."

Participant 5 emphasised the notion of independence in the learners, "They don't need to always just wait on me; they can also be independent." Participant 7 further motivates the need for digital integration to prepare learners for the future, "[We need to] move towards digital technology education not only because a situation like COVID-19 can happen again, because that is the way the world is moving: more jobs are created with technology, so we must prepare our learners for the future workforce and better employment opportunity, the whole economy is moving towards digitalisation."

Participant 5 identified and acknowledged the pivotal role that digital technology can play in assisting and supporting learners in their educational needs, "Yes, we could. We could implement it [digital technology]. And because right now it is a chalk and talk. They'd been more involved, more willing to be involved. And there are some of our learners who are struggling, and they are at risk, but if they were using the iPads or even their phones, I feel they would be more willing to learn, they would be more involved."

Concerns regarding equity and equality in access and connectivity were expressed as a reality in the education system. Participant 4 stated: "You know, for this to be successful that everybody has access to [digital technology] and that is the bottom line, you cannot make it successful. It is that people do not have access to it, if people do not have the resources available, they do not have the tools, they do not have the necessary network available. And so, this is not going to work. It is still going to be unfair. There is going to be disparity across

the board in terms of that. Our focus as an Education Department and as teachers needs to be on those who do not have so they do not lag behind." These sentiments link to digital divide theory which relates to disparities in digital access and connectivity.

Participants indicated that the future of education lies in the integration of digital technology in education. They justified this based on their experience during ERT and their integration of digital technology into their teaching practice after ERT. Through digital integration, they could create learning experiences for their learners that were fun, relatable, effective and increase learner involvement and interest. Digital integration exposed learners to technology which empowered them to be creative in the use and manipulation of the technology and therefore could strengthen their opportunities in the workplace and their future employment.

Reflections by teachers (Participant 5, 3) regarding the use of digital tools during ERT suggested the acquisition of technological skills (TK) and the knowledge of how to integrate the content with technology (TCK) for pedagogical purposes (TPK). These positive experiences had the potential to boost teacher self-efficacy. Equity and equality in access and connectivity linked to the digital divide were concerns expressed by teachers.

5.8.2 Potential for Educational Transformation

Teachers emphasised the need to approach the integration of digital technology with caution and forethought. They expressed their concerns about the use of digital technology in education. Participant 1 expressed concern that digital technology could negatively impact learners: "I am scared that if we expose them to too much technology, we are going to lose the primary stuff. We cannot lose it...But yes, how much are we going to expose our young minds to digital technology? Is it going to be harmful? I do not know. … Their social skills have been affected. The interaction between their peers they have lost."

Teachers were concerned about the impact of digital technology on the learners. Participant 4 expressed the following, "So we also need to be careful that too much online could also lead to anxiety in certain learners who do not prefer that method of learning. And then again, a kid who has not got the access or whose system is not working one hundred percent is the one that is going to carry a whole lot of stress because he is not able to access what others are able to access."

The teachers expressed concerns around establishing a healthy balance between traditional and modern pedagogies. Participant 2 stated: “But just as paper has its advantages, those [digital technologies] have its disadvantages; if we can find that combination that we are using between the two [digital and paper]. Then then I think we are on the right thing. And so, you have to adapt to that, you know, and try and incorporate the visual aspect also with your interaction, all the learners getting the balance between the two.”

Participants expressed concern about the overuse of digital technology in education and the potential harm it could do learners such as its effect on the foundations of education like literacy (the physical reading and writing skills) and its effect on the learners' social skills.

There was a concern by the teachers about digital inequality. Schools that have the means to integrate technology into their teaching practice may be strides ahead of those schools that do not. Digital technology may also cause stress and anxiety for the learners who are not as familiar with digital technology as their peers and for those who do not have access to a device.

Concerns expressed by participants about the use of digital technology reflect a critical pedagogical perspective (PK within TPACK), questioning not necessarily the technology itself (TK), but how it can be integrated effectively without compromising fundamental educational goals or social development. The anxiety linked to inequitable access underscores how the divide creates emotional distress for students, which in turn impacts teachers’ experiences and, potentially, their self-efficacy in managing classroom needs.

Teachers’ thoughts of achieving a balance between the use of digital technology and the traditional methods of teaching suggested an integration of technology with traditional pedagogies in the everyday teaching and learning experience, enabling an education aimed at catering to the distinct learning styles and the diversity of learners’ strengths and weaknesses.

5.9 Conclusion

Chapter 5 presented the findings of the study in seven themes that describe teachers’ experiences of ERT. These themes encompassed teacher adaptation to ERT, the resilience they displayed, the successes and difficulties they encountered, and the impact ERT had on their well-being and work-life balance. There were opportunities for professional development as well as reflection on pedagogical practices and the future of digital

technology in education. These reports by the teachers provided rich and in-depth insights into their lived experiences of ERT. While this chapter documented what teachers reported, Chapter 6 explains why those patterns matter by interrelating themes through three theoretical lenses.

CHAPTER 6: SYNTHESIS OF FINDINGS

6.1 Introduction

The pandemic made existing inequalities in education more visible, showing the vulnerability of the South African education system—a system that was already under pressure.

Chapter 5 reported seven data-driven themes relating to Grade 7 teachers' experiences of ERT during the COVID-19 pandemic in South Africa. The theoretical framework, comprised of the self-efficacy, TPACK, and digital divide theories, provided an analytical perspective. Self-efficacy theory helped to explain teachers' varying levels of confidence and adaptability in their encounter with ERT. TPACK highlighted how teachers integrated technology with their PCK. Digital divide theory provided context for understanding the disparities in access and readiness for ERT among both teachers and learners. These themes, in effect, illuminate the interplay among the teachers' own confidence (self-efficacy), their capacity to integrate digital tools (TPACK), and the unequal material conditions that shaped their practice (digital divide). The complexity of these overlapping factors underscores the need for a multi-layered approach to understanding teachers' first-hand experiences.

This chapter presents a synthetic discussion of the findings detailed in Chapter 5 and integrates the empirical themes with the theoretical framework to explain how crisis, competence, and context shaped teachers' actions. This analysis aims to explore the interconnections between the themes, revealing broader insights into the nature of educational transformation during and after the COVID-19 pandemic. By examining how the themes intersect and inform each other, a more holistic understanding of the complex dynamics at play in the shift to ERT and its lasting impacts on education is developed.

6.2 Insights

This section delves into seven key insights revealed by the findings of the study.

6.2.1 Insight 1: The Adaptive Resilience of Teachers

One of the most prominent insights emerging from the synthesis of the findings is the remarkable adaptive resilience demonstrated by teachers throughout the ERT experience. This insight draws primarily from Themes 1, 2, 3, 4 and 7.

The sudden shift to ERT initially provoked anxiety and uncertainty among teachers (Theme 3) because of the introduction of online teaching at their schools (Participant 1). This fear was felt by the teachers who were inexperienced in the use of digital technology. However, this initial trepidation quickly gave way to a spirit of resilience and determination, as expressed in Theme 3. Teachers rapidly developed new skills and strategies to engage students in the online environment, which is indicated in Chapter 5.5.3 (Theme 4). Theme 4 traced the transition from initial threat appraisal to mastery-driven innovation providing an example of adaptive resilience.

This transition from the unknown to innovation aligns with self-efficacy theory. As teachers gained mastery experiences in the digital environment, their self-efficacy increased, leading to greater confidence in their ability to address the challenges of ERT. The process was not linear but rather iterative. As teachers continually adapted their approaches and their use of technology based on feedback and experience, they experienced gains and successes.

The findings disclosed that teacher resilience was not solely an individual characteristic but was bolstered by collective efforts and support networks. The formation of informal peer support groups, regular SMT meetings, and the sharing of resources through platforms like WhatsApp all contributed to a sense of collective efficacy. These efforts built up the teachers' emotional resilience and the ability to cope with their own fears. This is evident in Theme 2. Informal peer mentorship (Theme 7) functioned as social persuasion (Bandura & Wessels, 1997), reinforcing collective efficacy. Positive comments from the parent community also played a role in building teachers' pedagogical adaptation and skill acquisition.

This collective resilience aligns with Gu and Day's (2013) research on teacher resilience that emphasises the importance of relational and contextual factors. It suggests that future efforts to build teacher resilience should focus not just on individual skills but on fostering supportive professional communities and institutional structures.

The ERT experience prompted a significant evolution in teacher identity. Teachers found themselves taking on novel roles—with technical support, digital content creation, and online community building. This augmentation of professional identity is reflected in statements in which teachers recognised that ERT extended beyond the academics to personal, yet professional, connections with the learners (Theme 1). Theme 4 showed the teachers' role

expanding into socio-emotional mediation; this signals an emergent professional identity centred on digital community building.

The evolution of teachers' professional identity challenged traditional notions of teacher competence and identified the importance of adaptability and lifelong learning in the teaching profession. It also accentuates the need for teacher education and professional development programs to foster these adaptive capacities, preparing teachers to manage future disruptions and ongoing technological change in education.

6.2.2 Insight 2: From Isolated Tools to a Digital Ecosystem

The ERT experience prompted a fundamental shift in how teachers conceptualised digital technology in education. This insight draws primarily from themes 2, 4, 5, and 6. Prior to the pandemic, teachers viewed digital tools as supplementary to their teaching. However, the ERT period necessitated a reimagining of digital platforms as the primary learning environment. This shift is evident in participants' statements presented in (Theme 5).

The data suggests that teachers who successfully integrated technology, pedagogy, and content had a more positive experience with ERT. Participant 7 reflected on their first History lesson on Google Meet. They were aware of the importance of conducting a lesson of high quality and noted that the lesson went well. The teacher figured out how to combine the subject knowledge with interactive technology and good pacing, resulting in a successful online lesson. The teacher reflected on how the use of an effective digital platform encouraged learner engagement in the lesson, Flipgrid was used to create excitement about learning and to motivate the learners to do the project through innovation and experimentation. This aligned with the TPACK model's emphasis on deliberate integration, where teachers critically evaluated the interplay between content, pedagogical strategies, and digital tools to optimise learning experiences.

This evolution of teacher identity aligned with the TPACK framework, accentuating how teachers had to rapidly develop their TK and integrate it with their existing PK and CK. The process was not just about learning to use new tools, but about rethinking the creation of engaging, effective learning experiences in the digital environment.

The findings also suggest that teachers internalised aspects of blended learning approaches and continued to use them when they returned to in-person teaching. Participant 7 indicated

that they continued to use the skills and knowledge they learned during ERT in their teaching practices after the COVID-19 pandemic. The teachers continued to use digital platforms for content delivery, assessment, and communication, indicating that their experience with ERT had a lasting impact on their pedagogical practices.

The findings suggest that teachers' abilities to integrate technology into their PCK was closely tied to their self-efficacy beliefs and shaped by their position within the divide. Teachers who had prior exposure to digital tools and received adequate training displayed higher confidence in implementing blended learning strategies. This is evident in statements in which teachers expressed that they evolved from not knowing much about ERT to feelings of confidence and enjoyment of the experience (examples: Participant 1, 5, 7). The teachers were able to adapt to the modern technology by making use of platforms like Google Meet, Google Classroom and Zoom. This illustrates the link between mastery experiences in self-efficacy and the development of TPACK. Digital inequalities influenced which teachers had access to such mastery experiences—those in less resourced schools had fewer opportunities to experiment with digital pedagogies due to infrastructural constraints, widening the gap in technological self-efficacy.

This shift towards blended learning approaches represents a significant evolution in pedagogical thinking. It suggests that the future of education may not be a binary choice between traditional and digital methods, but rather a thoughtful integration of both, leveraging the strengths of each approach.

The digital tools adopted during ERT have not only opened new possibilities for blended learning approaches but also for personalised and differentiated instruction. Teachers reported being able to cater more effectively to the distinct learning styles and needs of their learners (Theme 4).

The increased capacity for personalisation aligns with contemporary educational theories that emphasise the importance of tailoring instruction to individual learner needs . It suggests that digital technologies, when thoughtfully integrated with the effective use of TPACK, can support more inclusive and effective educational practices (Means et al. 2014).

6.2.2.1 Challenges and Concerns

Despite the potential benefits, teachers also expressed concerns about over-reliance on digital technologies. Participant 1 expressed concerns about learners being exposed to too much technology and the possible loss of the primary skills and knowledge. This reflects ongoing debates about the appropriate balance between digital and traditional methods.

These concerns underscore the need for critical reflection on the role of technology in education. They suggest that effective digital pedagogy is not just about adopting new tools, but about thoughtfully considering how these tools can support broader educational goals without compromising essential skills and social-emotional development.

6.2.3 Insight 3: The Impact of Unequal Connectivity on Teacher Practice

The ERT experience has both highlighted and exacerbated existing divides, impacting teacher practice during this period. This insight draws primarily from themes 2, 3, and 7.

6.2.3.1 Beyond Access: Redefining the Digital Divide

The findings reveal significant variations in how schools and educational institutions responded to these digital inequalities.

There were schools that were proactive in addressing access issues. The SGB stepped up and ensured that the best quality infrastructure was in place for the school community (Participant 4). Others struggled to provide adequate support, leading to concerns about widening educational inequalities (Participant 5).

These varying responses underscore the critical role of institutional leadership and resources in addressing technological gaps. They also point to the need for systemic, rather than piecemeal, approaches to digital equity in education. Participant 4 represented the view that the Department of Basic Education should address the digital divide by focusing on creating equitable access to digital technology.

The study demonstrated that the unequal access to digital resources directly impacted both teachers' self-efficacy and their ability to develop TPACK. To mitigate the loss of learning for those who did not have digital access, cycle style notes were created (Participant 2 and 5). This placed limitations on the teachers' use of interactive tools. This limitation reduced opportunities for mastery experiences, thereby restricting self-efficacy growth. Conversely,

teachers in schools with better access to devices and internet connectivity were able to experiment with digital pedagogies, leading to stronger TPACK development. This underscores how categorical inequalities in digital access shape not only access to technology but also teachers' confidence in using it effectively.

While digital inequalities posed definite difficulties, teachers with high self-efficacy were more likely to overcome these barriers by finding alternative solutions. Teachers used Zoom (Participant 2) and Google Meet (Participant 7) to interact with learners remotely. In the case where learners had limited access to the internet, Class Dojo was used (Participant 2) and those with no internet access could collect hard copy work packs to use at home (Participant 2 and 5). This demonstrates that teachers with higher self-efficacy actively sought out solutions, even when online learning was not feasible. Importantly, these teachers also displayed a more adaptive approach to TPACK, shifting from high-tech to low-tech solutions while still maintaining effective pedagogy. The findings reinforced that self-efficacy is not just a personal belief but a key determinant in whether teachers can effectively integrate digital and PK despite structural limitations.

The ERT experience revealed that the inequalities in digital access are far more complex than simply a matter of access to devices or internet connectivity. While these remain critical issues for the success of digital technology in education (Participant 4), the findings also point to other dimensions of the divide. These include digital literacy, home learning environments, parental support, and teacher preparedness.

The digital divide impacted digital literacy where the teachers and students varied widely in their ability to effectively use digital tools for educational purposes. Besides the student's digital literacy levels, the quality of the learners' home learning spaces had an impact on their ability to engage effectively in ERT. Conjointly, the importance of the role of parental support for the learners in ERT emerged. The level of parental understanding and support for digital learning varied and influenced learner engagement in ERT. Another critical layer of inequality presented itself in the levels of teacher preparedness for the implementation of ERT. Teachers' varying levels of technological and pedagogical readiness for online teaching created another layer of inequality. This complex understanding of the divide aligns with van Dijk's (2017) more refined conceptualisations, which requires extending the digital divide considerations beyond that of the levels of digital access and usage.

Despite institutional constraints, teachers demonstrated significant agency in attempting to bridge divides. This was evident in their efforts to create inclusive learning experiences, provide additional support to struggling students, and adapt their teaching methods accordingly. A teacher conducted weekly synchronous lessons with classes which were divided into two groups. This was followed by contact sessions with smaller groups and individual meetings for additional support for those who needed the extra help (Participant 6). Other teachers conducted synchronous lessons based on a grade schedule to ensure regular contact with the learners (Participant 3 and 5).

Learners at a well-resourced urban school had access to devices and data, enabling online learning to take place (Participant 4, 6, and 7). The school community assisted with the provision of data and devices to ensure digital access (Participant 7). Learners from another school, who did not have access to the internet, collected notes from the school before the school closures were implemented (Participant 3 and 5).

These findings confirm that categorical inequalities (such as income level, geographic location, and school resources) directly influenced teachers' ability to implement ERT. While most schools in the study provided laptops or data support, one school lacked the financial means to do so, further exacerbating educational inequities.

The roles that teacher as played as support and solution-finding agents aligned with research on teacher resilience and adaptability (Gu & Day, 2013), identifying the crucial role of teachers in mitigating educational inequalities, even in challenging circumstances.

6.2.3.2 Digital Citizenship: An Emerging Necessity

The ERT experience exposed a critical gap in digital citizenship education. Teachers reported difficulties with students' online behaviour and etiquette, suggesting a need for more comprehensive education in this area (Participant 5). This finding aligns with the recognition of the importance of digital citizenship education in preparing students for effective participation in increasingly digital societies, as highlighted by Ribble (2015).

6.2.4. Insight 4: New Professional Identities in Digital Schooling

The ERT experience has prompted a prominent shift in how teachers perceive their roles and professional identities. This insight draws primarily from Themes 3, 4, 6, and 7.

The ERT experience expanded the boundaries of the teaching role. Teachers found themselves taking on multiple new responsibilities, including as technology facilitators, digital content creators, virtual community builders, and mental health supporters.

As technology facilitators, teachers provided IT support to students and parents. Teachers had to rapidly develop skills to create engaging digital content (Participant.1, 2, 3, 4, 5, 6, 7). Teachers played a crucial role as virtual community builders by maintaining student engagement and a sense of classroom community in the virtual environment. This role was complemented by their role in supporting the mental health of their students. The emotional toll of the pandemic on students meant that teachers often found themselves providing increased emotional support to their students (Participant 1, 4, 5, 6). The broadening of teachers' roles aligns with research by Beijaard et al. (2004) on teacher identity in times of educational change, highlighting how external pressures can lead to significant shifts in professional self-concept.

The speedy move to ERT emphasised the importance of teachers' identity as lifelong learners. Teachers described a process of continuous learning and adaptation, as evidenced in Theme 6. The emphasis on continuous learning aligns with the concept of adaptive expertise in teaching (Bransford et al., 2005), which posits that effective teachers must be able to continuously adapt their practice in response to new challenges and contexts.

ERT blurred the boundaries between teachers' professional and personal lives. Teachers reported challenges in managing this balance, as reflected in Theme 3. The blurring of boundaries spotlights the need for innovative approaches to work-life balance in the context of digital teaching, aligning with research by Skaalvik and Skaalvik (2011) on teacher wellbeing and the prevention of teacher burnout.

The ERT experience highlighted the importance of collaborative professionalism. Teachers frequently mentioned the value of peer support and collaborative problem-solving (Participant 7). This emphasis on collaboration aligns with research on Professional Learning Communities in education (Stoll et al., 2006), suggesting that peer support and collaborative learning are important for navigating complex educational changes.

The experiences relating to ERT prompted teachers to engage more critically with digital pedagogy. Rather than simply adopting new tools, teachers began to question how these tools could best support their pedagogical goals to ensure a balanced use of digital technology that

did not compromise foundational knowledge and skills (Participant 1, 2, 5). This critical engagement with digital pedagogy aligns with the TPACK framework (Mishra & Koehler, 2009), illuminating the complex interplay between TK, PK, and CK in effective teaching.

6.2.5 Insight 5: Hybrid Pedagogy in Post-ERT Classrooms

In the post-ERT classrooms teachers have adapted their pedagogical practices to include new, hybrid forms of teaching and learning. This insight draws primarily from Themes 4, 5, and 6. and explores how teachers are navigating the integration of digital technologies with traditional pedagogical approaches to implement hybrid pedagogies.

This blended approach aligns with research by Graham (2013) on hybrid or blended learning models. The benefits of both forms of instruction are combined to maximising and enhance the strengths of both approaches. The balanced approach adopted by teachers testifies that teachers are developing more refined interpretations of the use of digital resources in education.

Data analysis revealed that teachers' decisions about blending digital and traditional methods were shaped by an interaction between their self-efficacy, TPACK knowledge, and digital access. Those who had high self-efficacy and strong TPACK knowledge were more willing to explore innovative methods, while those constrained by the divide defaulted to traditional methods due to limited access, knowledge, and confidence (Participant 7). This points out that pedagogical choices were not purely based on teachers' preferences but were constrained by external digital barriers and internal self-efficacy beliefs. Thus, future digital education initiatives should address both infrastructural challenges and teachers' psychological readiness to integrate technology effectively.

Teachers reported using digital tools like Flipgrid to create more engaging and interactive learning experiences that created a sense of excitement for the learners (Participant 7). This use of technology to enhance engagement aligns with research by Malone and Lepper (1987) on the motivational aspects of educational technology, suggesting that when used creatively, digital tools can be powerful motivators.

Digital tools allowed teachers to better personalise and differentiate instruction to the advantage of the learners (Participant 4). This increased capacity for personalisation aligns

with Tomlinson's (2014) research on differentiated instruction, suggesting that technology can be a powerful tool for meeting the needs of all learners.

The ERT experience led to increased use of asynchronous learning methods, allowing for more flexible access to educational content. PowerPoint and Google Slides proved to be effective digital tools (Participant 6). This shift towards more flexible, asynchronous learning aligns with research on self-regulated learning (Zimmerman, 2002), suggesting that these approaches can support the development of important metacognitive skills.

While embracing digital innovation, teachers expressed concerns about preserving essential skills and experiences (Participant 1 and 3). This concern aligns with ongoing debates in educational research about the potential impacts of increased technology use on cognitive and social-emotional development (Livingstone & Franklin, 2018).

6.2.6 Insight 6: The Imperative of Digital Citizenship Education

There emerged a recognition of the need for digital citizenship education. This insight draws primarily from Themes 1, 3 and 5. It explores the growing recognition of the need for comprehensive digital citizenship education as a major component of modern schooling.

The ERT experience points to a definite gap in students' understanding of appropriate online behaviour and digital etiquette. Participants reported that the learners were not prepared for online learning and had not been taught the expected etiquette (Participant 5). This observation aligns with research on digital citizenship education (Ribble, 2015), which emphasise the importance of teaching students how to behave responsibly and ethically in digital environments.

Furthermore, teachers' reflections disclosed that effective participation in online learning environments requires more than just technical skills. It involves understanding the social norms and expectations of digital spaces. This is reflected in comments about students' difficulty engaging appropriately in online classes and discussions. This finding aligns with sociocultural approaches to digital literacy (Lankshear & Knobel, 2008), which emphasise the importance of understanding digital practices within their social and cultural contexts.

Concerns about student safety and well-being in digital environments materialised as a significant theme. Teachers expressed worry about students' exposure to online content and the potential for digital addiction. This concern reflects growing research on the impacts of

digital media on child development and well-being (Livingstone & Franklin, 2018), bringing to the fore the need for education that helps students manage these difficulties.

Likewise, the increased online presence of learners during ERT underscored the importance of teaching about digital identity and reputation management. Teachers noted that students often seemed unaware of the long-term implications of their online actions. This observation coincides with research on digital identity formation in adolescents (Davis & Weinstein, 2017), emphasising the need for education that helps learners understand and manage their digital footprints.

In addition, teachers' reflections exposed the importance of developing learners' critical thinking skills in relation to digital information. These critical thinking skills include the ability to evaluate online sources, understand bias, and manage misinformation. Research on critical digital literacy by Pangrazio (2016), which emphasises the importance of developing student ability to critically engage with digital media and information, aligns with this finding.

6.2.7 Insight 7: Towards a Resilient and Equitable Digital Education Ecosystem

This final synthetic theme points towards a vision for a more resilient and equitable digital education ecosystem. It draws from all previous themes and insights, presenting a holistic view of the transformations and challenges in education revealed by the ERT experience. It emphasises the interconnected nature of the elements discussed.

The ERT experience demonstrated how deeply interconnected educational challenges are. Issues of digital access, teacher preparedness, student engagement, and pedagogical effectiveness were not isolated problems but part of a complex, interrelated system. This is reflected in participants' comments that raised multiple issues simultaneously. Some express the view that for ERT to be successful there had to be equitable access for all (Participant 4). This interconnectedness aligns with systems thinking approaches in education (Senge, 2012), which emphasise the need to address educational challenges holistically, rather than in isolation.

The ERT context also spotlighted the importance of building adaptive capacity at all levels of the education system—from individual teachers and students to institutions and policy frameworks. This adaptive capacity was significant in enabling the speedy move to online

learning and continues to be important as education systems navigate ongoing changes. This is reflected in comments about continuous learning and adaptation which refer to gains in teachers' knowledge and skills during the ERT experience (Theme 6). This emphasis on adaptive capacity aligns with Folke et al.'s (2010) research on educational resilience and change management in complex systems.

These experiences brought issues of educational equity into sharp focus, drawing attention to how existing inequalities can be exacerbated in times of crisis. This underscores the need for equity to be a central guiding principle in the development of digital education ecosystems. This concern for equity is reflected in comments expressing the opinion that the focus of the Department of Basic Education should be to address the divide and ensure digital equity (Participant 4). This focus on equity aligns with research on the role of education in addressing broader societal inequalities (Darling-Hammond, 2010).

Furthermore, the findings reveal the ongoing tension between embracing digital innovation and preserving valuable traditional practices. This suggests that resilient education systems need to find ways to balance these competing demands, creating hybrid approaches that leverage the strengths of both. This was displayed in participants' comments that stressed the importance of creating a balance between traditional teaching strategies and the use of digital tools (Participant 1, 3, 5). This need for balance resonates with research on educational innovation that emphasises the importance of building on existing strengths while embracing new possibilities (Fullan, 2007).

The encounters with ERT drew attention to the importance of collaboration at all levels—between teachers, between schools and families, and between education systems and broader communities. This suggests the need for an ecosystem approach to education that recognises and uses these interconnections. This collaborative approach was highlighted in participants' comments about sharing resources and ideas among teachers and with the broader school community. This ecosystem perspective aligns with research by Kania and Kramer (2011) on collective impact approaches in education.

6.3 Implications for Educational Policy and Practice

6.3.1 Teacher Adaptive Resilience

Adaptive resilience, in the context of the emotional coping, pedagogical adaptation and skill acquisition demonstrated by teachers during the ERT period, has implications for educational policy and practice.

The adaptive resilience relating to emotional coping, pedagogical adaptation and skill acquisition demonstrated by teachers during the ERT period has implications for educational policy and practice.

Teachers benefitted from support structures implying that educational institutions should prioritise the creation and maintenance of support structures that nurture collective resilience, such as peer mentoring programs and collaborative planning time. Professional development programs that focus on building adaptive capacities, digital skills, and the evolving teacher identity, rather than just specific technological tools are key in nurturing adaptive capacity. In addition, developing systems to recognise and reward teacher innovation and adaptability would encourage ongoing professional growth and experimentation.

By understanding and advancing the adaptive capacity of its teachers, educational systems can better prepare for future disruptions and ongoing technological change, ensuring that teachers are equipped to provide high-quality education to all their learners.

6.3.2 The Evolving Ecosystem of Digital Pedagogy

The successful navigation of the dynamic digital landscape implies the existence of teacher education encompassing updated pre-service and in-service teacher education programs that reflect the realities of blended learning environments. The focus would be on technical skills and pedagogical approaches for effective digital integration including blended learning strategies to cater to the holistic needs of learners. Teachers require ongoing support and training to effectively integrate digital tools in ways that enhance learning. Teacher professional development requires the nurturing of a collaborative and optimistic school environment where they would be at ease in a cooperative context where the exchange of ideas and discussion relating to the use of technology are encouraged.

The evolving ecosystem of digital pedagogy implies that the world of digital teaching and learning is fluid, ever-changing and interconnected.

The effects of constantly changing digital world imply that curricula should be redesigned to enhance the strengths of both digital and traditional learning methods, with a focus on how technology can support personalisation and differentiation. The transition to blended and digital environments that reflect the evolving ecosystem of digital pedagogy infers a focus on the development of new, effective assessment strategies that support learning outcomes in these learning environments.

Improvements in connectivity and access can support beliefs in teachers' digital abilities. The focus on digital equity for the future is highlighted. Addressing the issues of access and digital literacy is crucial to ensure equitable digital learning opportunities. Schools should invest in digital infrastructure to support the use of technology in teaching and learning. The development of digital infrastructure must be complemented by a focus on the well-being of teachers and learners. This indicates that policies and practices need to be developed regarding screen time, digital addiction, and the social-emotional impacts of the increased use of digital technologies in education.

By addressing these implications, educational systems can work effectively towards harnessing the potential of digital technologies while mitigating potential drawbacks, creating more flexible, inclusive, and effective learning environments for all students.

6.3.3 Inequalities in Digital Access

The implications for addressing the multifaceted nature of the inequalities in digital access is multi-faceted.

The existing inequality in digital access indicates a need for comprehensive digital equity policies to address not just access to technology, but also digital literacy, home learning environments, and parental support.

Teachers displayed varying levels of technological readiness. This implies that differentiated professional development should be tailored to address these varying levels of technological abilities and skills.

Concerns around digital citizenship infer that the curriculum should be designed to develop and empower teachers and learners through comprehensive digital citizenship education programmes.

Mitigating the inequalities in digital access in schools implies community engagement. Community engagement involves the need for schools to work to effectively engage parents and communities in supporting digital learning, potentially through adult education programs or community technology initiatives.

Effectively addressing the digital inequities implies the use of adaptive technologies. Adaptive technologies relate to the investment in technologies that can adapt to varying levels of digital literacy and connectivity, ensuring more inclusive digital learning experiences.

The successful mitigation of these digital inequalities indicates the need for the implementation of ongoing assessment of the technological gaps within educational communities to inform targeted interventions.

By effectively addressing these implications, educational systems can work towards more equitable digital integration, ensuring that the benefits of educational technologies are accessible to all students, regardless of their socioeconomic background or initial level of digital literacy. This sophisticated approach to addressing the digital inequalities is important for ensuring that the move towards increased digital integration in education does not exacerbate existing inequalities but rather serves as a tool for promoting greater educational equity.

6.3.4 Teacher Identity and Professionalism

The study revealed that the implementation of ERT led to the redefinition of teacher identity and professionalism.

The shift in teacher identity and professionalism implies the need of teacher education in this regard. To effectively assist and support teachers in this shift in teacher identity and professionalism during this digital age of education implies updated pre-service and in-service teacher education programs that reflect the expanded role of teachers in digital learning environments. The findings of the study forecasts that professional standards for teachers require revision to include competencies in digital pedagogy, online community building, and adaptive expertise.

The evolution of the role of the teacher in the digital age of education implies the need for the development and implementation of work-life balance policies by schools and education systems that support teacher well-being and work-life balance in the context of increased digital integration.

A further implication due to the metamorphosis of teacher identity and professionalism refers to the urgent need for educational institutions to prioritise the creation of collaborative structures that support peer learning and collective problem-solving among teachers.

In addition, the findings of the study imply the provision of time for reflection for teachers to engage in reflective practice about their use of digital technologies and their evolving professional identities.

The study uncovered the importance of self-efficacy in the implementation of ERT. This implies that there would be value in the adoption of ways to recognise and reward teachers who demonstrate adaptive expertise and innovation in digital pedagogy.

By addressing these implications, educational systems can successfully support teachers in developing professional identities that are well-suited to the challenges and opportunities of digital-age education. This, in turn, can lead to more effective, resilient, and innovative teaching practices that better serve the needs of students in a digital world.

6.3.5 Emergence of Hybrid Pedagogies

The benefits of hybrid pedagogies have emerged from the study. The findings reveal implications associated with this.

The study reveals the need for the redesign of curricula that explicitly incorporates both digital and traditional learning methods which contain clear guidance on how to blend these approaches constructively. Accompanying curricula design, is the need to develop assessment practices which can effectively measure learning outcomes in blended learning environments and its associated hybrid pedagogy. Teacher training that focuses on developing skills in hybrid pedagogy is an essential part of professional development offered to teachers; it should include how to effectively blend online and offline learning experiences, thus empowering teachers in the effective delivery of hybrid pedagogy.

School spaces should be redesigned to better support hybrid learning approaches, including flexible spaces that can accommodate both individual digital work and collaborative face-to-face activities. Schools should equip themselves to implement hybrid pedagogies. This infers that schools and education systems should invest in high-quality digital resources that complement traditional teaching materials and ensure the enhanced application of hybrid pedagogy.

The use of hybrid pedagogies implies an increased use of digital technologies and screen time. Policies and guidelines should be developed to ensure a healthy balance of screen-based and non-screen activities in blended learning environments. Additionally, the emergence of hybrid pedagogies implies that learners would need to navigate between the blended learning modalities and therefore emphasis should be placed on developing students' metacognitive skills to help them with the navigation thereof.

The emergence of the hybrid pedagogies represents a significant transformation in teaching practice, moving beyond the traditional versus digital discourse, to create new, integrated approaches to teaching and learning. As education continues to transform in the digital age, these hybrid approaches are likely to play a decisive role in shaping effective and engaging learning experiences for learners.

By addressing these implications, educational systems can develop hybrid pedagogies that maximise the strengths of both digital and traditional approaches. This balanced approach has the potential to create more engaging, flexible, and effective learning experiences while preserving essential skills and experiences.

6.3.6 Digital Citizenship Education

The need for digital citizenship has emerged from the study which has implications for educational policy and planning.

The findings of the study reveal that digital citizenship education should be integrated into the curriculum rather than treated as a separate subject. This integration should start from the early years of schooling. Accompanying curriculum integration should be the development of comprehensive school policies on digital use that incorporate principles of digital citizenship, including guidelines for online behaviour and digital safety.

Opportunities for pre-service and in-service teacher training that includes components on digital citizenship education should occur to ensure that all teachers are equipped to address concerns surrounding digital citizenship. Programs should be offered to educate parents about digital citizenship, enabling them to support their children's safe and responsible use of digital technologies. Teacher and parent training should be complemented by the development of programs that empower students to practise positive digital citizenship within their school communities. Opportunities should be created for student leadership in the realm of digital citizenship.

The establishment of partnerships between schools and technology companies and digital safety organisations to access up-to-date resources and expertise should create increased digital citizenship awareness. Assessment methods and strategies assessing the students' digital citizenship competencies should be developed to ensure that these skills are valued alongside traditional academic outcomes. Additionally, the ethical use of digital technology emerged from the study. As digital technologies become more prevalent, the inclusion of education on the ethical use of these technologies should be included in the digital citizenship curriculum.

Digital citizenship education should be considered as a core component of modern education, essential for students' future success and well-being because the ability to engage in the digital environment safely, responsibly and critically is as fundamental as traditional literacy and numeracy skills.

By addressing these implications, educational systems can work towards developing students who are not just technically proficient, but also responsible, ethical, and critical users of digital technologies in digital societies and workplaces.

6.3.7 Building Resilient Educational Policy and Planning

The need to build resilient educational policy and planning has emerged from the study.

The findings imply the development of flexible, adaptive policies that can respond quickly to changing circumstances while maintaining a focus on core educational goals. Education systems should regularly conduct equity audits to ensure that educational innovations and digital integration efforts are not exacerbating existing inequalities.

To build a resilient and equitable education ecosystem, education systems and schools should develop and refine hybrid learning models that successfully blend digital and traditional approaches. These hybrid models should include the creation of structures that can facilitate collaboration within and between schools, and their broader communities. These collaborations should be supported by the investment in robust, flexible, digital infrastructure suited to deliver a range of educational approaches that can adapt to future needs.

The creation of continuous learning opportunities should be encouraged to foster a culture of continuous learning and adaptation at all levels of the education system. Enhanced assessment approaches that capture a holistic view of student learning and development in both digital and traditional contexts should be established to provide valuable insights into student progression.

6.4 Conclusion

By addressing these implications, education systems can work towards building a more resilient and equitable digital education ecosystem. This vision of a resilient and equitable digital education ecosystem represents an evolution of the future of education systems. It recognises that in a complex and rapidly changing world, education systems need to be dynamic, resilient, adaptive, and deeply committed to equity to effectively prepare all students for future success.

Next, Chapter 7 presents a summary of the key findings, recommendations and suggestions for future research.

CHAPTER 7: CONCLUSIONS AND RECOMMENDATIONS

7.1 Introduction

This thesis has explored the lived experiences of Grade 7 teachers in South Africa as they navigated the shift to ERT during the COVID-19 pandemic. The study aspired to gain insights into the challenges, successes, and lasting impacts of this sudden shift to digital education.

The purpose of the chapter is to provide relevant recommendations and conclusions based on the results of the study and its associated implications. This chapter focuses on the key findings and the implications of these findings. Furthermore, recommendations are provided for education departments, institutions, researchers, and teachers. The limitations of the study are discussed, followed by suggestions for future research. The chapter ends with concluding remarks.

7.2 Summary of Key Findings

The study uncovers significant findings about the experiences of Grade 7 teachers during the implementation of ERT.

The adaptive resilience of teachers became evident as they demonstrated remarkable adaptability in the face of sudden changes. Despite the initial anxieties and difficulties, teachers persisted in the implementation of ERT because they were supported by collegial networks and institutional leadership structures. Teachers rapidly developed new digital skills and innovative pedagogical approaches with the belief that these would be beneficial to themselves and their learners.

Teachers' experiences reflected the practical application of the TPACK conceptual framework. They had to expeditiously integrate their TK with their existing PK and CK, often learning through trial and error. The reimagining of the use of digital platforms within the primary learning environment came to the fore, leading to an evolving ecosystem of digital pedagogy. This was reinforced by positive experiences with ERT.

Digital divide complexities relating to the change to ERT, highlighted and exacerbated existing technological gaps. The study unveiled that these divides extend beyond mere access to technology, encompassing issues of digital literacy, home learning environments, and

broader societal inequalities. The impacts of the digital divide on teaching and learning were influencing factors in the adoption of digital technologies and the effective implementation of ERT.

Teacher experienced evolving identities as they took on new roles as technology facilitators, digital content creators, and virtual community builders. This expansion of roles led to challenges and opportunities for professional growth.

The ERT experience catalysed the development of hybrid pedagogical approaches. Teachers began to integrate digital tools with traditional teaching methods, creating new blended learning experiences that leveraged the strengths of both approaches.

The study brought to the fore a critical need for comprehensive digital citizenship education. Teachers observed gaps in students' understanding of online etiquette, digital safety, and critical digital literacy skills.

The shift to ERT had profound emotional and psychological impacts on teachers affecting their self-efficacy. While teachers experienced stress, anxiety and uncertainty, particularly in the early stages, there were also reports of increased confidence and job satisfaction and resilience as teachers mastered new skills.

The level and quality of institutional support provided to teachers varied. Schools with robust digital infrastructure and proactive leadership facilitated a smoother change to ERT.

Teachers advocated for digital equality in schools, the implementation of an integrated digital citizenship curriculum, and the development of the necessary digital skills and knowledge to prepare learners for their future in a digital world.

These findings provide a nuanced understanding of the complex realities faced by teachers during this unparalleled period of educational disruption and adaptation. They draw attention to both the challenges and opportunities presented by the sudden shift to digital teaching modalities, offering insights for future educational planning and policymaking.

7.3 Implications of the Study

The findings of this study have important implications for educational practice, policy, and research:

Addressing the digital inequalities requires a multifaceted approach by policymakers and educational leaders in which consideration is given to cost-effective, easily accessible internet services and devices, digital literacy skills, and personal and societal inequalities that impact educational outcomes to ensure that all students, regardless of their socioeconomic background, can fully participate in and benefit from digital learning opportunities.

Variations in institutional support, highlight the importance of a robust and flexible digital infrastructure in schools that accommodates teaching and learning needs. Education systems should prioritise the development of reliable, accessible digital platforms, provide ongoing technical support for both teachers and learners and bring forth systemic transformation, the empowerment of its stakeholders, and a resolution to the digital divide.

The emergence of hybrid pedagogies suggests a need for a curriculum redesign that intentionally integrates and establishes a balance between digital and traditional teaching methods and leverages the strengths of both approaches to create more engaging, flexible, and effective teaching and learning experiences.

The findings on digital citizenship education reveal the need to integrate comprehensive digital citizenship education into school curricula that addresses the appropriate use of digital technology, the development of technical skills, and the promotion of online etiquette, digital safety, digital literacy, and ethical considerations in digital spaces.

The need for ongoing, adaptive, capacity-building, all-encompassing professional opportunities (which inspire teachers to be the agents of change within their education communities), focusing on technical skills, digital pedagogy, online community building, and strategies for maintaining work-life balance in digital teaching environments was highlighted.

The emotional and psychological impacts of ERT on teachers emphasise the importance of providing adequate support for teacher well-being that encompasses mental health resources, strategies for managing work-life balance, and fostering supportive professional communities.

The need for flexible and adaptive educational policies that can respond quickly to changing circumstances while maintaining a focus on core educational goals and equity was highlighted. The existence of an institution-based and system-based recovery plan is essential to secure the level of preparedness and adaptation to similar crises situations.

These implications suggest that the experiences of teachers during ERT offer lessons not just for crisis response, but for the ongoing evolution of education in an increasingly digital world. They point towards a future of education that is more flexible, inclusive, equitable, and responsive to the diverse needs of both teachers and learners.

7.4 Recommendations

Based on the findings, the following recommendations are made:

Recommendations for global education departments, the DBE, educational institutions, and researchers

Flexible and adaptive education policies are needed to enable the education sector to respond quickly to changing circumstances while maintaining a focus on equity and core educational goals.

Recommendations for the DBE

The investment in robust digital infrastructure in schools, ensuring equitable access to technology and internet connectivity is an essential requirement.

Comprehensive teacher training programs that focus on digital pedagogy, technology integration, and online hybrid teaching strategies need to be developed and implemented.

Comprehensive digital citizenship education as a core component of the curriculum from the early grades needs to be implemented.

Regular assessments of the digital inequalities in schools and communities need to be conducted, using the findings to inform targeted interventions.

Recommendations for educational institutions

Collaborative networks among teachers that facilitate the sharing of best practices and mutual support in digital teaching needs to be nurtured.

The redefinition of teacher identity and professionalism needs to be developed.

Comprehensive teacher professional development opportunities that focus on digital pedagogy, technology integration, and online hybrid teaching strategies need to be implemented.

Recommendations for researchers

Research partnerships between schools, universities, and education technology providers need to be encouraged to continually improve digital learning experiences.

Recommendations for teachers

Participate in teacher professional development opportunities that focus on digital pedagogy, technology integration, and online hybrid teaching strategies.

Join collaborative teacher networks that facilitate the sharing of best practices and mutual support in digital teaching, and the redefinition of teacher identity and professionalism.

7.5 Limitations of the Study

While this study provides valuable insights, it is important to acknowledge the following limitations.

1. The study focused on Grade 7 teachers in specific suburbs of Cape Town, which may limit the generalisability of findings to other contexts, particularly rural areas and areas with a varied socio-economic level. These findings may be linked to systemic inequalities and inequities within the South African context.

2. The reliance on self-reported data through interviews and focus group discussions may be subject to recall bias and could affect the range of the findings of the study. The negative experience or influence of ERT and digital technology may have influenced the teachers' recall of the phenomenon resulting in invalid data.

3. As the study was conducted after the ERT period, teachers' memories of ERT may not have been completely accurate. The time lapse may have resulted in teachers failing to recall certain aspects which could have provided key data to the study.

4. The perspectives of students, parents, and school administrators were not included in this study. These could have provided a multi-faceted understanding and exploration of stakeholders' experiences with ERT.

7.6 Suggestions for Future Research

This study suggests areas for future research. These include:

1. Adaptive Resilience and Teacher Agency – Self-efficacy proved decisive in how Grade 7 teachers made ERT achievable.
2. Digital Ecosystem Inequities – Access, infrastructure and skill gaps continue to determine who benefits from technology.

3. Evolving Pedagogical Identities – Teachers left ERT with revamped TPACK experiences and developing perspectives on hybrid pedagogies and digital citizenship.

Each suggested study below is designed to extend or test these insights rather than start a new agenda.

1. Longitudinal Follow-Up: Tracing Post-ERT Trajectories

This study captures a single context (2024). The central claim that crisis born self-efficacy and emergent TPACK can nurture lasting pedagogical change requires temporary confirmation.

The Longitudinal Follow-Up on Post-ERT trajectories would confirm or falsify whether ERT adaptations consolidate into stable practice, and whether teacher self-efficacy predicts sustained digital integration. This evidence is missing from most South-African ERT literature. Findings will also show policymakers if short-term emergency investments produce durable gains.

2. Comparative Grade-Band Study: Primary vs. FET and Rural vs. Urban

It is argued that Grade 7 sits at a bridging year; however, digital divide dynamics likely present differently in early primary or FET bands and across provincial contexts.

A Comparative Grade-Band Study would reveal whether the explanatory power of the three-lens framework generalises across schooling stages and geographies, or whether new constructs (e.g., parental mediation in lower grades) are required. The contrasting evidence will strengthen external validity claims of this study's thesis model.

3. Design-Based Research on Digital Citizenship Pedagogy

Chapter 6 posits "digital citizenship" as an emerging necessity, yet actual classroom models remain under-developed in South Africa.

The Design-Based Research on Digital Citizenship Pedagogy study would generate locally validated teaching resources and theory-informed design principles. It also provides concrete evidence on how digital citizenship instruction impacts learner online conduct, directly addressing the capacity gap identified in the study.

4. Psychosocial Well-Being and Professional Identity Study

The themes on “emotional labour” and “new professional identities” are compelling but are lacking in psychological constructs and coping strategies.

The Psychosocial Well-Being and Professional Identity Study would link mental-health paths to self-efficacy and TPACK growth. Questions like, “Do confident tech users experience less burnout, or does tech intensify workload?” could be addressed. The results will guide supportive interventions.

5. Randomised PD Trial: Comparing Three Teacher-Support Models

The recommendations of the study call for stronger professional development (PD) but do not identify the most cost-effective approach.

The Randomised PD Trial will provide consequential evidence on which PD mix, best causes changes in practice under real budget constraints. The findings will translate this thesis’s analytic insights into practical policy recommendations.

7.7 Concluding Remarks

The COVID-19 pandemic resulted in the implementation of ERT for a period which profoundly impacted the education landscape in South Africa and globally. This study investigated the experiences of seven Grade 7 teachers during this unusual time, revealing both difficulties and opportunities in the transition to digital teaching.

The tenacious adaptability demonstrated by teachers in this study provides hope for the future of education in an increasingly digital world. However, the findings also underline the critical need to address systemic inequalities and provide comprehensive support to both teachers and learners as they navigate this new educational terrain.

The lessons learned from the ERT experience should inform the development of more comprehensive, resilient, equitable, and effective education systems. By embracing the potential of digital technologies while remaining mindful of the importance of human connection in teaching and learning, an educational future that is both innovative and inclusive can be worked towards.

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APPENDICES

Appendix A: Semi-structured Interview Guide

Objective: To explore the lived experiences of Grade 7 teachers in schools in the WCED (Metro Central and South Education Districts) relating to the implementation of ERT during the COVID-19-induced school closures and the continuity of digital technology in post-COVID-19 education
Context: These interviews will take place individually to assist with the in-depth understanding, exploration, and interpretation of the participants' lived experiences: their thoughts, emotions, expectations, disappointments, learning, insights.
Questions: Questions: 1.What is your understanding of the COVID-19 pandemic and the school related closures? 2.What were your thoughts and emotions relating to these school closures during the COVID-19 pandemic? Describe a memorable experience/s. 3. What form/ method/ strategy of ERT did you and/or your school implement to ensure that learning and teaching took place during school closures? (How did you contact or reach your learners during the school closures to ensure that teaching and learning continued?) 4.What were your expectations of the ERT that you and or the school implemented? 5. How were these expectations met or not met? What in your opinion were the reasons for this? 6. Describe the role that your school (SMT, SGB and so forth) played in the implementation of ERT. 7.Why were these forms/ methods/strategies of teaching and learning/ ERT (in Q3) used? 8. How did you feel about implementing these forms/methods or strategies? What were the reasons for this? 9. Describe one of these experiences which you found memorable (in other words)/ Describe your memorable experiences relating to the implementation of these forms/methods or strategies. 10. Discuss the extent to which these forms/methods or strategies met your expectation (Levels of success) 11. What skills have you learnt? 12.What insights have you gained from these experiences?

13. At present, how do you implement what you have learnt from your experiences of ERT during COVID-19, in your daily teaching and learning activities?

14.Why have you continued to use these methods and strategies?

15.Why do you think this is so?

16. Is there one specific memorable experience that you would like to share regarding your experiences, thoughts, and emotions around Emergency Remote Education during the COVID-19-induced school closures? (Fit this question in where it is felt best to).

17. Are there any changes or transformations that you would like to see take place in education regarding the use of digital technology at Grade 7 level?

Further guidelines:

Last approximately 80 minutes
Guided by a semi-structured interview guide (Appendix A)
Flexibility to explore emerging themes
Recorded with participant consent (audio recordings)
Conducted in-person or via virtual platforms (e.g., Google Meet or Zoom) where necessary

Appendix B: Focus Group Discussion Interview Guide

Objective: To explore the lived experiences of Grade 7 teachers in schools in the WCED (Metro Central and South Education Districts) relating to the implementation of ERT during the COVID-19-induced school closures and the continuity of digital technology in post-COVID-19 education
Context: These discussions will take place in groups to assist with the in-depth understanding, exploration, and interpretation of the participants' lived experiences: their thoughts, emotions, expectations, disappointments, learning, insights and so forth.
Questions: 1. As a Grade 7 teacher, what are your experiences of the COVID-19 pandemic and the school related closures? 2. Describe a particularly memorable experience relating to Question 2. Why was this so memorable? 3. What is your understanding of ERT? 4. What was your role in the implementation of ERT at your school, within your grade? 5. Describe your experiences, thoughts, and emotions regarding ERT in general within your grade. 6. Describe your experiences, thoughts, and emotions relating to one of your most memorable experiences. 7. What were the challenges and successes of your experiences of the implementation of ERT? 8. Describe, in greater detail, one specific example of a success and one example of a challenge in the implementation of ERT? 9. What caused or contributed to these successes and challenges? 10. How were these challenges addressed and by whom? 11. What are the lessons learned from these experiences, emotions, and thoughts of ERT? 12. How have these affected or influenced your practices in ICT in your present daily lessons? 13. Why have you decided to continue these practices post-COVID? 14. Describe a memorable experience, post-COVID, in which you implemented these practices. 15. Compare your experiences of these practices during the school closures and post-COVID-19 education.

16. Based on your experiences, thoughts and emotions relating to ERT, what recommendations would you suggest for the future effective use of digital technology in post-COVID-19 education?
Further guidelines: Last approximately 80 minutes Guided by a focus group discussion guide (Annexure B) Flexibility to explore emerging themes Recorded with participant consent (audio recordings) Conducted in-person or via virtual platforms (e.g., Google Meet or Zoom) where necessary

Appendix C: Resource/ Document Analysis

Objective: To explore how have the Grade 7 teachers implemented ERT during the COVID-19 pandemic.
Focus: This will focus on the resources that are relevant to the implementation of ERT by Grade 7 teachers during the COVID-19 pandemic.
Questions: 1. Which resources did you make use of during ERT? 2. Describe these resources. 3. How was it used in ERT? 4. Who designed it? 5. What impact did it have on ERT and the implementation thereof?

Appendix D: Letter to Principals

Dear Principal

I am currently a Grade 7 teacher and a Masters Degree student at the University of KwaZulu Natal (Student Number: 222119798).

As part of my Masters Research Proposal, I have to source Grade 7 teachers based at schools in the Southern Suburbs who would be willing to participate in the study.

The title of the study is: Navigating Emergency Remote Teaching (ERT): The lived experiences of Grade 7 teachers during the COVID-19 pandemic

The study would focus on Grade 7 teachers who experienced and engaged in online teaching during the COVID-19 pandemic, who are willing to share their experiences in the form of interviews, focus group discussions and discussions around documents (planning/ worksheets and so forth) that they used during this time.

It would be sincerely appreciated if you would assist me in this regard and allow me to conduct the study with the teachers at your school that meet the criteria.

I can be contacted at:

School of Social Sciences, University of KwaZulu-Natal, Pietermaritzburg Campus, Scottsville, Pietermaritzburg. / Howard College Campus, Durban.
My Email: [redacted]
Cell: [redacted]8

My supervisor is Professor Wayne Hugo who is located at the School of Social Sciences, Pietermaritzburg Campus / Howard College Campus, Durban of the University of KwaZulu-Natal. Contact details: email hugow@ukzn.ac.za Phone number: UKZN Ext: 5970

The Humanities and Social Sciences Research Ethics Committee contact details are as follows: HSSREC Research Office, Tel: 031 260 8350/4557/3587, Email: hssrec@ukzn.ac.

Thank you for your contribution to this research.

DECLARATION

I…… *(full names of principal*) hereby confirm that I understand the contents of this document and the nature of the research project. I understand the intention of the research. I hereby agree to participate.

SIGNATURE OF PARTICIPANT: …… DATE: …….

Appendix E : Letter to participants

Informed Consent Document

Dear Participant,

My name is Tina Hermanus (*student no: 222119798*). I am a Masters candidate studying at the University of KwaZulu-Natal, Howard College / Pietermaritzburg Campus. The title of my research is, Navigating Emergency Remote Teaching (ERT): The lived experiences of Grade 7 teachers during the COVID-19 pandemic. The aim of the study is to investigate the lived experiences of Grade 7 teachers in the Southern Suburbs of Cape Town in relation to the implementation of ERT during the COVID-19 pandemic, to identify the factors that influenced Grade 7 teachers' decisions to continue or abandon the use of specific digital technologies in their present-day teaching, to analyse the lessons learned by Grade 7 teachers from their experiences with ERT during the COVID-19 pandemic, and to elicit the changes, policy recommendations, and support structures that Grade 7 teachers would like to see implemented in South African schools to improve the integration of digital technology in education.

I am interested in interviewing you to share your experiences and observations on the subject matter.

Please note that:

- The information that you provide will be used for scholarly research only.
- Your participation is entirely voluntary. You have a choice to participate, not to participate or stop participating in the research. You will not be penalised for taking such an action.
- Your views in this interview will be presented anonymously. Neither your name nor identity will be disclosed in any form in the study.
- The interview will take about 80 minutes.

- The record as well as other items associated with the interview will be held in a password-protected file accessible only to myself and my supervisors. After a period of 5 years, in line with the rules of the university, it will be disposed by shredding and burning.

- If you agree to participate, please sign the declaration attached to this statement (a separate sheet will be provided for signatures)

I can be contacted at: School of Social Sciences, University of KwaZulu-Natal, Pietermaritzburg Campus, Scottsville, Pietermaritzburg. / Howard College Campus, Durban.

My Email: [redacted]

Cell: [redacted]

My supervisor is Professor Wayne Hugo who is located at the School of Social Sciences, Pietermaritzburg Campus / Howard College Campus, Durban of the University of KwaZulu-Natal. Contact details: email hugow@ukzn.ac.za Phone number: UKZN Ext: 5970 The Humanities and Social Sciences Research Ethics Committee contact details are as follows: HSSREC Research Office, Tel: 031 260 8350/4557/3587, Email: hssrec@ukzn.ac.

Thank you for your contribution to this research.

DECLARATION

I…… *(full names of participant*) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire. I understand the intention of the research. I hereby agree to participate.

I consent / do not consent to have this interview recorded (if applicable)

SIGNATURE OF PARTICIPANT: …….. DATE: ……..

Appendix F: Gatekeeper Approval

Western Cape Government
Education

Directorate: Research

meshack.kanzi@westerncape.gov.za
Tel: +27 021 467 2350
Fax: 086 590 2282
Private Bag x9114, Cape Town, 8000
wced.wcape.gov.za

REFERENCE: 1645DCF180000A9-20230818
ENQUIRIES: Mr M Kanzi

Mrs Tina Hermanus
[redacted]
Bayview, Strandfontein
Cape Town
7798

Dear Tina Hermanus,

RESEARCH PROPOSAL: NAVIGATING EMERGENCY REMOTE TEACHING: THE LIVED EXPERIENCES OF GRADE 7 TEACHERS DURING THE COVID-19 PANDEMIC.

Your application to conduct the above-mentioned research in schools in the Western Cape has been approved subject to the following conditions:

1. Principals, educators and learners are under no obligation to assist you in your investigation.
2. Principals, educators, learners and schools should not be identifiable in any way from the results of the investigation.
3. You make all the arrangements concerning your investigation.
4. Educators' programmes are not to be interrupted.
5. The Study is to be conducted from **10 October 2023 till 30 September 2024.**
6. No research can be conducted during the fourth term as schools are preparing and finalizing syllabi for examinations (October to December).
7. Should you wish to extend the period of your survey, please contact Mr M Kanzi at the contact numbers above quoting the reference number.
8. A photocopy of this letter is submitted to the principal where the intended research is to be conducted.
9. Your research will be limited to the list of schools as forwarded to the Western Cape Education Department.
10. A brief summary of the content, findings and recommendations is provided to the Director: Research Services.
11. The Department receives a copy of the completed report/dissertation/thesis addressed to:

The Director: Research Services
Western Cape Education Department
Private Bag X9114
CAPE TOWN
8000

We wish you success in your research.

Kind regards,
Meshack Kanzi
Directorate: Research
DATE: 10 October 2023

[redacted]

Appendix G: UKZN Ethical Clearance

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

04 October 2023

Tina Hermanus (222119798)
School Of Education
Pietermaritzburg Campus

Dear T Hermanus,

Protocol reference number: HSSREC/00006056/2023
Project title: Navigating emergency remote teaching: The lived experiences of grade 7 teachers
Degree: Masters

Approval Notification – Expedited Application

This letter serves to notify you that your application received on 28 August 2023 in connection with the above, was reviewed by the Humanities and Social Sciences Research Ethics Committee (HSSREC) and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

This approval is valid until 04 October 2024.
To ensure uninterrupted approval of this study beyond the approval expiry date, a progress report must be submitted to the Research Office on the appropriate form 2 - 3 months before the expiry date. A close-out report to be submitted when study is finished.

HSSREC is registered with the South African National Health Research Ethics Council (REC-040414-040).

Yours sincerely,

[redacted]

Professor Dipane Hlalele (Chair)

/dd

Appendix H: Certificate of Professional Editing

CERTIFICATE
OF PROFESSIONAL EDITING

I, Barbara L. Louton, declare that I am a professional editor with a Bachelor of Arts in Professional Writing, a Master of Arts in Development Administration, and 20 years of experience as an editor, researcher, and writer.

I declare that I was contracted by Tina Louise Hermanus, a master's candidate in the School of Education at the University of KwaZulu-Natal, to complete a professional edit of her dissertation, ***'Navigating emergency remote teaching: The lived experiences of Grade 7 teachers during the COVID-19 pandemic'***.

I declare that I have completed a professional edit of the document, addressing structure, language, style, and formatting. Changes were tracked and comments were made in text with recommendations for the client to address.

Disclaimer:
Responsibility for the originality and accuracy of the material presented in the edited document lies with the client. I have not verified the originality or accuracy of statements, quotations or citations and references presented in the manuscript. Where I have detected inaccuracies, I have rectified them or reported them to the client. The client was free to make further changes to the edited document after the edit was complete.

I can be contacted at:
Cell: [redacted]
Email: [redacted]

Barbara L Louton	[redacted]	29 June 2025
Name	Signed	Date