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# Teachers' experiences navigating changes in teaching during the coronavirus pandemic in a public school in KwaZulu-Natal

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A RESEARCH PROJECT SUBMITTED IN FULFILMENT OF THE REQUIREMENTS FOR THE MASTERS DEGREE IN EDUCATIONAL PSYCHOLOGY IN THE SCHOOL OF EDUCATION, UNIVERSITY OF KWAZULU-NATAL EDGEWOOD CAMPUS

Supervisor: Dr. V. Jairam

## DECLARATION

I, Shaun Deeplal, declare that this research project is my own work. It is being submitted for the master's degree in educational psychology, at the University of KwaZulu-Natal, South Africa. This project is submitted by electronic paper format and has not been submitted before for any degree or examination at this or any other University.

This work was completed under the supervision of Dr. V. Jairam, at the University of KwaZulu-Natal, Edgewood Campus.

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## ABSTRACT

The coronavirus (COVID-19) pandemic revealed the need for change in the global environment, including the education sector, where teachers, as frontline workers, were expected to continue teaching despite pandemic risks. Teaching underwent a paradigm shift from traditional classroom teaching to online teaching and later to rotational teaching. This study was underpinned by the interpretivist paradigm, which explored the subjective experiences of teachers. The methodological design for this study was based on the qualitative approach to address the research problem. The techniques and methodology employed in this study to generate data to answer the research questions included the obtaining of in-depth data through semi-structured interviews and a single focus group discussion. An exploratory case study was conducted at Aspire High, a public school in KZN. This qualitative study used Kurt Lewin's 3-step Theory of Change model of unfreeze, change, and refreeze stages as its theoretical framework to explore the experiences of 10 purposefully selected Grade 10 teachers from a public school in KwaZulu-Natal as they navigated changes in technology, pedagogy, and the social aspects of their teaching during the pandemic. The study established the lack of technology resources in South Africa, with teachers overwhelmed by technological, pedagogical, and social challenges. Technological barriers, new teaching strategies, increased workloads, and social isolation, led to teachers' stress, anxiety, and burnout. Teachers required more emotional and psychological support. However, the pandemic enabled teachers' professional development, technological development, and new educational strategies for advancing education in the post-pandemic era. A thematic analysis of the data from in-depth interviews and a single focus group revealed three major themes and fourteen sub-themes on teachers' struggles during the pandemic. These include the challenges associated with the following: technological barriers, administrative and institutional support, the development of new materials, learner performance and engagement, and emotional and social effects. The research recommends enhancing technological support and training, promoting pedagogical innovation, and adapting institutional policies and support structures for a more equitable education system that would be more resilient to future crises.

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## DEDICATION

I dedicate this master's dissertation to my loving wife, Arlene Deeplal, who gave me so much encouragement to press on in spite of challenges and ensured that I completed this study. Thank you for being a tower of strength and hope and for your love, care, and support. I am so grateful to you.

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| | |
|---|---|
| COVID-19 | Coronavirus Disease 2019 |
| DBE | Department of Basic Education |
| DoE | Department of Education |
| DBST | District Based Support Teams |
| OECD | Organisation for Economic Co-operation and Development |
| PMT | Protection Motivation Theory |
| SA | South Africa |
| SBST | School Based Support Team |
| SMT | School Management Team |
| UNICEF | United Nations International Children's Emergency Fund |
| UNESCO | United Nations Education, Scientific and Cultural Organisation |
| UK | United Kingdom |
| USA | United States of America |

# CHAPTER I

# INTRODUCTION TO THE STUDY

## 1.1 Introduction

On March 11, 2020, change was imminent when the World Health Organisation (WHO) declared the coronavirus pandemic (COVID-19) a global pandemic (Cucinotta & Vanelli, 2020). Every sector of the world economy including agriculture, manufacturing, the financial sector, hospitality and tourism, the real estate and housing sector, and particularly education was severely impacted (Sohrabi et al., 2020). Most countries implemented lockdowns and ordered the closure of schools and other educational institutions (Sangeeta & Tandon, 2021). The lockdown on March 26, 2020, commenced, compelling schools and teachers to have a paradigm shift and, although unprepared, to move to online teaching as there were no other options. Teaching online was a major struggle for many teachers and stressful at all education levels (Durr et al., 2021).

This study explored teachers' experiences in navigating online and rotational teaching and how this impacted them and the curriculum delivery during and after the COVID-19 pandemic. This chapter provides the background to the study, its perspectives, rationale, problem- and purpose statements, objectives, research questions, and significance. The chapter also provides an overview of the research design, limitations of the study, and an overview of the chapters.

## 1.2 Background of the Research

The Coronavirus pandemic (COVID-19) brought about many disruptions in education systems around the globe, including in South Africa. The pandemic disrupted schools globally because the lockdown forced the closure of schools to control the spread of the virus. The United Nations Educational, Scientific and Cultural Organisation - International Institute for Higher Education in Latin America and the Caribbean (UNESCO-IESALC) (2020) stated that the most impacted were learners from disadvantaged backgrounds, which caused these learners to lose out on opportunities to pursue studies and obtain skills and knowledge. South Africa has experienced challenges in conducting online teaching due to poor infrastructure, minimum resources, and inadequate training.

The COVID-19 pandemic is a new occurrence. In this study, I explore teachers' experiences

in navigating online and rotational teaching and how this impacted them and curriculum delivery during and after the COVID-19 pandemic. Following a critical review of the scholarly literature, this dissertation argues for the need for this research from the perspective of teachers in KwaZulu-Natal (KZN) and provides the methodology for conducting the research. Recommendations for dealing with changes in teaching are supplied in the final chapter to guide teachers and schools toward moving forward.

## 1.3 Perspective and Significance of the Research

There was much fear and anxiety experienced all over the world due to the pandemic, and during this time, teachers had to navigate online, rotational, and face-to-face teaching with trepidation. Initially, teachers had no option but to adapt to online teaching.

As an Educational Psychology student, I aimed to explore Grade 10 teachers' experiences locally and discuss the impact of the change from face-to-face teaching to online teaching and then to rotational teaching. The reason for choosing teachers who teach Grade 10 learners is that subject choices in Grade 10 are linked to the career path that learners wish to pursue after matric. Grade 10 is the first year of the Further Education and Training (FET) phase in South African schools. Furthermore, this research topic is essential because it demands a paradigm shift not only by teachers but also by School Management Teams (SMTS), School Governing Bodies, School Based Support Teams (SBSTs), and District Based Support Teams (DBSTs). To teach effectively, teachers need to acquire training and develop new skills for online teaching during the COVID-19 pandemic.

## 1.4 Rationale

The COVID-19 pandemic affected many teachers globally. Many teachers also lost family members and colleagues during the pandemic. During the lockdown, teachers were compelled to teach online and later conduct rotational teaching. Teachers had to navigate changes in teaching related to technology, pedagogy, and social aspects, resulting in emotional stress (Ferri et al., 2020). Online and rotational teaching also caused some changes in the daily routines of learners and affected their results because many learners did not have the required equipment or data to log in to online lessons. Furthermore, although some studies have been conducted, no research has been conducted on the experiences of teachers in KZN, South Africa (SA).

As a teacher/researcher, my personal knowledge and experience provides a source which can reflectively and critically be mined in order to develop a wealth of ideas for the generation of concepts and theories. This study allowed me to examine my own assumptions as a teacher, as well as those of others and thereby assess their implications. This study also makes available observations, feelings and insights of other teachers for reflection and analysis.

In addition to the above, the following gaps in the literature were evident due to COVID-19 being a new phenomenon. The identified gaps in the literature indicates:

- The available initial literature dealt with the health sector and neglected the educational sector.
- Teachers should have been considered as frontline workers who were exposed to the virus and more support should have been offered to teachers during the pandemic.
- There was little research on the impact of the paradigm shift to online and rotational teaching had on teachers during COVID-19 in the South African context.

In hindsight, three years after the COVID-19 pandemic, it is essential to review how the changes materialised in the longer term. Many studies were conducted soon after the pandemic began and later, but a retrospective study at this point can examine the longer-term impact of the COVID-19 period. The significance of conducting research on this topic is to understand the change process because it may not be the last. This study will benefit teachers, the Department of Education (DoE), and relevant school stakeholders because it addresses the impact of changes in teaching during the pandemic and provides intervention strategies to deal with such changes in the post-pandemic era.

## 1.5 Theoretical/Conceptual Framework

Kurt Lewin's Theory of Change model guides this study of teachers' experiences as they navigated changes in teaching during COVID-19 in a public school in KZN. The justification and relevance of using Kurt Lewin's change theory speaks directly to my research questions and research objectives. The new normal because of the coronavirus pandemic demanded a paradigm shift from traditional teaching methods to online and rotational teaching. The concepts of unfreeze, change, and refreeze as explained later was the most appropriate concepts that are applicable for teachers to adapt in meeting the new demands for teaching and learning. According to Ferri et al. (2020), teachers experienced technological, pedagogical, and social

challenges while adapting to online teaching. Thus, the conceptual framework of this research uses the three stages of Lewin's Theory of Change of *Unfreeze*, *Change*, and *Refreeze* to research teachers' experiences relating to technology, pedagogy, and social challenges (Ferri et al., 2020).

Kurt Lewin's (1951) Theory of Change serves as a lens to understand how teachers can allow for changes in teaching (from face-to-face to online and then to rotational teaching) during the crisis of COVID-19. The fundamental assumptions underlying any change in a human system are derived originally from Kurt Lewin's Theory of Change (Schein, 2010). Drawing from his 1951 Theory of Change and how change should be dealt with, Kurt Lewin introduced the three-step change model, which is widely accepted in psychology for implementing change. The Kurt Lewin Change Theory Model is based on a three-step process: unfreeze, change, refreeze (Robbins & Judge, 2009), which is a high-level change approach. Lewin explained these three steps as follows:

**Unfreezing** enables people to gain perspective on their day-to-day activities, unlearn old habits, and be open to new ways of reaching their objectives. Regarding teaching and learning, COVID-19 has brought about numerous changes in the classroom. Initially, the change was from face-to-face instruction in the classroom to online instruction. The next change was from online teaching to rotational teaching while attempting to adhere to COVID-19 protocols. Unfreezing is about letting go of old patterns, because change is necessary. During the initial lockdown, online teaching was introduced because learners and teachers could not access their schools. Teaching methods such as group work, discussions, and some assessments could not be done.

The second step is **change**. Lewin (1951, p. 50) "recognized that change is a process where the organization must transition or move into this new state of being". This change or transition is recognised as a change. Most people struggle with change because of new realities. It is a time marked by uncertainty and fear, making it the hardest step to overcome. During the change step, people begin to learn new behavioural processes and ways of thinking. COVID-19 has resulted in several changes in teaching and learning. The first change was to online lessons from face-to-face lessons, followed by rotational learning. Methods of teaching had to change during online teaching. The changes in teaching and learning that became concrete included the trimming of the curriculum, and the reduction of classroom capacity during rotational teaching because learners were required to attend school every alternate day or week.

Moreover, learners were required to work individually without sharing resources due to COVID-19 protocols.

Teachers experienced profound changes in their personal lives (Aperribai et al., 2021) and professional lives (Dayal & Tiko, 2020; Kaden, 2020) due to the COVID-19 pandemic, thus impacting their mental health in areas such as cognitive, behavioural, and emotional well-being (Federkeil et al., 2020).

The third step is **refreezing.** This step involves reinforcing and stabilising the new state after the change. It is about establishing change as a new habit or process. Efforts must be made to guarantee that the change is not lost but must be cemented into the organisation's culture and maintained as an acceptable way of thinking or doing. Regarding the changes brought about by COVID-19, these changes were implemented to contain the spread of the virus. Therefore, changes needed to be reinforced to ensure that teaching and learning could occur in a manner that minimised the risk of infection.

## 1.6 Overview of Research Methodology

The research used a qualitative approach to address the research problem of teachers having to teach online and adopt rotational teaching with the protocols of the COVID-19 pandemic and its devastating effects.

### *1.6.1 Research Paradigm*

This study was underpinned by the interpretive paradigm, which seeks to understand issues by interacting with participants and portraying the reality of people's experiences.

### *1.6.2 Research Approach*

This study falls under a qualitative approach because it interpreted, decoded, and translated the experiences of teachers during the COVID-19 pandemic. Qualitative research enables researchers to gather in-depth insights into topics that are not well understood (Creswell, 2017). I have used the qualitative approach to gain in-depth knowledge, which is the strength of qualitative research. This approach is exploratory and was ideal for this study.

### *1.6.3 Location of the Study*

This study was conducted during the 2024 academic year at Aspire High, a Quintile 5 public school in Pinetown District, South Africa. According to Van Dyk and White (2019, p. 1), "the

Amended National Norms and Standards for School Funding (ANNSSF) required the ranking of schools into one of five quintiles of which Quintile 1 represents the poorest schools and Quintile 5 the most affluent." The result of this amendment allows schools in impoverished communities to receive more funding. The school chosen was near me and consisted of multiracial learners and teachers. Pinetown is a suburb in KZN with a population of approximately 220,000 people, and high levels of unemployment and poverty.

### *1.6.4 Data Generation Techniques*

I used semi-structured interviews for this study to generate data from 10 Grade 10 teachers. Open-ended questions were structured to probe the responses, encourage two-way discussion, and obtain insight into the participants' experiences.

I also conducted a single focus group discussion with the same Grade 10 teachers who were interviewed for additional insight into the teachers' experiences. Interviews and focus groups are the main techniques in qualitative research (Creswell, 2017).

I used purposive sampling for this study because he made specific choices about which people to include in the sample (Bertram & Christiansen, 2014). Ten Grade 10 subject teachers (five males and five females) were selected from a public school in the Pinetown area. These teachers were subject teachers from diverse race and religious groups from Aspire High and participants in the semi-structured interviews and the single focus group discussion. As stated previously, the study was based on Grade 10 teachers as Grade 10 is a very important year as it is the first year of the FET phase in SA schools, when learners choose subjects linked to career paths.

### *1.6.5 Data Analysis*

Thematic analysis was used to analyse the data**.** Thematic analysis is a technique that involves systematically identifying, coding, and analysing patterns of meaning to uncover underlying themes (Braun & Clarke, 2012). I sought patterns and/or themes in the responses of the 10 participants to uncover useful information related to the phenomenon.

The interview and focus group transcripts were reviewed to identify patterns and themes related to teachers' experiences. Data reduction was used to simplify the patterns and the themes, using inductive reasoning to draw conclusions.

## 1.7 Problem Statement

According to König et al. (2020), the COVID-19 pandemic posed unique challenges and demanded an adaptation to a new normal. The educational sector was also subjected to a change in the teaching and learning process. Until March 2020, the typical teaching situation at schools were characterised by learners who were taught in classrooms by teachers who covered their subjects' standard content through formal teaching. During the pandemic, teachers were required to still maintain contact with their learners through a new approach of online and later rotational teaching. Teachers were ill-equipped and did not have the capacity to adapt to this new model of teaching and faced many challenges. The COVID-19 pandemic had placed numerous demands on teachers. An interrupted academic year, unforeseen closure of schools, technology, pedagogy and social challenges, social distancing during rotational teaching, teaching with a mask and constant sanitizing were some of the strains placed upon teachers.

COVID-19 disrupted people's lives in every sector. With no opportunity to prepare for the lockdown, parents, guardians, learners, communities, and schools had to change. Teachers were greatly impacted as they had to change to online instruction and then to rotational teaching. They were still required to continue with curriculum delivery that required different resources and tools and to deal with information communication technology issues while connecting with learners socially, emotionally, and physically. This research considers the experiences of teachers at a school in KZN, SA, as there is no research on these teachers' perspectives on this topic. Lewin's three-step change model is identified as the theory that could explain the changes that teachers needed to make initially (unfreeze stage), during the change (change stage), and later in the change leading into the post-pandemic era (refreeze). The research is relevant to teachers in a situation of change and has implications for the education sector in general.

## 1.8 Purpose of the Study

The purpose of this study is to explore Grade 10 teachers' experiences pertaining to technology, pedagogy, and social aspects as they navigated changes in teaching from face-to-face to online teaching and from online to rotational teaching during the COVID-19 pandemic, and to examine the implications of their experiences for teaching and learning during the pandemic and in the post-pandemic era.

## 1.9 Research Objectives

The objectives of this study were to:

1. Explore Grade 10 teachers' experiences as they navigated changes in teaching during the Coronavirus pandemic in terms of technology, pedagogy, and social aspects.
2. Explore how Grade 10 teachers navigated and adapted to technological, pedagogical, and social changes in teaching and learning during the COVID-19 pandemic.
3. Examine the implications of these changes for teaching and learning during the pandemic in the post-pandemic era.

## 1.10 Research Questions

The study was guided by the following research questions:

### *1.10.1 Main Research Question*

What were the experiences of Grade 10 teachers as they navigated changes in teaching during the Coronavirus pandemic in terms of technology, pedagogy, and social aspects, and how did these experiences equip their teaching approaches during the pandemic and in the post-pandemic era?

### *1.10.2 Sub-Questions*

1. What were the experiences of Grade 10 teachers when they initially moved to online teaching?
2. How did Grade 10 teachers navigate the technological, pedagogical, and social changes during online and rotational teaching?
3. What were the implications of these changes for teaching and learning during the pandemic and in the post-pandemic era?

## 1.11 Scope of the Research

The delimitation of the study is that I focused on one province in SA, specifically on one district and one school.

According to Rajkoomar (2015, p. 11), "no research project is without its limitations, and there is no perfectly designed research". The limitation of this study is that the findings

cannot be generalised to all SA schools or teachers because only one school was used in the sample. Therefore, the findings of this study may not be transferable to other contexts.

## 1.12 Contribution to Knowledge

The study's unique contribution is its use of the structure of Ferri et al. (2020) to understand teachers' challenges in the educational sector regarding technology, pedagogy, and social factors within the three stages of Lewin's Theory of Change (unfreeze, change, and refreeze).

There has not been a study in South Africa that examined how teachers in the SA school system coped using the theoretical framework of Lewin. I asked questions that refer to the phase when lockdown started and when the school started to effect change, when they were in the change, and subsequently when the changes were more established. There has not been a study that has used this approach, and it is important that South African teachers are more prepared when change occurs again.

## 1.13 Definitions of key Concepts

### *1.13.1 Coronavirus Disease*

Coronavirus disease 2019 (COVID-19) was initially identified in Wuhan, China, in December 2019. This pandemic was caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The World Health Organisation (WHO) coined the name COVID-19 in January 2020 (Liu et al., 2020). This virus is transmitted by air and via direct and indirect contact, and it commonly spreads via droplets (Cirrincione et al., 2020). It can cause anything from influenza symptoms, such as sore throat, cough, fever, and pneumonia, and can result in breathing difficulties and death. According to WHO (2020), research has shown that the aged and those with various underlying medical problems like cardiovascular diseases, diabetes, chronic respiratory diseases, and cancer are more likely to develop serious illnesses from the coronavirus. At this stage, there are no definitive treatments for Coronavirus. However, vaccines such as the AstraZeneca COVID-19 vaccine, Novavax COVID-19 vaccine, Pfizer vaccine, and the Johnson and Johnson vaccine were found to be effective in reducing the deadly effects of the virus in most individuals. In 2021 and early 2022, a third, fourth, and fifth wave of the virus were prevalent in South Africa, with milder symptoms and fewer fatalities.

### *1.13.2 Online Teaching*

Online teaching refers to instructional delivery and learning support conducted via digital platforms and tools. Due to the emergence of internet technologies and numerous communication devices, online education has gained popularity in recent years (Allen & Seaman, 2017). In online teaching, instructors use several types of digital courseware, like virtual classroom software, for presentation purposes only, which cannot be compared with traditional one-on-one classroom instruction. Online teaching requires different techniques from traditional class pedagogy because it involves addressing learners who may be sitting in different countries without having face-to-face contact with them (Bolliger & Wasilik, 2009). Good online teaching entails the creation of interactive and interesting learning experiences, the formation of online communities among learners, and timely delivery of valuable feedback. Online teaching is, therefore, only successful given other factors such as teachers' abilities to effectively present content using online tools like PowerPoint or videos, and their capacity to adapt to a virtual environment and establish good relationships with learners.

### *1.13.3 Rotational Teaching*

In South Africa, school closures in 2020 resulted in an average loss of 54% of in-person learning time in that year (Department of Basic Education (DBE), 2022a, p. 5). Even after schools reopened in the third term of 2020 via a staggered grade return, most schools implemented rotational attendance schedules for over 18 months, leading to further reductions in face-to-face teaching. Schools divided learners into two groups, with each group attending school on a rotational schedule. For example: Group A attended school on Monday, Wednesday, and Friday in Week 1 and then on Tuesday and Thursday in Week 2. Some schools divided learners into two groups and scheduled each group to attend school only on alternate weeks. This was done to reduce class sizes to maintain social distancing while complying with health and safety protocols.

Another rotational teaching concept is blended learning, which combines online and face-to-face instruction in a structured, alternating format. In this model, learners move between distinct learning modes like self-directed online courses, small-group work with teachers, and whole-class activities (Staker & Horn, 2012). The idea behind the rotational model is to enable teachers to tap into both the advantages of online and traditional classroom teaching methods, giving learners a variety of experiences across all these types of schooling. Thus, Christensen et al. (2013) noted four common models, namely, station rotation, lab rotation, flipped

classroom, and individual rotation. Personalisation of instruction with an increase in learner enthusiasm can be realised within classrooms through various forms of rotational approaches to learning since they cater for different varieties within the context of learning acquisition (Horn & Staker, 2012). Nevertheless, successful implementation of the rotational teaching method requires proper planning and coordination as well as professional development for teachers so that they can properly integrate online and face-to-face instructional strategies. SA schools conducted rotational teaching later in 2020 when learners returned to school, but some schools also conducted online lessons in addition to rotational.

### *1.13.4 Teacher Experiences*

The experiences of teachers range from different occurrences, circumstances, and problems that teachers face during their careers. According to Dewey (1938), experience is central to learning and growth because people build knowledge through interaction with their environment. Within teaching contexts, experiences shape teachers' outlooks on work and skills applied in their practice. Teachers' experiences have a personal grounding, but they also happen within wider cultural, historical, and institutional spaces (Clandinin & Connelly, 1996). To comprehend teacher experiences is to observe how teachers make sense of their profession's complex realities, such as educational policy reforms, technological changes, and public expectations.

## 1.14 Layout of Chapters

This document is divided into six chapters as follows:

**Chapter 1: Introduction to the Study**

This chapter presents the structure of the research and an overview of the study, which includes the introduction and background of the study, its purpose and rationale, problem and purpose statements, research questions, and major objectives.

**Chapter 2: Literature Review**

This chapter provides an in-depth investigation of national and international literature on teachers' experiences in adapting to online teaching during the COVID-19 pandemic. This review explores the teachers' experiences related to technology, pedagogy, and social aspects as they navigated changes in teaching during the coronavirus pandemic. These changes are linked to transitioning from face-to-face to online platforms and later to rotational teaching

because of school closures both nationally and globally. The concepts of technology, pedagogy, and social are discussed in Lewin's three stages of change: initial change (unfreeze), during the change (change), and later toward the post-pandemic era (refreeze). The modifications implemented by teachers to address challenges and implications of these changes for teaching and learning are also addressed.

**Chapter 3: Theoretical/Conceptual Frameworks**

This chapter deals with the theoretical framework and conceptual framework by using Lewin's Theory of Change model and combining it with the three concepts of Ferri et al. (2020): technology, pedagogy, and social. These theories present a lens through which the experiences of Grade 10 teachers could be understood during the coronavirus pandemic while managing changes in their teaching methods.

**Chapter 4: Methodology**

This chapter explains the research design and methodology. The type of research and the methods of data generation and analysis are discussed. The two research instruments used, semi-structured interviews and a single focus group discussion, are described. Sampling and ethical issues are also discussed.

**Chapter 5: Data Presentation, Analysis, and Discussion of Findings**

This chapter presents the data and interprets the findings within the conceptual framework of the study. The findings of this study are presented and discussed thematically.

**Chapter 6: Concluding discussion and Recommendations**

This chapter focuses on the concluding discussion and provides recommendations and suggestions based on the findings of the study.

## 1.15 Chapter Conclusion

In this chapter, the structure of the research and an overview of the study are provided, incorporating the introduction and background of the study, its purpose and rationale, problem and purpose statements, research questions, and major objectives. The next chapter will focus on the literature review of teachers' experiences in adapting to online and rotational teaching during the COVID-19 pandemic.

# CHAPTER 2

# LITERATURE REVIEW

## 2.1 Introduction

A literature review is a comprehensive overview of previous research on a specific topic that provides a critical analysis and synthesis of existing knowledge in the field (Hart, 2018). This chapter reviews the literature on the purpose of this study – to explore teachers' experiences regarding technology, pedagogy, and social aspects as they navigated changes during the COVID-19 pandemic. This review will define key concepts, highlight the theoretical framework to guide the study, and present empirical and theoretical literature relevant to the purpose of this research, including the main research and sub-questions. The review covers previous literature on teacher experiences during the COVID-19 pandemic and their technology, pedagogy and social challenges as they navigated changes in teaching during the pandemic.

## 2.2 **Theoretical Framework**

As introduced in the previous chapter, Kurt Lewin's Theory of Change model guides this study of teachers' experiences as they navigated changes in teaching during COVID-19 in a public school in KZN. According to Ferri et al. (2020), teachers experienced technological, pedagogical, and social challenges while adapting to online teaching. Thus, the theoretical framework of this research uses the three stages of Lewin's Theory of Change of unfreeze, change, and refreeze to examine teachers' experiences relating to technology, pedagogy, and social challenges (Ferri et al., 2020).

### *2.2.1 Lewin's theory*

The logical sequence of events for teachers during the COVID-19 pandemic comprised the initial stage (unfreeze) when teachers were compelled to commence online teaching, the continuing change stage (change) during the pandemic, and the stage towards the end of the pandemic leading to the post-COVID-19 era (refreeze).

The three challenges of technology, pedagogy, and social adopted from Ferri's work will now be discussed using Lewin's unfreeze, change, and refreeze change stages.

### 2.2.2 *Key Concepts for the Effective use of Online Learning: Technology, Pedagogy and Social: Ferri et al.*

Ferri et al. (2020) discussed technology, pedagogy, and social aspects as challenges to transitioning to online teaching during COVID-19 (Table 1). Technological challenges were observed related to a lack of internet connectivity and electronic devices. This led to inequalities through uneven access to the technology needed by learners and teachers, as not all learners had access to the necessary technologies, such as fast internet connections and computers. The second challenge was pedagogy, where online teaching implied revising the approaches used in face-to-face lessons by using innovative teaching methods to engage learners on online platforms. The third challenge was the social ones that dealt with the loss of human interaction between teachers and learners, the lack of a suitable home learning environment to study, and parental support. These three challenges are discussed in this study and are underpinned by Lewin's Theory of Change.

**Table 1**

*The three challenges of online learning*

| OPEN CHALLENGES | |
|---|---|
| *TECHNOLOGICAL CHALLENGES* | Access to infrastructure such as technological devices and an Internet connection. |
| *PEDAGOGICAL CHALLENGES* | Teachers' lack of skills in using technology. Need for training and guidelines for teachers and learners. |
| | Need for teaching materials in the form of interactive multimedia (images, animations, educational games) to engage and maintain learners' motivation. |
| | Lack of learner feedback and evaluation system. |
| *SOCIAL CHALLENGES* | Lack of suitable home learning environment to study and parents' support. |

Source: Adapted from "Online learning and emergency remote teaching: Opportunities and challenges in emergency situations" by Ferri et al. (2020, p. 4)

## 2.3 Technological Experiences of Teachers

Technological challenges in education refer to the obstacles faced by teachers and learners when using digital learning materials. As technology advances rapidly, teachers experience challenges using these tools to teach. However, one such issues includes the discrepancy

between those who can afford computers or other required equipment and hence access the internet and other technologies, on the one hand, and those who cannot do any of this due to poverty (Warschauer & Matuchniak, 2010). These differences may make some people lag behind while at the same time, they promote inequalities in society. Another obstacle is the inability of some professionals to properly use technology or adapt it to online classrooms (Ertmer & Ottenbreit-Leftwich, 2010). Furthermore, insufficient infrastructure, poor technical support services, and the need for professional development often led to severe obstacles in the integration of technology into the educational process.

It is important to ask whether teachers were trained adequately to conduct online lessons during the COVID-19 lockdown. The literature shows that teachers in the South African education system experienced technological challenges as they navigated the transition to online teaching during the pandemic, lacking competence in using digital tools and struggling to cope with the technology systems. A lack of online training, poor infrastructure and support hindered the transition to online teaching. Some teachers in South Africa had not received proper formal ICT training to apply online learning fully. Robinson (2020) reported that teachers felt overwhelmed due to lack of support.

Konig et al. (2020) argued that teachers were not adequately trained in operational and **i**nformation communication technology **(**ICT) processes to engage learners on online platforms. However, teachers' formal technology training began years ago (Jantjies, 2020). Nevertheless, some teachers did not receive tuition for online teaching as many rural and semi-urban schools had no computers or resources, and deficient networks hindered the virtual delivery of lessons to learners. Furthermore, teachers did not have up-to-date devices and had poor connectivity (Hoadley, 2020). At times, teachers were not competent at operating computers, which affected how they facilitated lessons. Conducting assessments, monitoring learners' attendance, and generating examinations were also issues in online teaching.

It was unfortunate that many teachers and learners did not know how to use advanced tools to engage in online learning. Many parents and learners were also not familiar with ICT devices linked to internet connectivity. Other challenges were power outages and poor network connectivity. Teachers also found that the use of digital technologies and online tools did not always correspond to learners' needs and prior digital competencies (OECD, 2019). Teachers could not incorporate opportunities for learning through play via online platforms. The lack of

technological resources increased inequity and disadvantaged learners and teachers, especially in rural areas where they could not afford proper equipment.

## 2.4 Pedagogical Experiences of Teachers

Pedagogical hardships imply complexities inherent in designing instructions that involve different subjects for learners. This can be attributed to diverse needs among learners coupled with changes in policies on schooling, in addition to evolving knowledge and skills requirements characteristic of the 21st century. A key challenge lies in changing teaching methods so that they take into consideration individual characteristics like learning style or cultural background, thereby addressing an increasingly heterogeneous classroom population (Tomlinson, 2017). This calls for teachers to properly understand differentiated instruction strategies and create inclusive environments where all learners can thrive. For instance, teachers are now required to help learners develop better critical thinking abilities alongside other higher-order thinking skills that are needed for coping with rapid changes occurring globally, especially within societies (Trilling & Fadel, 2009). These challenges can only be addressed through a shift from traditional teacher-centred approaches towards more learner-centred activities promoting active learning.

According to Ferri et al. (2020), teachers have experienced technological, pedagogical, and social challenges while adapting to online teaching. These teaching challenges arose because some teachers had poor computer skills, learners were demotivated, and teachers lacked intrapersonal and perceptive skills. Teachers were compelled to revisit traditional lesson approaches and adjust to succeed. By engaging in online lessons, teachers were challenged to try new pedagogical approaches to the virtual lessons. Facilitating lessons on an online platform challenged teachers as their methods of instruction and feedback had to change.

Teaching methods needed to be transformed to hold the attention of learners and provoke appropriate behaviour. However, this was challenging as teachers' use of digital tools needed to improve to engage learners properly. As Anderson et al. (2001) say, online teaching was an immensely challenging and intricate task. There was an ongoing need for teachers to grow not only with knowledge but also with experience and with connecting with other professionals. Online teaching demands that teachers embrace change to be successful. In this regard, teachers had to be willing to become learners and be prepared to embrace self-development, experiment with new techniques, and receive feedback from learners while collaborating with other teachers (Easton, 2008). According to Robinson (2020), teachers have reported feeling

overwhelmed because they did not have suitable study areas, equipment, and internet access to start online lessons.

It is also important to understand the impact of the changes in teaching in the minds of teachers as they navigated various shortcomings. One of the main limitations of a move to online teaching and learning was the loss of human interaction between teachers and learners.

In the pandemic, teachers were compelled to revisit the approaches used in traditional lessons and adjust to be successful. By engaging in online lessons, teachers were challenged to try new pedagogical approaches in the virtual lessons. Facilitating lessons in an online platform challenged teachers as their methods of instruction and feedback had to change and teaching methods needed to be transformed to hold the attention of learners and provoke appropriate behaviour. However, this was challenging as teachers' skills needed to improve using digital tools to engage learners properly. Teachers in the SA education system also experienced pedagogical challenges concerning assessment and curriculum trimming.

### *2.4.1 Teachers' Experiences Doing Assessments Online*

According to Cho and Shen (2013), a continuous assessment model had to be considered to assist the process of assessment. As online teaching was new to the learners, teachers needed to consider how much time and effort it took to prepare themselves to continue with curriculum delivery, and teachers needed to introduce self-reflections or portfolios (Hodges et al., 2020). Most SA schools introduced adjusted timetables to ensure that teaching continued. School staff were also challenged to engage parents in assisting with the process of task completion. Teachers also received mediocre work from learners, as work was sometimes not completed.

### *2.4.2 The Curriculum Policy Response to COVID-19 and how Teachers Navigated it*

A substantial amount of time had been lost for teaching, although this varied across SA schools. Several guidelines and documents emphasised the requirements for the various subject for learners to progress to the next grade (Hoadley, 2020). Initially, the Department of Basic Education (DBE), proposed cancelling or postponing examinations. Learners' strengths and weaknesses were to be considered while conducting assessments. Additionally, not all grades and subjects were treated the same in assessments. Some subjects like mathematics and languages had formal assessments.

### *2.4.3 Reduction and Change in Assessment*

In SA schools, the DBE (2020, p. 15), proposed 'Curriculum Trimming' to assist online teaching. Feasibility in analysing and examining the curriculum about adequate school resources, and the current social and economic situation were also considered. The curriculum for Grade 12 continued and remained as initially planned, but some assessments were reduced. The June 2020 examinations and the matric examinations were moved to November/December 2020. Formative assessments were suggested for Grades 1-3 as examinations were cancelled. Assessments for Grades 4-9 were also reduced.

## 2.5 Social Experiences

Social challenges are the problematic matters and dynamics that surround the process of education, as well as learners' well-being and teachers' success. These problems can be explained by socio-economic inequalities, cultural diversity, and new forms of communication in the digital era that have changed social interactions among people. Notably, one such issue is the achievement gap between different races, ethnicities, or socio-economic groups; it may arise from factors such as seclusion in schools, unequal resource allocation, or even hidden prejudices in learning institutions (Reardon, 2013). This challenge can only be addressed if a systematic approach is in place for equity, inclusivity, and justice in education.

Another social challenge is the effect of societal issues on learner performance, which include factors such as stress, anxiety, and bullying (Durlak et al., 2011). Teachers are responsible for providing positive support to their learners so that they develop socially and emotionally as well as perform academically better. Furthermore, several social challenges have emerged due to the increased use of social media platforms and various digital technologies being adopted. This has led to an increase in online safety risks among learners and thus the need for critical media literacy skills (Jenkins et al., 2009).

One of the main limitations of a move to online teaching and learning was the loss of human interaction between teachers. Human interaction is important for young learners who need to learn. According to the experts, although the use of ICT "gadgets" is like "an extended arm" for learners, there is no substitute for proper teacher-learner interaction (Ferri et al., 2020, p. 10). Many of the social challenges are because of not having normal interaction between teaching staff and learners. Social challenges were attributed to teachers and learners not being

able to interact physically, the lack of appropriate home settings to complete lessons, and minimum support from parents who also worked from home.

### *2.5.1 Teachers Need to Address Learners' Mental and Emotional Needs*

A challenge for the teacher was to connect emotionally with learners in uncertain and anxious times. Imad (2020, p. 1) referred to teachers as 'dancing clays' as teachers tried to keep a balance of learner's mental and emotional needs. This balance included teachers emailing learners and offering support by also referring learners to a counsellor, repeating lessons to refresh learners. Teachers had to be hopeful and optimistic at the same time to help learners manage stress.

### *2.5.2 Experiences of Teachers with Special Needs Learners*

The changes to online teaching were challenging for teachers of learners with special needs, who often require extra attention and need to be at school because they use special equipment (Schuck and Lambert, 2020). Thus, the lack of resources for some learners who required special support was a challenge. There was also little motivation for learners, and parents did not have the time to assist their learners in certain aspects.

The common disabilities that required special needs resources were autism, learning disability, and speech disability. The change from their routines to engaging learners and trying to connect with these learners was very challenging for teachers transitioning to online teaching. Schuck and Lambert (2020) also noted that teachers experienced multiple challenges while trying their best to engage with families and try new teaching methods. Teachers were also expected to provide adequate support to families. However, there were not enough resources, not enough adult support at home, and teachers tried to obtain assistance from parents to assist their teaching.

A further challenge for the teachers was that learners showed different behaviours because of changes in their routine. The learners' routines were affected, and learners also experienced outbursts at home because they refused to complete tasks. Teachers also faced the challenge of teaching parents how to help their children at home. Some added challenges were conducting assessments and motivating learners' attendance on the online platform. According to UNESCO (2020), online learning raises concerns that learners with fewer tools were not likely to engage meaningfully in remote learning.

## 2.6 Challenges on Online Platforms Versus Traditional Classroom Settings

Scholars questioned whether the online platforms were sufficient to continue the teaching endeavour (Imad, 2020), and whether distance learning was an appropriate solution to the problem, since schools are a place for social learning among learners (Konig et al., 2020). Social development is important for learners to learn age-appropriate skills.

Furthermore, many teachers and learners in rural South Africa lack the resources to improve technology (Cristobal-Fransi et al., 2020). In most rural areas South Africa, it is more difficult to offer quality education services. Learners and teachers in rural South Africa required much assistance (Ebrahim et al., 2020) and online learning could not take place during COVID-19 because of a lack of resources to connect online and low-quality software (Dube, 2020).

Ramrathan et al. (2020), who examined the shift to online teaching and addressed the challenge of curriculum overload from an African Ubuntu perspective, found that these new technologies were very expensive.

## 2.7 Teachers' Experiences with Technology, Pedagogy, and Social Changes During COVID-19 and Application Post COVID-19

Grade 10 teachers' technological, pedagogical, and social adaptations to the pandemic and in the post-pandemic era are examined next.

### *2.7.1 Teachers' Technology Experiences During the Pandemic (Change)*

Globally, teachers had to quickly learn new technologies and digital tools to enable online teaching during the COVID-19 pandemic. However, many teachers struggled with technology and appropriate resource accessibility (Ferri et al., 2020). A study by Alonso-García et al. (2021) showed that teachers' competency in online pedagogy and their attitude towards technology significantly impacted their adoption of pandemic-related technological adaptations. They could teach better online and use digital materials only when they were technologically competent and had good attitudes toward technology. Even technology proficient teachers may not handle the workload and time pressures associated with digital content and online learning (Kaden, 2020).

Teacher-learner digital divides widened rapidly because of the sudden shift to online teaching (Beaunoyer et al., 2020). There was a lack of internet access, computer devices, and technical aid for teachers in underprivileged schools and communities (Aboagye et al., 2021). These

differences in technological access hampered online teaching and drove educational injustice (Azubuike et al., 2021). Some institutions provided professional development for teachers to enhance their technological competence while adapting them to online instruction models adopted during the COVID-19 crisis (Hartshorne et al., 2020). However, there were inconsistencies in this support, and many teachers struggled with online methodologies throughout the COVID-19 lockdown (Giovannella et al., 2020).

Schools opening after the COVID-19 outbreak necessitated rotational or hybrid schedules, leading to greater challenges in using technology among teachers. Face-to-face and online learning methods were employed simultaneously through multiple devices (Niekerk & Niekerk, 2022), creating time management issues, and causing further work pressure (Apriyanti et al., 2022). Despite this, teachers found some advantages of technology in their instruction like adaptability, tailoring, and engaging learners (Chen & Zhang, 2023). Moreover, teachers' desire to embrace and integrate various technologies into their teaching was intensified after the pandemic (Stelitano et al., 2021).

Several studies have focused on how teachers experienced and changed their approaches to teaching because of technological advancements during the pandemic. According to a review conducted by Thompson et al. (2023), most research on technology used by teachers during the COVID-19 pandemic reported common themes of the continued need for technological support, digital literacy, and the prospect of technology to change the teaching and learning experience. In a large-scale survey by Pressley et al. (2022), teachers who were assisted with modern technologies and were properly trained tended to enjoy online instructions and adopt educational technologies even in the post-pandemic era. These results highlight the significance of giving teachers the resources they required to navigate the changes of technological advancements during this crisis period to improve their knowledge and skills acquisition through learning technologies in education.

### *2.7.2 Pandemic-Related Pedagogical Changes for Teachers (Change)*

Teachers also had to adapt their pedagogical methods due to the coronavirus pandemic. Many teachers found online teaching challenging as they had to find ways of motivating learners (Carrillo & Flores, 2020). Teachers struggled with creating interactive and cooperative online learning experiences and instead continued lecturing and giving assignments (Rasmitadila et al., 2020). Teachers were unable to differentiate online lessons according to individual learner needs (Aperribai et al., 2021).

Teachers were looking for various ways to improve their abilities to meet these pedagogical concerns in online teaching. In the middle of the pandemic, teachers used media resources, promoted learner-driven discussions, and frequently provided feedback as well as support (Alea et al., 2020). Khlaif et al. (2021) noted that icebreakers and small group exercises with personalised interactions with learners can build community through social presence in an online setting. Thus, teachers had to be flexible in their teaching methods when moving from one educational modality to another.

As schools reopened using hybrid and rotational teaching, challenges arose for teachers managing in-person and online learning simultaneously (Niekerk & Niekerk, 2022). For example, Apriyanti et al. (2022) found inconsistent use of materials across approaches thus prioritising learners who were physically present rather than those learning online. Differentiation strategies applied by these teachers required innovative approaches to assess how best the interest of each learner could be taken care of within hybrid classrooms (Putri et al., 2022).

The pedagogical innovations during the crisis have emphasised the value of ongoing teacher training and support for effective instruction. A systematic review by Hollings et al. (2023) of 52 papers about teachers' professional development programmes during the pandemic found that collaborative learning, reflection, and contextualised support are crucial for instructional growth and adaptability. According to a survey by García-Alberti et al. (2023), teachers who participated in online and hybrid teaching professional development programs reported higher self-efficacy, job satisfaction, and improved perceptions of learner learning outcomes. These findings have implications for teacher preparation for the post-covid era and concur with the importance of continuous professional development and support for teachers.

The recent educational changes due to COVID-19 have also raised discussions about future education and creative ways of teaching. The pandemic created an opportunity to "reset" pedagogy by reimaging traditional teaching practices in favour of learner agency, creativity, and social-emotional learning (Rapanta et al., 2021). Qualitative research by Noori et al., (2024) demonstrated how teachers yearned for more flexible curricula with personalised approaches, thereby integrating technology into teaching during the pandemic. Consequently, these studies showed that pedagogical reforms might have long-lasting impacts on instruction as teachers work to establish more resilient, equitable, learner-centered school systems in the post-pandemic era.

### *2.7.3 Social Experiences of Teachers' During the Pandemic (Change)*

The social dynamics of education, including its technological and pedagogical aspects, changed due to the coronavirus pandemic. Since abruptly shifting to online learning, teachers were faced with social isolation and loneliness (Apriyanti et al., 2022). To address these problems, teachers developed groundbreaking techniques for building online learning communities (Klaif et al., 2021). The article by Pressley et al. (2022) showed that online teachers who emphasised learner well-being and social-emotional learning experienced more engagement among learners than their counterparts who did not pay attention to these aspects. Niemi and Kousa (2020) highlighted friendly interactions with learners, informal communication, and greater emotional support for helping learners online to improve their general well-being. There is clearly a need to structure online learning processes to enhance connections between teachers and learners.

Teachers also had to contend with additional social issues, such as how they could deal with hybrid models of teaching combined with distance learning when schools reopened. Trust needed cultivating to promote collaboration based on teamwork (Khlaif et al., 2021). Apriyanti et al. (2022) argued that our current education system still faces significant equity gaps even after adapting recent technology for learning purposes. For this reason, most learners did not perform well when it came to studying using devices like personal computers or smartphones. Also, the hybrid model necessitated new methods of creating classroom communities, promoting interaction among learners, and supporting their social-emotional well-being (Niekerk & Niekerk, 2022).

Teachers also needed to care for their own well-being during the pandemic. Ozamiz-Etxebarria et al. (2021) conducted a review of 28 studies on teacher well-being during the pandemic and found that many reported elevated levels of stress, anxiety, and burnout. The findings indicated that workload, social support, and self-care behaviours were important for promoting teacher well-being, thereby necessitating targeted interventions and resources to enhance teachers' mental health and resilience. To be adaptable, teachers needed the support of colleagues and peers who had similar experiences (Noori et al., 2024).

The role of schools and teachers in achieving social justice in education during the pandemic has been questioned. In a concept paper, Rapanta et al. (2021) stated that COVID-19 increased educational disparities, such as lack of access to online learning materials among poor children due to closures. These authors argued that post-pandemic education should be more inclusive and socially just by focusing on the needs of marginalised learners. Furthermore, a study by

Thompson et al. (2023) revealed that when teachers were interviewed about teaching issues related to social justice during the pandemic, they showed an increasing awareness about teaching being political and social. These researchers suggested that the pedagogical approaches applied should be critical and transformative. Their studies show that teachers may have revised their fight for equal education during a societal shift due to the pandemic.

### *2.7.4 Post-pandemic Educational Methods and Pandemic Experiences*

Teachers' post-covid strategies are influenced by their COVID-19 experiences. As such, many teachers have had to rethink their approaches and produce new ways of involving learners in the learning process amid the rising popularity of distance education and hybrid models (Rapanta et al., 2021). According to a survey by García-Alberti et al. (2023), most participants claimed that they had resorted to greater dependence on technology, learner-oriented teaching methods, and socio-emotional learning following the pandemic.

Post-pandemic teaching methods have also been influenced by the challenges and uncertainties that come with the "new normal" in education. Noori et al. (2024) revealed the common issues teachers face in post-pandemic teaching, such as need for flexibility, resilience, and adaptability under constant disruptions and changes. Adaptive expertise became a necessity for teachers during the COVID-19 pandemic, implying an increased demand for teacher's ability to adjust their knowledge and skills in diverse contexts of instruction (Thompson et al., 2023). These authors proposed a framework for developing adaptive competence in teacher education and professional development based on their pandemic experience.

Post-pandemic teaching methods have changed following the socio-economic changes due to the pandemic. A meta-analysis by Hollings et al. (2023), based on 42 studies concerning the long-term effects of the pandemic on education, identified trends such as the acceleration of digitalisation processes in the educational sphere, a focus on equality and inclusiveness, and an increasing significance attached to social-emotional learning and learner well-being. The review underscored the importance of teachers adapting to these new educational settings by building the necessary skills and mindsets for success after COVID-19.

Reform movements in education and policy debates have also shaped post-pandemic teaching methods. Stelitano et al.'s (2021) examined how COVID-19 impacted the educational policy in the United States (US), calling for systematic and equitable education reform that addressed educational disparities as well as supported the development of a more resilient and adaptive

teaching workforce. An analysis by Chen and Zhang (2023) compared education policy responses to the pandemic in different countries, highlighting the need to combine crisis management with strategic planning. Teacher professional development and support are critical.

If teachers, schools, and education systems had learned from the challenges and opportunities during this crisis, post-pandemic teaching approaches would have been affected by their pandemic experiences, leading to more resilient, equitable, and effective educational practices. The COVID-19 pandemic has functioned as a pedagogical shift that is challenging fundamental assumptions and practices while opening new possibilities in education (Rapanta et al., 2021). Teachers can shape post-pandemic education by reflecting on their pandemic experiences, engaging in continuous professional learning, and partnering.

## 2.8 Teachers' Experiences Transitioning to Online Teaching

### *2.8.1 Teachers' Initial Online Teaching Experiences (Unfreeze Stage)*

At the beginning of the pandemic, teachers were forced to quickly adapt to sudden changes in technology, teaching techniques, and learner interactions when switching to online learning. This section will view problems arising from technology, pedagogy, and social aspects experienced by Grade 10 teachers during this period and the strategies they employed to cope with online instruction.

### *2.8.2 Technology Issues During Online Teaching Transition (Change)*

Teachers had to learn modern technology and use unfamiliar platforms to teach online during the pandemic. Many teachers found it challenging to teach online because they had no prior experience in this field or lacked the appropriate technical resources and support systems (Ferri et al., 2020). In the early days of the outbreak, Indonesian teachers met numerous technological barriers like poor internet connections, lack of digital equipment, and how to administer online teaching systems (Aliyyah et al., 2020). Spanish teachers experienced difficulties with online teaching, such as creating digital content and employing videoconferencing tools (Aperribai et al., 2021).

The digital gap or unequal access by learners and schools due to technology and internet resources made it harder for teachers to transition to online instruction (Beaunoyer et al., 2020). Italian teachers dealt with differences related to technology access among their learners during

the first months of the pandemic by providing printed materials and technical advice and involving families and communities in online education (Giovannella et al., 2020). Even so, this approach did not solve all problems associated with the digital divide because rural areas and slums remained disadvantaged in terms of accessing e-learning services (Azubuike et al., 2021).

The technological hurdles teachers faced when transitioning to online instruction also affected their workload, stress levels, and well-being. According to Kaden (2020), teachers spent more time trying various technologies, including software packages, after establishing different pedagogical techniques. In fact, Pressley et al. (2022) discovered that job satisfaction was lower among those who struggled with technology than those who felt comfortable using it. These results highlight the need for better provision of technological assistance through training courses so that teachers can initially deal with school closures.

While some teachers encountered technological obstacles during their first online teaching experience, they also recognised the potential of digital tools and platforms to improve their classroom practice. The research conducted by Chen and Zhang (2023) on Chinese teachers during the pandemic identified that they commonly preferred to use digital technologies because they were more flexible in terms of time management, engagement with learners, and subject customisation. However, Noori et al. (2024) questioned how these teachers adapted when they had no other way than to go online. They concluded that going online meant that teaching professionals were not only able to experiment but also to innovate, which consequently changed their traditional pedagogical approaches.

### *2.8.3 Initial Online Teaching Pedagogical Challenges (Unfreeze)*

The pandemic caused education to go online and forced teachers to change their pedagogical approaches. In particular, in the initial stages, many teachers found it difficult to adjust their physical teaching methods for online learning (Carrillo & Flores, 2020). Rasmitadila et al. (2020) observed that Indonesian teachers, at the beginning of the pandemic, struggled with learner engagement, feedback provision, and hands-on and experiential learning. According to Khlaif et al. (2021), Palestinian teachers failed to adapt their e-learning strategies to differentiate, particularly in terms of classroom management and assessment practices.

It was even harder for teachers to start with online instruction because of a lack of training in pedagogy on the internet. A review by Alea et al. (2020) of 24 studies on teacher preparedness

for online learning during the pandemic revealed a wide gap between teacher's technology skills and pedagogical expertise. The review highlighted the need for specific professional development and support that would enable teachers to facilitate online discussions, give feedback on learners' work and create interactive and engaging activities.

Moreover, teachers faced initial instructional challenges when transitioning to online teaching. Based on calculations by Dorn et al. (2021), sudden switching to online schooling following COVID-19 resulted in substantial losses among learners, especially those from disadvantaged backgrounds. This research suggested that effective e-pedagogy could have mitigated these losses by fostering the continuity of education during crisis periods. The study of Giovannella et al. (2020) on Italian learners during the early phase of the COVID-19 pandemic exposed shared challenges, including a lack of motivation, self-regulation problems, and limited peer interaction and collaboration abilities. These results confirmed that supportive and interesting online environments developed by teachers can influence learners' academic performance and welfare.

Although they faced initial obstacles when teaching online, many teachers could visualise learner-centered and personalised instruction in virtual pedagogy. Through the pandemic, Chen and Zhang (2023) investigated how Chinese teachers resorted to flipped learning, project-based learning, and gamification as a way to engage learners actively. According to Rapanta et al. (2021), the COVID-19 pandemic brought about an educational reset where teacher-centered approaches have been questioned while learner-centered approaches have been examined. These authors' proposal for post-pandemic education was a concept of resilient pedagogy that was based on flexibility, adaptability, and learner autonomy. This research showed that even though teachers in online teaching faced major challenges, this method allowed for innovation that entailed adjustment in their didactic approaches that may influence education systems in the future.

An online learning alternative in the context of COVID-19 excluded many learners from teaching and learning in South African schools because of the lack of resources to connect to the internet, poor internet connectivity, and low-tech software (Dube, 2020; Ebrahim et al., 2020). Ngogi (2020) concluded that blended learning practices in South African schools was commendable as new teaching methods and strategies had to be learned to continue teaching learners.

### *2.8.4 Social Issues During Online Teaching Transition (Change)*

The pandemic's technological, pedagogical, and social dynamics altered education with the sudden switch to online instruction. Many teachers had a challenging time maintaining ties and promoting the emotional well-being of their learners during the shift to online teaching (Niemi & Kousa, 2020). In their qualitative study on UK teachers' social challenges in early pandemic online teaching, Kim and Asbury (2020) found that face-to-face personal interactions were entirely lost, rapport building between learners proved difficult, and emotionally supporting learners online became more challenging. According to Pressley et al. (2022), US teachers in the initial stages of the pandemic were worried about their learners' mental health situations, especially those coming from low-income or marginalised families.

The first changes to online teaching intensified teachers' social issues, which combined with the pandemic's socio-emotional consequences for learners and families. In reviewing studies examining the effects of learner loneliness and isolation on mental health, Loades et al. (2020) found that the rates of anxiety, depression, and stress were significant early in the COVID-19 pandemic. This implied that schools and teachers played essential roles in emergency support and mental health promotion activities during the pandemic. To explore how learners with disabilities transitioned into online learning early on, Haie et al. (2021) conducted a qualitative study confirming similar issues such as lack of social interaction or connection, difficulty accessing support materials or resources, among others, with resultant stressors like anxiety levels higher than previously. Pandemic-specific social-emotional interventions for vulnerable learners should be considered based on these findings.

Initial problems of online instruction also affected teacher well-being and resilience. During the initial stages of the COVID-19 outbreak German teachers were under stress, and experienced high levels of anxiety and burnout (Klapproth et al., 2020). This research indicated that thriving in teaching was enhanced by social support and self-care strategies including maintaining social ties, setting roles and responsibilities, and stress reduction. Bubb and Jones (2020) undertook a qualitative study on social support given to Norwegian teachers during the beginning of online teaching. These authors found that teachers' well-being and adaptability occurred through peer networks, leadership support, and collaborative learning.

Initially, teachers grappled with the social aspects of online teaching, but many saw a way for social connection and inclusivity. For instance, Palestinian teachers used breakout rooms, discussion forums and collaborative projects to build a sense of belonging among their learners

at the onset of the pandemic (Khlaif et al., 2021). Socio-emotional learning, like empathy, communication and teamwork was especially important in education in the pandemic. Rapanta et al. (2021) recommended a "socially inclusive pedagogy" emphasising equity, diversity, and belonging after the pandemic. These studies demonstrate that although there were major initial social obstacles to online instruction, the pandemic allowed teachers to rethink how learning environments can be made more inclusive as well as supportive.

### *2.8.5 Online Teaching Adaptation Strategies by Teachers*

Several strategies and approaches were developed by teachers to adjust to online teaching and overcome technological, pedagogical, and social challenges. The strategies shared similar features across locations. For example, in their summary of studies on adapting to online teaching during COVID-19 lockdowns, Alea et al. (2020) found that teachers used multimedia resources, frequent feedback and support, social interaction, and collaboration as strategies in their online teaching. Often, teachers used digital tools and platforms to create fun and engaging learning experiences for effective online teaching. Chen and Zhang (2023) reported that strategies used in China's early pandemic included video conferencing for synchronous lessons, interactive quiz games for learner motivation, and peer feedback via social media accounts. Meanwhile Noori et al. (2024) found that Afghan teachers used mobile learning apps, among others, for hands-on immersive learning experiences.

To adapt their instruction to the online medium, teachers emphasised learner well-being, including social-emotional training. In a study by Kim and Asbury (2020), UK teachers focused on maintaining social connections with learners through regular check-ins, virtual social events, and mindful activities at the onset of shifting from face-to-face to online lessons. Similarly, Pressley et al. (2022) observed that US online teachers who paid more attention to social-emotional learning increased learner engagement rates, thereby lowering learners' anxiety levels.

Teachers also created strategies to address equitable access and inclusion in online instruction particularly around the most vulnerable populations of learners. For instance, the Italian study conducted by Giovannella et al. (2020) showed how the country implemented distance education during the initial stages of lockdown, including providing printed materials, and offering technical assistance besides family-community co-operation. In the Palestinian research conducted by Khlaif et al. (2021), Palestinian teachers used assistive technology, differentiated instruction, and culturally responsive pedagogy during the pandemic.

Finally, teachers discovered that online education needed continuous professional development and co-operation. For example, Trust and Whalen (2020) found that US teachers who had moved to online teaching needed practical assistance at first, as well as the support of their peers to improve the effectiveness of their lessons. In the same vein, Hartshorne et al. (2020) provided insights on how teachers across various countries used online communities of practice, peer coaching, and action research to build capacity and reflect on their practices throughout the early phases of the pandemic. These findings pointed towards teacher agency and power, which are crucial to online learning for resilient educational practices in the post-COVID-19 era.

## 2.9 Management of Technological, Pedagogical, and Social Changes in Online and Rotational Teaching

Teachers faced new challenges as the pandemic persisted and schools began to re-open. They now needed to manage different issues associated with social, technical, and pedagogical shifts related to online and rotation-based teaching. Effectively, teachers had to manage both face-to-face instruction and online teaching at the same time using various means to involve learners across different modalities (Niekerk & Niekerk, 2022). This section reviews how teachers dealt with these changes, focusing on the socio-cultural, technological, and pedagogical aspects of online and rotational teaching.

### *2.9.1 Managing Social Changes in the Context of Online and Rotational Teaching*

The transition to online and rotational teaching during the pandemic significantly affected the social interactions involved in teaching and learning. Teachers faced several social issues such as handling relationships and communication with learners across varied instructional formats, creating a sense of belonging in hybrid learning environments, and safeguarding learners' emotional well-being amid uncertainty and stress (Apriyanti et al., 2022). In their study, Niekerk and Niekerk (2022), investigated how South African teachers coped with changes within society arising from rotational teaching. Teachers used various strategies, including using online platforms for staying connected with learners, creating virtual communities where peers could interact, and assisting individual learners through feedback, among other ways.

The main challenge facing these teachers while using online or rotational methods was related to equality and inclusion for all the learners. For instance, the pandemic had deepened social inequalities, especially for marginalised groups such as those living in poverty (Dorn et al.,

2021). In some studies, this issue was addressed by developing mechanisms that ensured equal access to quality education and support, regardless of the learner's background. For example, in Khlaif's 2021 study on the practices of Palestinian teachers regarding fairness and inclusivity in online and rotationally taught classes, some teachers used personalised instructions as well as culturally sensitive approaches to instruction, while others partnered with families or communities to deal with specific challenges faced by diverse groups among them.

Socio-emotional shifts during COVID-19 challenged teacher's resilience. Many teachers experienced mental health issues and reduced job satisfaction following their efforts towards managing multiple models of instruction while meeting learners' social-emotional needs (Kim & Asbury, 2020; Klapproth et al., 2020). To manage their stress levels, teachers turned to various self-care techniques, like setting limits, seeking assistance from colleagues, family members, and participating in mindfulness-based relaxation techniques (Aperribai et al., 2021; Kim & Asbury, 2020).

### *2.9.2 Emotional and Psychological Challenges of Teachers During the Pandemic*

It is important to understand the impact of the teaching changes on the minds of teachers as they navigated the shortcomings of the pandemic. One of the main limitations of a move to online teaching and learning was the loss of human interaction between teachers and learners. The lockdown interrupted learning in South African schools, and many learners and teachers were incapable of carrying out online learning during the COVID-19 lockdown (Ebrahim et al., 2020). New teaching methods and strategies had to be learned to continue teaching learners.

While teachers' desire to achieve is one of the most important constructs of teacher competence (Bandura, 1997; Lauermann and Konig, 2016), the new teaching paradigm resulted in their anxiety, health issues, loneliness and depression, with some teachers experiencing post-traumatic stress disorder (Leite et al, 2020; Talidong et al., 2020). Many teachers were unconfident in their online teaching, and frustrating technology glitches added to their anxiety and stress, further impacting their mental health and affecting their effectiveness as teachers (Adams, 2019). Their personal lives, self-management, and emotional awareness suffered. Although teachers are considered essential workers (Beames et al., 2021), their inability to feel safe affects their role as teachers in reaching their full potential (Lever et al., 2017).

Nevertheless, teachers still had to connect with their learners, support them, and continue teaching despite their own fears and anxiety (Robinson, 2020). Learners were socially isolated

as they were no longer exposed to their traditional classroom setting, which is best suited for expressing their emotions to others, and some were absent during online learning (Ali & Smith, 2015; Holmes & Reid, 2017; Schaeffer & Konetes, 2010). Indeed, Imad (2020, p. 1), referred to teachers as 'dancing clays' as they tried to keep a balance of learners' mental and emotional needs.

There were more resilient teachers who coped well and reported fewer COVID-19 worries and lower levels of anxiety and depression (Barzilay et al., 2020). Coping strategies represent the ways an individual, group, or organisation use to minimise the effects of stress (Barhem et al., 2009).

It was vital for teachers in the pandemic to maintain a sense of purpose, build resilience, and adopt a growth mindset in adversity.

### *2.9.3 Managing Technical Advancements While Maintaining Online and Rotational Teaching*

The pandemic forced teachers to adapt to some technological breakthroughs and obstacles when they moved to online and rotational teaching. Teachers had to quickly adjust to new digital tools and platforms, often with little or no training support, and find ways of integrating technology smoothly into their instructional methods (Chen & Zhang, 2023). Aperribai et al. (2021) studied the obstacles that Spanish teachers faced as they tried to employ online and rotational teaching processes. These authors identified challenges, like scarce secure technology availability for most teachers with limited access to internet services, managing several learning management systems and communication tools, and constantly needing technical help from experts and professional growth.

Teachers tried different ways to overcome these technology barriers, including actively seeking web tutorials, collaborating with colleagues and technology partners (Hartshorne et al., 2020). Chen and Zhang (2023) showed how Chinese teachers managed the transition from traditional classroom-based instruction to online models where rotation was involved. These teachers used blended learning models whereby they developed adaptive learning technologies while incorporating game-based strategies, all aimed at ensuring effective learner participation as well as individualising their knowledge acquisition.

Another challenge that teachers faced in our technological age the safeguarding of learners' data privacy during online classes. As online learning became more popular among learners,

parents were concerned of their safety from predators. Cyberbullying ranks as a high security threat faced by teenagers globally according to statistics provided by World Health Organisation (WHO), the international organisation whose mandate includes promoting public health worldwide including prevention measures aimed at reducing incidence rates alongside other forms of violence perpetrated against children in school environments (Niekerk & Niekerk, 2022). Teachers therefore needed to be familiar with strategies and procedures such as providing secure communication platforms, monitoring children's online activities, and teaching digital citizenship skills to both learners and their parents (Giovannella et al., 2020).

### *2.9.4 Managing Pedagogical Adjustments in Online and Rotational Teaching*

During the pandemic, teachers had to adjust their teaching methods and overcome substantial pedagogical obstacles as they transitioned to online and blended teaching. With limited time and resources for planning and preparation, teachers had to change their teaching methodologies to suit different styles with specific advantages and limitations (Khlaif et al., 2021), Apriyanti et al. (2022) examined the pedagogical barriers that Indonesian teachers faced when using both online and rotational teaching approaches. The challenges they identified were making learning meaningful, providing valuable feedback for assessment purposes, and coping with classroom dynamics and behaviours across different teaching modes.

Teachers developed a wide range of strategies to deal with their educational challenges, including flipped learning models, project-based learning, and inquiry-based learning and promote learner ownership of work (Chen & Zhang, 2023). Niekerk and Niekerk (2022) found that South African teachers dealt with the changes in pedagogy associated with rotational teaching using blended learning techniques, formative evaluation practices, and differentiated instruction to address learners' individualised needs for growth.

Promoting critical thinking creativity and problem-solving skills among learners in online or hybrid education proved a significant impediment for teachers, especially for teachers in remote areas (Rapanta et al., 2021). They adopted diverse strategies, including using authentic, relevant assignments that promoted cooperative peer-to-peer learning and technology integration that enhanced learners' metacognitive abilities while encouraging critical thinking through the contextual use of technologies (Noori et al., 2024). Palestinian teachers tackled the pedagogical problems associated with online and rotational teaching using strategies such as problem-based learning and design thinking to promote the creative, critical, and innovative skills of learners (Khlaif et al., 2021).

### *2.9.5 Changes Implemented by Teachers to Address Challenges*

Teachers introduced numerous alterations and developments in their teaching methods to address the social, technological, and pedagogical barriers of online and rotational education, from minor adjustments to major changes (Hartshorne et al., 2020). In a comprehensive review, Alea et al. (2020) synthesised findings from studies on changes in teachers' strategies for online and rotational formats during the pandemic. The review identified the use of blended learning models, social-emotional learning tactics in the curriculum, and learner-centered customised approaches. Through formative assessment techniques, such as portfolios, peer feedback and self-reflection, some teachers empowered learners, leading them to take responsibility for their own learning. In remote/hybrid learning settings though, traditional testing methods could not be relied upon as an effective way of evaluating learners' performances (Khlaif et al., 2021). Teachers also made decisive changes through innovative evaluation techniques.

Another crucial adjustment that teachers made was to focus on social-emotional growth among learners while engaging in online or rotational lessons. They realised that amid the stress increases related to the uncertainties of COVID-19, there was a need not only for academic progression but also for mental well-being and nurturing (Kim & Asbury, 2020). Chen and Zhang (2023) conducted a case study on Chinese teachers who shifted their instructional practices toward emphasising social-emotional skills when implementing online or rotational instruction methods. The teachers used mindfulness and other stress-relieving activities to create supportive class communities where emotional intelligence was integrated into the management of different subjects.

Teachers changed their professional development and collaborative approaches, effectively responding to the challenges faced during sessions with a teacher-learner interaction model, but mostly taught via internet mediums. Due to the fast-paced transformations of COVID-19, teachers acknowledged the importance of continuous professional development and peer assistance to adapt to changing teaching and learning dynamics (Trust & Whalen, 2020). In a qualitative survey by Hartshorne et al. (2020), teachers' professional growth means were evaluated in relation to their online and rotational teaching experiences in different nations. This study suggested that virtual communities of practice, online webinars, workshops, and collaborative action research were ways for teachers to share best practices, resolve problems, and create new knowledge and strategies in effective education after the pandemic.

## 2.10 The Implications of Changes for Teaching and Learning During and After the pandemic

There were considerable implications for teaching and learning as the pandemic encompassed social, technological, and pedagogical transformations. These effects were observed during the crisis and are projected to persist in the post-pandemic era. Implications range from the immediate impact on learners' learning outcomes and teacher well-being, to long-term consequences on educational policies, practices, and paradigms (Zhao, 2020). This section explores how these changes affected schooling during the COVID-19 pandemic and beyond, with a particular focus on the challenges encountered, opportunities presented, and the lessons learned from this unprecedented pandemic.

### *2.10.1 Teaching Implications During the Pandemic*

The pandemic caused a major change in teaching methods and experiences as online and later rotational teaching techniques were adopted. The outbreak necessitated quick adjustments by teachers to new technologies, new ways of instruction, and interactions, which in most cases were not sufficiently explained (Ferri et al., 2020). As a result, many teachers experienced increased workload, increased stress levels, and burnout.

While there have been concerns about how the effectiveness of online and hybrid learning (Aperribai et al., 2021), teachers have also had a chance to be creative and try different approaches to their teaching methods, which could have had lasting impacts on education (Chen & Zhang, 2023). Various authors like Alea et al. (2020) have pointed out that many teachers now possess different abilities and perspectives to enhance teaching in the digital age using blended learning models, personalised instructions, and socio-emotional development. Thus, the pandemic was an opportunity for systemic changes in education, involving flexible forms of learner-centered learning, technology integration that was meaningful and effective, and making equity central to educational policy decisions, including those on inclusion on all fronts (Zhao, 2020).

As is the case with any transformation during emergencies, such as pandemics in educational systems across various countries, some unique situations have arisen. In addition to these digital gaps among others, pre-existing disparities and challenges in relation to education, for example teacher shortages among other factors, worsened the pandemic (Dorn et al., 2021).

### *2.10.2 Effects of Learning During the Pandemic*

The transition to online and rotational teaching styles during the pandemic also had significant outcomes for learners' learning experiences and outcomes. As Kim and Asbury (2020) argued, social isolation, stress, and disengagement intensified among many learners because of the pandemic, which caused substantial disruptions in traditional learning routines and settings. Limited access to reliable technology, internet connection and educational support at home were some of the major challenges of learners from disadvantaged backgrounds (Dorn et al., 2021). Conversely, they helped learners learn the new skills needed in this modern era, such as digital literacy, self-directed learning, and flexibility (Chen & Zhang, 2023). Many learners appreciated the adaptability and the customisation of remote/hybrid education because it encouraged collaboration and innovation using digital tools/platforms (Niekerk & Niekerk 2022).

Learners from different learning environments learned differently during the pandemic and since then. Dorn et al. (2021) acknowledged that during the COVID-19 pandemic there were wide disparities in academic performance of learners belonging to poorer economic backgrounds and those who come from minority communities. Such opportunities occurred during the pandemic where more inclusive teachings could have been conducted using assistive technologies and personalised teaching methodologies including culturally responsive pedagogies (Khlaif et al., 2021). Furthermore, learners needed social-emotional education together with mental health guidance services. Comprehensive approaches for education could also have been implemented (Kim & Asbury, 2020).

### *2.10.3 Teaching Implications in the Post-Pandemic era*

The pandemic has had a lasting impact on teaching methods and paradigms in post-pandemic times because of socio-technical and pedagogical changes. The pandemic also laid bare the limitations and disparities of traditional teaching approaches, which included overreliance on face-to-face delivery methods, obsession with standardised tests, liability, and forgetfulness in social-emotional learning or learner welfare (Zhao, 2020). However, the global health crisis has facilitated the adoption of novel pedagogies and technologies such as blended learning, adaptive learning, and artificial intelligence, which have the capacity to transform education in the 21st century (Chen & Zhang, 2023).

Consequently, what happens after COVID-19 depends on how well education systems at various levels learned lessons during the pandemic while simultaneously adapting to the new situations of digital era teaching and learning (Hartshorne et al., 2020). Teachers' training provisions should be enhanced by investing more in curricular reorganisation and technological infrastructure. Similarly, this entailed a complete shift in our understanding of the nature of education in society (Zhao, 2020). To overcome these issues, there must be greater emphasis on educational equality and justice across societies. Therefore, more holistic ways of delivering instruction that prioritise learners are necessary (Khlaif et al., 2021).

### *2.10.4 Consequences for Education in the Post-Pandemic era*

The long-term effects of the pandemic on learning in the post-pandemic period were expected to be experienced by learners because of significant social, technological, and pedagogical changes. Thus, 21st-century skills and competencies such as critical thinking, creativity, collaboration, and digital literacy were essential during this time of crisis as it became clear how important they were for thriving in an ever-changing world economy (Chen & Zhang, 2023). Additionally, the pandemic also highlighted how continuing disparities in educational outcomes persisted, especially for learners from less affluent and marginalised families. These issues must be addressed immediately in the post-pandemic era (Dorn et al., 2021).

The impact of these changes on learning in the post-pandemic era relies on whether education systems can provide equal access to education for all learners regardless of their background or situation (Khlaif et al., 2021). To do so, personalised and adaptable learning must be prioritised alongside new teaching methods and technologies which foster effective engagement and support for diverse learners (Chen & Zhang, 2023). Additionally, there should be an inclusive educational strategy that encompasses learners' physical health and their intellectual development together with social-emotional aspects, among others (Kim & Asbury, 2020).

The ability to extract lessons from this global disaster and apply them as an opportunity for constructive reform and revolution in education largely relies on the future consequences of the pandemic on teaching and learning. According to Zhao (2020), the pandemic provided a unique opportunity to re-innovate education to make it more equitable, inclusive, efficient, and capable of preparing all learners for the challenges and opportunities typical of 21st-century life. Achieving this would require strong innovation initiatives within guidance and collaboration between all stakeholders involved in education, such as politicians, teachers,

learners, guardians, and communities. It also requires readiness to question existing norms and accept new ways of teaching and learning in the aftermath of the pandemic.

## 2.11 Summary of the Literature Review

Teachers' encounters throughout the COVID-19 pandemic, as discussed in this chapter, are based on diverse and detailed material. The transition to online and rotational teaching was sudden and caused significant changes in the technological, pedagogical, and social aspects of education (Ferri et al., 2020). Teachers were required to adapt rapidly to new tools, strategies, and dynamics, often with limited resources and training or support (Hartshorne et al., 2020). These difficulties were also found in literature, which examined factors like online skills level, years of teaching experience, and school environments, among others (Alonso-García et al., 2021).

Literature also showed that teachers had difficulties initially (unfreeze stage), but they adapted creatively by rethinking their curriculum during the COVID-19 pandemic (change stage). They thus embraced novel approaches, attitudes, and competencies to deliver instruction in the digital world (Alea et al., 2020). They adopted strategies such as using blended learning, which is a combination of various modes of instruction, personalised instruction, which has been effective among learners who needed extra attention socially and academically, and social emotional support, which was important to learners' well-being, especially during the pandemic outbreak (Alea et al., 2020). For schools to effectively adapt to these changes, teacher agency was crucial. According to Trust and Whalen (2020), collaboration between teachers and professional development is crucial.

Research has also pointed out that many traditional disparities have remained unaddressed within educational systems because of the pandemic. Learners from disadvantaged backgrounds could not access reliable technology connectivity or devices and they lacked educational support services necessary for online classes during COVID-19 (Dorn et al., 2021). More focus is needed on issues surrounding educational justice since the COVID-19 pandemic (Rapanta et al., 2021). Teachers' welfare and support have also come to the fore, with some teachers experiencing increased levels of stress, burnout, and emotional exhaustion during the pandemic (Aperribai et al., 2021).

This chapter's material analysis shows that COVID-19 has been a catalyst of challenges and opportunities for education. Although the immediate impacts of the crisis are significant and

diverse, there are long-term effects on education as a whole. There is a need for an all-inclusive and transformative approach to education in the post-pandemic era, as supported by this literature review. However, it should be balanced by fairness, inclusivity, and creativity while allowing teachers and learners to thrive in rapidly changing environments (Zhao, 2020).

This chapter presented a theoretical/conceptual framework that provides insights into how various factors interact to shape teachers' experiences and adaptation during crises. The framework can be applied in future research works and educational practice throughout the study area.

## 2.12 Knowledge Gaps in the Literature

Since COVID-19 is a relatively new phenomenon, there are numerous gaps in the body of knowledge concerning the experiences of teachers during COVID-19. The available literature deals largely with the health sector and neglects the educational sector. Teachers should have been considered as frontline workers who were exposed to the virus and more support should have been offered to teachers during the pandemic. Moreover, there is little research conducted on the teaching and learning process and the impact that the change to online and rotational teaching had on teachers during COVID-19 in the South African context.

## 2.13 Chapter Conclusion

The purpose of this study is to explore Grade 10 teachers' experiences pertaining to technology, pedagogy, and social aspects as they navigated changes in teaching from face-to-face to online teaching, and from online to rotational teaching during the coronavirus pandemic and also to establish the implications of these experiences for teaching and learning during the pandemic and in the post-pandemic era.

The literature review explored teachers' experiences while they conducted lessons online and rotational teaching during the pandemic. The review of the literature dealt with the following 10 main points:

First, the technological difficulties and adaptations, pedagogical methods, and social aspects that resulted from transitioning to online and rotational teaching align with Lewin's change theory framework (Unfreeze, Change, and Refreeze).

Second, there were substantial impacts of the pandemic at both personal and professional levels among teachers and in relation to learners' learning outcomes and well-being.

Third, diverse changes were implemented by teachers to address challenges, with implications for teaching and learning during the pandemic and in the post-pandemic era.

Fourth, the pandemic revealed the weaknesses and unfairness of the education system and provided opportunities for innovative teaching-learning partnerships.

Fifth, teachers managed pedagogical adjustments in online and rotational teaching related to assessments and curriculum trimming.

Sixth, teachers needed to address learners' mental and emotional needs despite their own challenges.

Seventh, maintaining a sense of purpose, building resilience, and adopting a growth mindset in pandemic-related adversity were vital for educators in the pandemic.

Eighth, teachers experienced increased workloads, increased stress levels and burnout in their online learning commitments during the pandemic.

Ninth, teachers adapted to online teaching using various strategies and managed to adjust to social, technological, and pedagogical changes while teaching online and in a rotational format.

Lastly, teachers in various countries implemented changes to address technological, pedagogical, and social challenges.

In summary, the COVID-19 pandemic era has provided a new teaching and learning paradigm for the education sector. It is important to draw upon the pandemic to guide stronger, fairer, and better policies for future education systems. Benefits of the lessons of the pandemic will depend on continuous support for growth professionally and overall welfare.

This literature review has discussed teachers' experiences while adapting to online and rotational teaching during the COVID-19 pandemic using the technological, pedagogical, and social concepts of Ferri et al. (2020). The next chapter will expand this discussion using Lewin's Theory of Change to show the different stages of the change.

# CHAPTER 3

# THEORETICAL FRAMEWORK

## 3.1 Introduction

This chapter examined the theoretical framework that supports the study of teachers' experiences as they navigated changes in technology, pedagogy, and social aspects during the COVID-19 pandemic in a public school in KZN. The study is underpinned by Kurt Lewin's Theory of Change (1951) to explain teachers' experiences as they navigated change during the coronavirus pandemic.

This chapter analyses Lewin's theory and describes how it guides the research questions and addresses the purpose of the study. The theory is used to answer the research questions of the study: What were Grade 10 teachers' experiences as they navigated changes in teaching during the Coronavirus pandemic in terms of technology, pedagogy, and social aspects, and how have these experiences equipped their teaching approaches in the post-pandemic era?

## 3.2 Theoretical Framework

A theoretical framework is a conceptual structure that guides research by providing a basis for understanding, analysing, and interpreting the phenomena under study. It comprises a set of related theories, concepts, and assumptions that inform the research questions, methods, and analysis (Grant & Osanloo, 2014). A well-defined theoretical framework is important because it situates the research within a broader context of existing knowledge, gives direction to examining a research problem through data generation and interpretation, and suggests ways to get from where we are to where we want to be (Ravitch & Carl, 2016).

This study uses Lewin's Theory of Change as its theoretical framework. The theory is used to explain the change management processes that took place in teaching during the COVID-19 pandemic when teachers had to unlearn their practices, relearn new teaching styles, and then freeze them to ensure continuity (Fullan, 2020). The theory provides a model to account for how Grade 10 teachers transitioned into online and rotational teaching (the unfreeze stage), when teachers were compelled to continue with online teaching and later rotational teaching (the change stage), and then later in the change, leading to the post-pandemic era (the refreeze stage).

Lewin's change framework allowed this study to identify the challenges that teachers faced during the change process and discuss support strategies for teachers' successful transitions (Harris & Jones, 2020). It is applied to the three challenges of online learning conceptualised by Ferri et al. (2020) – technological, pedagogical, and social challenges.

Technological challenges refer to the availability of digital resources, such as internet access and technological tools, teachers' lack of skills in using technology and the need for training and guidelines for teachers and learners.

Pedagogical challenges refer to fostering learner engagement and motivation. Interactive multimedia teaching materials, such as images, animations, and educational games are necessary, as a system for obtaining and evaluating learner progress is currently lacking.

Social challenges refer to inadequate home learning environments and a lack of parental guidance and support.

Thus, the study uses Lewin's three-stage model to examine the change stages in technology, pedagogy, and social challenges.

### 3.3 History of Kurt Lewin

**Kurt Lewin** (1890-1947) was a German-born American social psychologist. He studied at the University of Berlin and received his doctorate in 1914. Lewin is widely considered the pioneer of change management, group dynamics, and action research, which he applied to create efficient methods for resolving the challenges individuals and organisations face. Lewin introduced a planned view of organisational change in the 1940s and created a rational, goal-oriented model of change that enhanced organisational effectiveness and viability. This change model pioneered group dynamics in the organisational context (Immordino, 2017).

Lewin's 1951 Theory of Change or 3-Stage Model of Change (unfreeze, change, and refreeze) provides a model for understanding and managing organisational change. It aims to understand why changes occur, implement the necessary changes, and normalise them in the organisation's day-to-day operations. His unfreeze, change, and refreeze model is considered an essential framework for change management (Robbins & Judge, 2009; Sonenshein, 2010; Waddell, 2007).

### 3.4 Lewin's Change Model for Organisations

Lewin's perspective on life as a continuous process of change is reflected in his Theory of Change, which remains a vital tool today. Lewin's evolving thinking was in this 'preparadigmatic' period (Becher & Trowler, 2001, p. 33). Lewin's model (unfreeze, change, and refreeze) is widely accepted in psychology for implementing change.

Implementing change requires moving an organisation from its current state to a desired future state, which will not happen simultaneously. Commitment planning identifies key individuals and groups whose support is crucial for successful change and buy-in. The people or groups constitute political support, stakeholder plans, and their commitment to change during the process. The change management structure identifies the direction and structure for managing the change process.

Organisational development is concerned with changes in the cultures of organisations and is largely focused on organisational behavioural changes and changes in individuals (Bartunek & Moch, 1987). Lewin's change model posits that an organisation needs to execute change by proceeding from one stage to another, through unfreezing, changing (moving to a new level), and freezing the new level. Change is assumed to occur when one set of forces is greater than the other, when the old behaviour is ignored and the new behaviour is agreed upon and accepted (Lewin, 1947).

Lewin's organisational change model is based on field theory, which was Lewin's most developed work at his death (Burnes & Bargal, 2017). In field theory, behaviour needs to be evaluated in the context of forces that influence it. The existing context is the field in which related forces play a role, and these powers include the person, events, and environment (Burnes & Bargal, 2017). According to Lewin's field force analysis (a process which integrates with Lewin's 3-stage Theory of Change), change is accomplished by either reinforcing the motivators or mitigating the obstacles (Connelly, 2020). A catalyst is needed to unfreeze the status quo and trigger the initial stage of transformation (Burnes & Bargal, 2017).

Lewin perceived behaviour as a dynamic equilibrium, where contrasting forces interact and counterbalance each other. In the education context, driving forces facilitated change by pushing teachers in the desired direction while other forces hindered change by pushing teachers in the opposite direction. Therefore, it is essential to analyse these forces, and Lewin's

3-step model offers a valuable framework to influence the balance in support of the planned change.

### 3.5 Lewin's Theory of Change

Lewin established his Theory of Change in the 1940s. It is a groundbreaking structure for understanding and managing organisational and societal change. Within this body of work, Lewin relied on his contribution to group dynamics, field theory, and action research that emphasised understanding forces that shape human behaviour and the need to develop a planned change method (Lewin, 1947). Lewin's Theory of Change has been used extensively in different disciplines, including education, psychology, and organisational development, becoming a foundation model for implementing change (Burnes, 2020).

According to Lewin's Theory of Change, transformations occur through three stages: unfreezing, changing, and refreezing (Lewin, 1951). In the first step of unfreezing, there is a recognition that change is required, and people are motivated by the urgency created within them that makes them leave their comfort zones. In this stage, it may be necessary to question prevailing assumptions, beliefs, and actions to develop an attractive future vision (Schein, 2021). The stage of change involves realising planned changes while enabling new behaviours, processes, and modes of thinking for individuals. Effective communication, including training, should be provided so that employees can deal with any uncertainty brought about by changes (Kotter, 2021). Finally, the refreezing stage involves reinforcing and stabilising changes to be integrated into organisational culture practices. Continuous monitoring of adjustment feedback during this period is essential to uphold the momentum behind the transition from old habits, thus avoiding regression (Cummings & Worley, 2022).

The core principles guiding changes in human systems are based on Kurt Lewin's Theory of Change (Schein, 2010). Drawing from his (1951) Theory of Change and how change should be handled, Lewin introduced the 3-step change model, which is widely accepted in psychology for implementing change. This 3-step model suggests that for any organisation to change, it must 'unfreeze' the organisation's current practices and then start the process of 'change' and then 'refreeze' practices to a desired model (Lewin, 1951).

Lewin's (1951) change model has been criticised for its assumption that organisations operate in a stable environment and that change is always short-term which may not be realistic in the long-term (Bakaria et al., 2017). The model's simplicity and focus on solidifying change

(refreeze) have ensured its enduring relevance despite criticism. To achieve lasting transformations, organisations must anchor new practices; otherwise, they risk reverting to chaos.

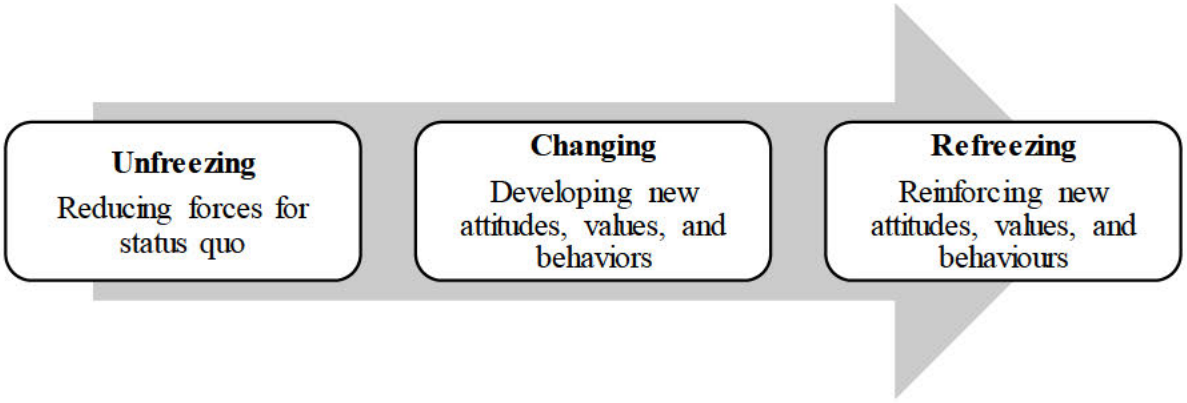
### 3.6 Lewin's Change Model

According to Bertram and Christiansen (2014, p117), "theories provide a possible explanation for why things happen, or they can provide models for how things happen". Lewin's Theory of Change offers a model for understanding how people move from one state to another or from a familiar comfort zone to an unknown new territory.

The change in how learners and teachers interacted on the online platform and later in rotational teaching contributed significantly to teachers' experiences of the coronavirus pandemic and shaped how teachers responded and adapted. Thus, Lewin's change model provided a model to understand how teachers navigated changes in technology, pedagogy, and social aspects (Ferri et al., 2020) as they changed from teaching face-to-face to online instruction and then to rotational teaching during the COVID-19 pandemic (Figure 1).

**Figure 1**

*Lewin's 3-steps of Change Theory*




Source: Adapted from "Handbook of Research on Contemporary Approaches in Management and Organizational Strategy" by Caglar (2019, p.390)

### 3.7 Lewin's Change Model as Applied in a School Context

This study used Lewin's 3-phase model of unfreeze, change, and refreeze as a guide to understand the steps involved in implementing change. Lewin's model was selected as it provided a suitable framework to understand the teachers' experiences involved in changes in

the technology, pedagogy, and social aspects implemented in schools during the COVID-19 pandemic.

### *3.7.1 Unfreeze*

The unfreeze stage is where the organisation recognises the need for change and challenges the current behaviour (Evans et al, 2016). During the unfreeze stage there is a need to provoke attitudes and behaviours for people to experience letting go of the old (Burnes & Bargal, 2017). The unfreeze stage arises from being unsure and introduced voluntarily in planned change or involuntarily unplanned change (Ritvo, 2017).

This unfreeze stage was used to frame the first of the research sub-questions:

> What were Grade 10 teachers' experiences when they initially moved to online teaching? (Lewin's unfreeze stage)

When lockdowns began, schools immediately closed, putting traditional face-to-face teaching on hold. According to Lewin's theory, this is the first stage of change: the unfreeze stage. The unfreeze stage required a shift to what needed to be changed. It was a phase where the organisation started to prepare to accept the new change process (Lewin, 1951). The school team was required to unfreeze its current processes to prepare for the upcoming change. Planning for a new teaching methodology commenced, and different stakeholders were informed of the expected changes. The lockdown decision of the President of South Africa was filtered through the DoE to the school principals regarding school closure. Principals and school management informed teachers, parents, and learners of the unfreeze situation. The DoE and school management needed to support and embrace the need for change and deal with initial concerns from teachers, learners, and parents involved in the change.

### *3.7.2 Change*

Once the old way of doing things has been unfrozen, change can begin to be implemented as a solution. This next phase – 'change' – is when the change occurs. This change stage is the transition stage and requires detailed planning. It involves a paradigm shift and causes the organisation to revisit the direction of the change while still providing support for the change (Lewin, 1947). Lewin recognised this stage as the most challenging to accomplish.

This change stage was used to frame the second of the research sub-questions:

> How did Grade 10 teachers navigate and adapt to social, technological, and pedagogical changes during online and rotational teaching? (Lewin's change stage)

During the change stage, teachers became 'unfrozen'. Teachers needed to maintain the initially created momentum change (Randall et al., 2018). However, many teachers fell short of what they needed to accomplish as they lacked a clear change vision or were unable to adjust to the emerging obstacles. The DoE and school management had to motivate the benefits of the change and provide convincing reasons for the change while giving teachers the opportunity to voice their opinions regarding the change process. The change also required the staff to communicate the change to help lessen uncertainty (Xu et al., 2016). It was vital to provide staff with regular updates and address concerns about the change. This assisted in mitigating teachers' fears and started to accustom them to change or a new normal. Leaders communicated with stakeholders, addressed misinformation, and engaged teachers with the change plan (Airiodion Global Services, 2020).

### *3.7.3 Refreeze*

The third stage – refreeze – is the refinement stage in which the new normal of processes, behaviours, and strategies are established or reinforced in the culture of the organisation. Lewin found this an important stage to ensure that teams did not revert to their old, more familiar behaviours. According to Lewin, leaders and managers need to champion the change, develop strategies to foster the adoption, and establish channels for feedback with the teachers implementing the change. The change soon becomes entrenched in the organisation's culture and becomes permanent, especially in the education sector. The change is now sustained and embraced and becomes the 'new normal.'

This refreeze stage was used to frame the last research sub-question:

> What were the implications of these changes for teaching and learning during the pandemic and in the post-pandemic era? (Lewin's refreeze stage)

The refreeze stage was a time for teachers to practise and refine their interactions with this new way of doing things. For instance, the DoE offered ongoing training in this new process so that teachers did not resort to traditional teaching methods. Refreeze required teachers to receive feedback, recognition, and encouragement to avoid previous behaviour. In this phase,

management organizational changes and sustained such changes. The change resulted in new processes or a 'new normal.'

Finally, the new methods, systems, and procedures needed to be solidified (Jabri, 2017). This refreezing phase was important to deal with feelings of fear and uncertainty that prevailed during the change phase.

The refreeze stage of Lewin's (1951) change model represents the culmination of the change process, where the new behaviours are firmly established and become the new normal (Burnes & Bargal, 2017). The refreeze period in this study occurred when the interim processes adopted by the school became the new norm. To accelerate the refreeze stage, there was a need to promote ways which sustained change and celebrated success (Airiodion Global Services, 2020).

### 3.8 The Different Degrees of Change

Change can be classified as developmental, transitional, or transformational (Anderson & Anderson, 2010; Simion et al., 2019). Developmental change builds upon existing foundations, whereas transitional change transforms the existing state to create a new one. (Anderson & Anderson, 2010; Simion et al., 2019). During transformational change, there is a change in thinking which requires a change in mindset or culture (Anderson & Anderson, 2010). Another way to evaluate degrees of change is provided by Green (2007), who classifies change as adaptation, reconstruction, evolution, and revolution. During adaptation, change occurs slowly through stages; during reconstruction, changes occur a little faster, but the paradigm is not changed (Green, 2007). Evolution involves slow transformational change, while revolution comprises rapid fundamental change on many fronts (Green, 2007).

Change can occur from insignificant to transformational change. COVID-19 set in motion many changes that could be referred to as either a reconstruction, characterised by quick changes but no paradigm shift, or a revolution which is both quick and involves a paradigm shift. Within a revolution, the change is transformational in a similar context to the classification of Anderson and Andersons (2010). The field of change management is marked by many theoretical perspectives that examine the dynamics of change (Kotter, 1996; Lewin, 1951; Lippitt et al., 1958; Nadler, 1993). These change theories categories are based on how

often they occur and their origin. In this study, change is evaluated according to Kurt Lewin's (1951) Theory of Change.

### 3.9 The Catalyst for Change

According to Hailey (2016), the failure rate of planned change is as high as high as 70%. Given the numerous changes brought about by COVID-19, it is important to identify characteristics that are likely to lead to established changes over time.

The leadership approach followed during the change process is a crucial factor. Jones and Harris (2014) suggested that one of the markers of successful change is 'distributive leadership' which is a process in which leadership is spread widely throughout an organisation (Harris, 2013). Second, Collins and Hansen (2012) highlighted that organisations that performed far better than their competitors made their decisions quickly and followed through with disciplined execution. These organisations thrived even in adverse conditions because they had a collaborative culture in place for change with collective teams (Harris, 2013). Kurt Lewin's change model informs crucial concepts for assessing the scope and impact of organisational change resulting from the COVID-19 pandemic.

The COVID-19 pandemic forced teachers and managements in schools to make personal and organisational changes on a scale never experienced before. It was a driving force that caused changes in organisations and people. This study used Kurt Lewin's (1951) change Model to investigate the degree of change and whether the changes implemented by a high school in KZN are temporary or transformational. The Kurt Lewin Change Model suggests that change occurs when the forces driving change surpass the forces resisting change, or when resistance weakens.

### 3.10 Chapter Conclusion

Lewin's Theory of Change provided the theoretical framework of the study. The 3-stage model of Lewin's Theory of Change – unfreeze, change, and refreeze – is applied to the school context to understand teachers' experiences of change relating to technology, pedagogy, and social aspects during the COVID-19 pandemic. It thus addresses the study's research questions. The research questions align with the three stages of this framework and address the concepts of Ferri et al. (2020). This theoretical framework integrates the three phases of Lewin's Change theory: Unfreeze, Change, and Refreeze combined with teachers' experiences relating to

technology, pedagogy and social aspects.

Lewin's Theory of Change provided a structure for understanding how change takes place. It starts by 'unfreezing' the status quo, then moves on to the phase of ‘changing’ and finally ‘freezing’ or institutionalising new ways of doing things.

With this view, researchers can get a clearer picture of teachers experiences within complex dynamic contexts during crisis times so that it would be possible to link these findings with prospects for educational technologies after COVID-19. Therefore, this theoretical framework will form the basis for reviewing the literature, conducting methodology work, and analysing this study.

The practical application of Lewin’s Change Model will be to develop a model for the Department of Education (DoE) proposing a Future Change Plan Model using this model of unfreeze, change, and refreeze as an intervention strategy to respond to future challenges or crisis.

The next chapter describes and justifies the research methods used to collect and analyse the empirical data.

# CHAPTER 4

# RESEARCH METHODOLOGY

## 4.1 Introduction

The purpose of this study, as presented in Chapter 1 was to explore Grade 10 teachers' experiences regarding technology, pedagogy, and social aspects as they navigated changes in teaching from face-to-face to online teaching, and from online to rotational teaching during the coronavirus pandemic, and to establish the implications of these experiences for teaching and learning during the pandemic and in the post-pandemic era.

The previous chapter presented the theoretical framework of this study. This chapter discusses the research methodology, which includes the research paradigm, approach, the sampling strategy, the research design, methods of data generation and analysis, limitations of the study, and research ethics.

## 4.2 Research Methodology

According to Choy (2014), research methodology describes all the techniques and methods used to generate data to answer the research questions. "Methodology is the study of the methods that are employed. It is concerned with uncovering the practices and assumptions of those who use methods of different kinds" (Bryman, 2008, p. 160).

### *4.2.1 Research Paradigm*

A paradigm is a belief or assumption about fundamental aspects of reality that gives rise to a particular worldview (Nieuwenhuis, 2007). In this study, paradigm means a set of shared assumptions, concepts, values, and practices with a constellation of commitments, questions, methods, and procedures to give direction to a research process (Creswell, 2009). According to Bertram and Christiansen (2014), a research paradigm represents a particular worldview that defines, for researchers who hold this view, what is acceptable to research and how this should be conducted.

Furthermore, a paradigm addresses fundamental assumptions on faith, such as beliefs about the nature of reality (ontology), the relationship between knower and unknown (epistemology), and assumptions about methodologies. These beliefs shape how the qualitative researcher sees the world and acts on it (McNeill, 1992). In this study, I employed an interpretive paradigm.

In this paradigm, I have interpreted phenomena in terms of the meaning people assign to them (McMillan and Schumacher, 2006).

Interpretivism refers to the approaches which emphasise the meaningful nature of people's character and participation in both social and cultural life (Elster, 2007; Walsham, 1995). It denotes that the research methods adopt the position that people's knowledge of reality is a social construction by human actors, and so it distinctively rules out the methods of natural science (Eliaeson, 2002). It is rooted in the philosophical traditions of hermeneutics and phenomenology, and the German sociologist Max Weber is generally credited with being the central influence. Interpretivists look for meanings and motives behind people's actions like behaviour and interactions with others in the society and culture (Whitley, 1984).

### 4.3 Qualitative Approach

The qualitative research approach was used in this study. This approach was suited to this in-depth study exploring the subjective experiences of teachers who, being frontline workers, were forced to continue teaching online and later conduct rotational teaching in the COVID-19 pandemic. I used open-ended questions and an exploratory, interpretive data analysis method, typical of the qualitative approach (Creswell, 2011; Silverman, 2010). Hennink et al. (2020) stated that qualitative research is an approach that allows researchers to examine people's experiences in detail by using a specific set of research methods such as in-depth interviews, focus group discussions, observations, content analysis, visual methods, and life histories or biographies. This type of research uses a series of data from these representations, which are interpreted to identify themes and patterns of knowledge.

The research aimed to address, using this methodology, the problem statement and key questions that arose from the COVID-19 pandemic, where teachers were compelled to conduct online instruction and rotational teaching with certain protocols in response to the pandemic's devastating effects.

Qualitative research involves an interpretivist, naturalist approach to life (Flick, 2016). As such, this study aimed to make sense of how teachers were affected and how they coped while teaching during the pandemic. According to Creswell (2017), qualitative research enables a researcher to gather in-depth insights on topics that are not well understood. I used the qualitative approach to gain in-depth knowledge, which is the strength of qualitative research. Qualitative Approach is all about its exploratory nature and was ideal for the study.

Thus, this study used of participants who provided information about their experiences while teaching during the COVID-19 pandemic.

## 4.4 Sampling

Sampling is about making decisions about the number of participants from a population to include in the study (Bertram & Christiansen, 2014). According to Creswell (2014, p. 143), "a sample is a group of people, objects, or items that are representative of the population taken for measurement or examination." Etikan et al. (2016) further defined a sample as a smaller part of the entire population, chosen to represent the larger population.

There are two main types of sampling: probability sampling which involves random selection, and non–probability sampling, where the researcher uses subjective judgment as used in exploratory studies. The non-sampling technique used in this research has limitations in that it does not represent the population of teachers; therefore, it is not generalisable.

In qualitative research a dominant strategy is purposeful sampling, which looks for cases that are information-rich and these cases can be examined in depth (Patton, 2001). In simple terms, this technique relies on the judgment of the researcher to make specific choices about which groups of people to include in a sample based on their knowledge and/or experience. This study employed a purposive sampling method by specifically choosing 10 Grade 10 teachers who taught Grade 10 learners in 2020 and 2021 during the coronavirus pandemic (Cohen et al, 2011). The sample included five male and five female subject teachers from diverse race groups, gender, and religions from Aspire High School to respond to the semi-structured interviews and participate in the focus group discussion. Purposive sampling "involved identifying and selecting individuals or groups of individuals that are especially knowledgeable about or experienced with a phenomenon of interest" (Cresswell & Plano Clark, 2011, p.50). These specific teachers were chosen as participants as they were knowledgeable, had experienced online and rotational teaching in 2020 and 2021, and were also teaching in the FET phase at Aspire High school at the time of the study. The reason for choosing Grade 10 teachers for the study is because Grade 10 is the first year of the FET phase in SA schools. It is an important year for Grade 10s as learners choose subjects linked to career paths.

## 4.5 Research Design

An exploratory case study was used for this research to collect using two instruments. a case study is a systematic and in-depth study of one case, in its context (Rule & John, 2015) and

defined as: “an empirical inquiry that investigates/explores a contemporary phenomenon in-depth and within its real-life context” (Yin, 2018, p. 18). This case study is in-depth and explored teachers’ experiences as they navigated challenges in the technology, pedagogy, and social changes associated with teaching in the coronavirus pandemic in Pinetown, KZN.

Case study research is a qualitative approach characterised by a “description of context that is bound by time and place” (Creswell, 2007, p.73). This case study was conducted at Aspire High, a public school in KZN for the purpose of obtaining in-depth data through semi-structured interviews and a single focus group discussion. A case study is a type of qualitative descriptive research which is used to look at small groups of participants where the end product is a rich “thick” description of the phenomenon under study (Creswell, 1998, p.20). Furthermore, a case study involves looking at a phenomenon in its real-life context (Cohen et al., 2007; Merriam, 2002). In this study, the phenomenon studied was the teachers’ experiences teaching through the COVID-19 pandemic.

### 4.6 Data Generation

~~The researcher~~ I used a semi-structured interview and a single focus group discussion to obtain data from the 10 participants to answer the research question and sub-questions. They are restated here, for convenience:

**Research Question**

What were Grade 10 teachers’ experiences as they navigated changes in teaching during the Coronavirus pandemic in terms of technology, pedagogy, and socially and how these experiences have equipped their teaching approaches during the pandemic and in the post-pandemic era?

**Sub-Questions**

1. What were Grade 10 teachers’ experiences when they initially moved to online teaching?

2. How did Grade 10 teachers navigate and adapt to social, technological, and pedagogical changes during online and rotational teaching?

3. What were the implications of these changes for teaching and learning during the pandemic and in the post-pandemic era?

### *4.6.1 Semi-structured Interviews*

Semi-structured interviews were used first. A semi-structured interview is a meeting in which the interviewer attempts to elicit information from an interviewee who knows about a specific topic (Longhurst, 2010).

The meeting unfolded conversational and allowed for a two-way discussion. To encourage this two-way discussion, questions were structured as open-ended so that the interviewee had a chance to elaborate and explain and the interviewer could probe responses. The questions were pre-planned before the interview, but the interviewee was given an opportunity to elaborate and explain issues through probing with open-ended questions. This allowed interviewees to explore issues they felt were important and to be open about sensitive issues. This method allowed me to delve deeper into the participants' experiences that affected them on various fronts during the COVID-19 pandemic.

The semi-structured interview schedule comprised 5 sections and 46 open-ended questions. The first section requested demographic data from the participants, while the following sections comprised questions on technology, pedagogy, social issues, and rotational teaching. Questions in each section also focussed on the unfreeze, change, and refreeze stages of Lewin's Theory of Change. The interviews were conducted and recorded on the Zoom platform. The transcripts for the interviews were extracted from the Zoom platform.

### *4.6.2 Focus Group Discussion*

Focus group discussions involve a gathering of people from similar backgrounds or situations to discuss ideas, thoughts, and views on a particular topic of interest (Bertram & Christiansen, 2014). The value of focus group discussions lies in the interaction within the group, which builds on each other's memories. A single focus group discussion, which is the most common and classical type of focus group discussion, was conducted for this study (Morgan, 1996). The agenda of the single focus group discussion was led by the participants rather than by a set of questions. I was present to lead the discussion and ensure that participants remained focused on the topic. Focus group discussions ensure that a specific field of focus is addressed to generate qualitative data.

Data were generated from the participants' views, perceptions, and opinions. Through the discussions, themes and topics were developed and used in the follow-up discussions. The interaction encouraged the group rather than individuals to articulate their views and opinions.

This study conducted single focus group discussions with the same 10 purposely selected Grade 10 teachers to generate qualitative data based on participants' experiences of teaching during the COVID-19 pandemic. These techniques provided the empirical data of the research.

## 4.7 Triangulation

Triangulation in research refers to the use of more than one method of data generation (Cohen et al., 2011). In this study, triangulation was achieved using semi-structured interviews and a single focus group discussion to gather and confirm teachers' experiences by viewing them from more than one angle (Cohen et al., 2011). The type of triangulation used was methodological triangulation in which multiple methods (interviews and focus group discussion) were used (Table 2). The two sets of data enriched the findings of the study.

**Table 2**

*Data Generation Methods, Instruments and Technique*

| Source of data | Data generation methods | Data generation instruments | Data generation technique |
|---|---|---|---|
| Grade 10 teachers | Semi-structured interviews | Interview schedule | Interviews conducted on the Zoom platform, recorded and transcribed |
| | Focus group discussion | Focus group schedule | Focus group discussion conducted on zoom platform, recorded and transcribed |

Note: The researcher generated this table

## 4.8 Data Analysis

This study employed thematic analysis to analyse the data. Thematic analysis "is a method for systematically identifying, organising and offering insight into patterns of meaning" (Braun & Clarke, 2012, p. 2). The data generated during this research included transcripts from audio-recorded semi-structured interviews and a single focus group discussion with Grade 10 teachers. The analysis process required me to identify patterns and/or themes in the responses of the participants to uncover useful information related to the phenomenon.

Interview transcripts and focus group transcripts were reviewed for patterns and themes to understand teachers' experiences. The recordings were transcribed, and ~~the researcher~~ I became familiar with the participants' data by reading, rereading, reviewing, organising, and making notes of possible themes and patterns. During this process, initial codes are generated, and chunks of data are categorised. Data reduction was implemented to simplify relationships in the data, and inductive reasoning used to detect patterns and make conclusions. to uncover useful information relating to the teachers' experiences.

## 4.9 Ethical Considerations

I am a student at UKZN registered for an M. Ed degree. He obtained ethical clearance from the higher education department at UKZN for continuing with the study (Appendix C). The researcher also obtained permission from the school principal to use teachers as participants (Appendices A and B).

I obtained informed consent from the 10 participants by meeting each participant at the school before starting the study. "Consent means that the participants agree to take part in the study" (Bertram & Christiansen, 2014, p. 66). He explained the title of the study, its objectives, the types of questions, and the duration of the interview to the participants. The participants were also requested to sign the Consent Form (Appendix D) confirming that they agreed to participate in this study.

In addition, participants were notified in writing in advance about what the study entailed, the title of the study, the type of questions, the duration of the interview and the objectives of the study.

It is also imperative that an ethical researcher protects the identity of the participants. I also assured the participants that pseudonyms would be used instead of their real names to ensure their anonymity (Cohen et al., 2011 & Bertram, 2004). In this way, the three ethical principles of autonomy, non-maleficence, and beneficence were followed.

Participants gave their informed consent in writing before the interviews commenced.

### *4.9.1 Autonomy*

I ensured the autonomy of the participants in the study by explaining to them that they were allowed to withdraw from participating at any time during the research process. (Mouton,

2001). Initially, participants were informed of a one-on-one interview, but this later changed to a Zoom interview due to sound issues when recording near one another.

### *4.9.2 Non-maleficence*

Non-maleficence means 'do no harm' (Bertram & Christiansen, 2014, p. 66). I ensured that no teacher was prejudiced or harmed in any way. Participants were informed that they were not obliged to continue with the study should they feel the need to withdraw.

### *4.9.3 Beneficence*

Beneficence means that the study must 'be of benefit' to the research participants, to other researchers, and society (Bertram & Christiansen, 2014, p. 67). The study will benefit the participants and society at large as they will also learn coping skills for dealing with COVID-19 or future pandemics, and teachers will benefit from new teaching skills to cope with teaching online and in-class teaching.

## 4.10 Rigor and Trustworthiness

Research rigor has to do with the confidence that the recipients of research place in the procedures used in data generation and analysis and the related findings and conclusions (Bloomberg, 2024). Details of the methodology have been described in this chapter of the dissertation and were explained to the school principal and the participants.

Trustworthiness is about whether the research findings reflect the "reality and lived experiences of the participants" (Bertram & Christiansen, 2014, p.188). The four categories of trustworthiness considered are now discussed in the context of this study.

### *4.10.1 Credibility*

Credibility ensures that research is believed. I ensured that interviews were recorded verbatim and transcribed information analysed to ensure accuracy. To ensure that the true essence of their views emerges through this research, participants engaged in a process known as *member checking*, in which raw data were handed back to them to check if the transcripts accurately reflected what was said (Bertram & Christiansen, 2014). To ensure the credibility of data generated in this study, the participants were schoolteachers. With such participants, it is expected that the data generated can be trusted and credible because they had first-hand experiences of the effects of COVID-19.

### *4.10.2 Transferability*

Transferability refers to whether the results can be transferred to other contexts or settings. This study aimed for transferability by providing clear, detailed information about its context, participants, and results. For example, this research was conducted in a public school located in the Pinetown District, Durban, KZN. Once a similarity is established between contexts, situations, or populations, the results of the study can be considered transferable to other contexts.

### *4.10.3 Dependability*

Dependability is when a researcher can account for study variations. This study generated data using semi-structured interviews and focus group discussions. The information generated was reviewed for patterns and themes. Thereafter, the transcripts were then examined and analysed. This process is known as an 'audit trail' (Cohen, Manion & Morrison, 2018).

An external researcher ensured an accurate representation of the data generated. Considering this check-and-recheck process, dependable results can be ensured. To further enhance the dependability of this study, the results generated from the interviews were returned to the participants for review.

### *4.10.4 Confirmability*

Confirmability refers to whether the analysis of the data can be confirmed by another person (Bertram & Christiansen, 2014). I provided verbatim quotes from the participants to show that he is not biased. This study aims for neutrality by employing the following processes:

Participants were allowed to review the data to ensure that it represented their views and not of my own.

The results of this study were also made available for peer reviews, where others reviewed the results to ensure that the findings were based on the participants' responses and not biased.

## 4.11 Limitations of the Study

Like any other study, this study had "certain limitations" (Rule & John, 2011 p. 110). First, the sample size was small since it was designed to be an in-depth qualitative study. Although

the findings cannot be generalised, transferability is possible in that the findings could be used to provide useful information about teachers' experiences as they navigated change during the COVID-19 pandemic, which could assist other teachers, schools, and researchers. The findings of this study could also be used as intervention strategies to support teachers and school management in the area of change.

### 4.12 Chapter Summary

This chapter presented the research methodology used to conduct this study at a public school in the Pinetown District in KZN, South Africa. It also discussed the methods used to obtain the data. Purposive sampling was used since the participants were chosen intentionally. The data generation methods discussed were semi-structured interviews and a single focus group was conducted on Zoom and recorded and transcribed. The chapter also discussed how the data was analysed. The ethical considerations were also presented in the chapter, where anonymity and confidentiality of the study were ensured through the use of pseudonyms and the safekeeping of research findings, transcripts, and recordings. This section also presented how the quality of the research and findings were ensured through research rigor and trustworthiness. The next chapter will discuss the data presentation and analysis of the 10 semi-structured interviews and the single focus group discussion. The responses of the questions posed during the interviews and the focus group discussion will be analysed and discussed.

# CHAPTER 5

# DATA PRESENTATION AND ANALYSIS

## 5.1 Introduction

The COVID-19 pandemic caused tremendous disruptions in institutions globally, including education. Schools had to move to online instruction and later to rotational teaching to curb the spread of the virus. This transformation presented significant obstacles and required teachers to quickly adjust. This chapter examined how KZN public school Grade 10 teachers handled these developments. Technology, pedagogy, and social issues surrounding teaching during the pandemic are the primary focus. This study used semi-structured interviews and a single focus group discussion to ascertain how these changes affected teaching and learning.

The research design and methodology of this study were discussed in the previous chapter. This chapter presents the data analysis, research findings, and discussion. Thematic analysis was used to code and bring out relevant themes from the data. Verbatim quotations are used in the data presentation to maintain the authenticity of the participants' actual responses.

## 5.2 Demographics of the Participants

Ten Grade 10 teachers from Aspire High, a public school in Pinetown, KZN, participated in the study. The participants were purposively sampled to ensure gender, ethnicity, and religious diversity (Table 3). They included five male and five female teachers who matched the school's demographics. Diversity was important because it offered different views on pandemics and how they could lead to change.

Participants were less experienced and veteran teachers with seven to forty-six years of experience. These experience levels revealed how teachers at different career phases adjusted to online and rotational teaching. These teachers taught mathematics core, mathematics literacy, English, life orientation, life sciences., engineering and graphic design, and accounting, thus providing for a complete study of pedagogical changes across disciplines.

**Table 3**

*Characteristics of the Sample*

| Total group (N=10) | *n* | % |
|---|---|---|
| **Gender** | | |
| Female | 5 | 50 |
| Male | 5 | 50 |
| **Teaching Experience** | | |
| <15 Years | 6 | 60 |
| ≥15 Years | 4 | 40 |
| Race | | |
| Black | 2 | 20 |
| Coloured | 1 | 10 |
| Indian | 1 | 10 |
| White | 6 | 60 |
| **Highest Educational Qualification** | | |
| Diploma | 1 | 10 |
| Degree | 6 | 60 |
| Post-graduate Degree | 3 | 30 |
| **Subjects Taught in 2020/2021** | | |
| Mathematics | 3 | 30 |
| Mathematics Literacy | 1 | 10 |
| English | 1 | 10 |
| Life Sciences | 2 | 20 |
| Accounting | 1 | 10 |
| Life orientation | 1 | 10 |
| Engineering and Graphic Design EGD | 1 | 10 |
| **Total** | 10 | 100 |

### 5.2.1 Semi-Structured Interviews

A semi-structured interview schedule comprising 46 open-ended questions were presented to the 10 participants. The interviews were conducted on the Zoom platform and recorded. The interview transcripts were then extracted from the Zoom platform. The duration of the interviews and the single focus group discussion provided in (Table 4).

**Table 4**

*Duration of Semi-Structured Interviews and the Single Focus Group Discussion*

| Participants | Duration (hour, minute, second) |
|---|---|
| Participant 1 | 01.21.23 |
| Participant 2 | 02.30.04 |
| Participant 3 | 01.25.17 |
| Participant 4 | 01.27.17 |
| Participant 5 | 01.29.43 |
| Participant 6 | 01.27.17 |
| Participant 7 | 01.25.51 |
| Participant 8 | 00.54.53 |
| Participant 9 | 01.00.08 |
| Participant 10 | 00.39.16 |
| Focus Group Discussion | 00.57.09 |

### 5.2.2 Focus Group Discussion

The single focus group discussion comprised 10 broad questions, with 8 of the 10 participants sharing information. The other two had challenges logging into the session. The focus group discussion was also conducted, and recorded on the Zoom platform, and the transcript extracted from it. The verbatim quotes were used in the analysis of the responses.

### 5.2.3 Data Analysis and Interpretation

The three concepts of Ferri et al. (2020), namely, technology, pedagogy, and the social aspects were used in combination with Lewin's three stages of change – unfreeze, change, and refreeze – to craft the main research question and the sub-questions and also to formulate the interview and focus group questions of the research instruments. The analysis of the data will be structured accordingly, showing the three concepts and highlighting the three stages of Lewin's Change Model.

The following three major themes were extracted from the responses: navigating changes in teaching during the coronavirus pandemic, strategies for adapting to changes in teaching and

learning, and implications of pandemic-induced changes on teaching and learning. The first major theme comprised six sub-themes, while the second and third major themes comprised four sub-themes each. These are discussed in the following sections.

## 5.3 Major Theme 1: Navigating Changes in Teaching During the Coronavirus Pandemic

The six sub-themes of this major theme are now presented with verbatim responses and interpretations for each of the three phases of Lewin's change model.

### *5.3.1 Sub-Theme 1: Technology Challenges During Online Teaching*

**The Unfreeze Stage**

Technology knowledge before the pandemic varied among individuals. Some teachers used technology in the classroom, whereas others did not. This revealed the multiple starting places teachers had to adjust to in the pandemic-imposed educational environment.

The semi-structured interviews revealed that Grade 10 teachers struggled with technology initially when they were compelled to conduct online teaching initially (unfreeze), during the coronavirus pandemic (change) and when the change became more reinforced (refreeze). Teachers noted a steep learning curve and limited training and support for new technologies. Many participants noted resource discrepancies across homes, which hindered learners' online learning. Participants raised connection and technical challenges related to technology that disturbed instruction and impaired learner learning.

Teachers expressed displeasure and fear over the quick move to digital media. They had to learn new software and change their teaching methods quickly without advice or resources. This unexpected change increased their burden, because they had to produce a digital curriculum, manage technological difficulties, and help learners who struggled with the new learning method. The digital gap has worsened educational inequities, making it more difficult for teachers to provide equitable learning opportunities to all learners.

The initial transition to online teaching represented the unfreezing stage, where teachers had to put on hold traditional face-to-face teaching and rapidly adapt to online teaching. This stage was marked by significant challenges, including a steep learning curve and a lack of adequate training and resources, which necessitated a fundamental reassessment of teaching methods

and tools (Lewin, 1951). The following verbatim statements are examples of responses typifying this subtheme of technology challenges during the unfreeze stage:

**Table 5**

*Example Quotes for Theme 1: Navigating Changes, Sub-Theme: Technology Challenges in the Unfreeze Stage*

| Participant | Example quote |
|---|---|
| Participant 5 | "I really didn't feel prepared for it. We felt rather anxious. You know, how we going to do this? How's it going to work? You know, it was rather overwhelming, and I just thought I don't see this working. However, many educators didn't have the means to teach online. Some tried to make a plan." |
| Participant 3 | "But I did realise that coming from a government school we have learners that did not have access to laptops and Internet. And I suppose I was trying to navigate how we would get education across to everyone who needed it. And I knew that I wouldn't get all of them." |
| Participant 9 | "Well, being an older teacher, I am not very comfortable with technology. So, I was not very happy initially. I've never used technology. I don't use a visualiser. I stand on my feet and teach. I don't use a computer. So that was initially very difficult." |
| Participant 2 | "You take stock of the idea that a lot of your children probably are either middle class or upper-lower class students. What you start to think of very quickly is, will my students have the infrastructure necessary to communicate" |
| Participant 5 | "I had challenges with logging on and not knowing what to do. How to actually unmute and put their videos on and off". |
| Participant 4 | "If you do ask them on WhatsApp, they would say, ma'am, my mom buys me data for a month. And the data is for WhatsApp. So, I don't have other data. I don't know how to log in - some learners will say, me, there's only one laptop at home. and my mom is using the laptop." |
| Participant 6 | "The other part of it is not all technology was available to everybody. we also had issues where people have lost income and lost their jobs. There wasn't sufficient money to actually invest in the technology that is necessary. They may have had a simple device. Some didn't have devices." |

**The Change Stage**

During the change stage, teachers began to develop and refine their technological skills, despite facing ongoing challenges such as connectivity issues and limited access to appropriate devices among learners. This stage reflects the experimentation and learning process described by Lewin (1951), where new behaviours and strategies are tested and gradually integrated. The participants' responses are listed below

**Table 6**

*Example Quotes for Theme 1: Navigating Changes, Sub-Theme: Technology Challenges in the Change Stage*

| Participant | Example quote |
|---|---|
| Participant 3 | "I felt overwhelmed by the constant need to update my knowledge and skills to keep up with the technology requirements. It was a daunting task to balance teaching and learning new tools simultaneously" |
| Participant 10 | "Some of them didn't have the Internet. We must realise that we are dealing with the learner population, that where there's some who may be very affluent, there are others that don't have the facilities that we might have. So, in terms of technology, they did not have the same capabilities to access as what we did." |
| Participant 2 | "So, some of the students they didn't have money for data, or they didn't have the infrastructure at home to be able to have a laptop where their parents were also working from home and so those became complications to that kind of initial shift from being face to face to where it's actually, it's just you and the kids." |
| Participant 8 | "I think I had a few concerns, number one being Internet stability. There were some occasions where electricity would go off. Internet was unstable. The first concern was that we weren't going to be able to produce a good lesson because of the technology in terms of Internet. We started with zoom. But we ended up leaving Zoom and going on to, I think to Google classroom." |
| Participant 7 | "The lack of proper training made it very difficult to use the new platforms effectively. I often found myself spending hours just trying to figure out how to navigate the software, which left me with little time to focus on teaching." |
| Participant 6 | "I think students did not have data enough data to actually communicate. And it did take a lot of data. I wasn't really prepared for that myself because I didn't have unlimited access to the Internet access or data. So financially it was also burdensome. You know, it was R300 at a time, and that data was not lasting very long." |

| Participant | Example quote |
|---|---|
| Participant 10 | "Many of my students struggled with connectivity issues, and this greatly affected their participation and performance. It was heart-breaking to see them fall behind because they couldn't access the online lessons." |
| Participant 6 | "We had to go onto various platforms, we had to get used to technology. And I wasn't one that was technologically inclined? We come from an old school. I've been teaching for 30 years by then, and we got used to old habits and old ways of doing things. This has been like a paradigm shift, and we had to then use technology which wasn't my favourite in any way, and I still battle with it. We weren't grown up with technology at all. It was stressful." |

**The Refreeze Stage**

Some teachers reached the 'refreezing' stage, where new technological practices began to stabilise and integrate into their regular teaching routines. However, this stage also highlighted the need for continued support and resources to solidify these changes fully (Lewin, 1951). The change from face-to-face teaching to online instruction required new technological capabilities and pedagogical changes. Lack of preparation and support left many teachers unprepared for digital instruction, resulting in stress and burnout. The digital gap among learners revealed educational inequalities that teachers had to negotiate with inadequate resources and assistance. The participants' responses are listed below:

**Table 7**

*Example Quotes for Theme 1: Navigating Changes, Sub-Theme: Technology Challenges in the Refreeze Stage*

| Participant | Example quote |
|---|---|
| Focus Group Participant: | "Even when we go back to the classroom, I plan to keep using some of the digital tools we've adopted. They've made teaching and learning more flexible" |
| Participant1 | "The online still continued because we were told that some learners didn't come back due to Covid, so we still needed to accommodate them to continue with the online lessons. So, whatever we taught in the classroom, we also had to do online." |
| Focus Group Participant: | "The digital divide was very evident. Some students had all the resources they needed, while others had nothing. It was a real challenge to manage such disparities." |

| Participant | Example quote |
|---|---|
| Participant 6 | "And the preparation took a little bit longer now because I had to do video sessions. I did even video listens through a camera and posted it through groups. I have the chalk board at home. So, I used to teach on the chalkboard. I video the lesson and send it through Google classrooms or some other platform." |
| Participant 4 | "I told myself; I am going to spend a few 100 and get the data so that I can get this information through to the kids. Whatever costs it's fine for this very moment I will spend that cost. But for the learners it was a little bit difficult. It affected the attendance." |
| Participant 7 | "Obviously, it was fear of the unknown. The problem was not everybody had home Internet. Some people, the Internet would go down. A lot of teachers had to stream lessons every day, which was not refunded back to them." |
| Participant 7 | "So, the whole data thing and the whole technology and in the classroom, it's amazing in theory. But unless you're a first-rate country. it's not going to work. They have no clue how a basic computer works. They don't know how to send an email or how to switch a computer on." |
| Focus Group Participant | "But there's like an unfiltered access that the students even feel. Now they have your phone number. They have your email, and they use them, on weekends and evenings. The parents as well also use it, and the parents will contact you sometimes actually quite unprofessionally". |

Interview snippets demonstrated teachers' complex technical difficulties as they navigated the transition from face-to-face teaching to online instruction during the initial stage (unfreeze) and when online teaching continued until August 2020 (change). The school continued with some online teaching when learners were called back to school for rotational teaching, and even currently in some subjects (refreeze). The change from face-to-face teaching to online instruction required new technological capabilities and pedagogical changes.

The results reveal that while technology offered a potential answer for continuing education throughout the pandemic, it also created additional obstacles that aggravated educational system concerns. A lack of technology, internet access, and teacher professional development hindered online teaching. Socio-economic gaps among learners hampered equal education, learner involvement, and performance.

Comparing the data obtained with published studies shows that KZN Grade 10 teachers' experiences match global trends. Bond (2020) found that the quick change to online learning has uniformly exposed digital infrastructure and teacher readiness gaps. Huang et al. (2020) says that teacher training is crucial to online education's success since insufficient assistance might make it difficult to adapt to new teaching methods.

Contradictions appear in this study's data as some participants found that a lack of infrastructure and support might nullify the potential advantages of technology when properly incorporated, contrary to international research like Bao (2020) and Dhawan (2020). This means that environment, resources, and training influence the effectiveness of education technology.

### *5.3.2 Sub Theme 2: Pedagogical Changes During Online Teaching*

**The Unfreeze Stage**

The semi-structured interviews revealed that Grade 10 teachers' instructional techniques changed during the coronavirus pandemic. Switching everything online seemed like a new technique (unfreeze) even for the most cautious teachers. To hold the attention of students, teachers had to rework their curricula to appear on digital platforms and assist this material with interactive exercises (change). They also had to engineer ways online assessment methods that required ingenuity coupled with adaptability (change). It also underscored how teachers were called to widen the range of learning for learners with different levels of digital access and learning pace. This is often the difference between sending learners who experienced technical difficulties, or other online learning challenges additional resources and assignments via WhatsApp or from school by arrangement. Teaching methods focused on self-directed training to empower learners to assume greater responsibility in their education (refreeze). This approach proved haphazard because of trying something new, and also not everyone was prepared or inspired to take the initiative.

The shift to online platforms necessitated a profound reassessment of pedagogical approaches, aligning with Lewin's 'unfreezing' stage. Teachers had to evaluate critically and often abandon traditional face-to-face teaching strategies in favour of more flexible and interactive online methods (Lewin, 1951). The participants' responses are listed below:

**Table 8**

*Example Quotes for Theme 1: Navigating Changes, Sub-Theme: Pedagogical Changes in the Unfreeze Stage*

| Participant | Example quote |
|---|---|
| Participant 2 | "Adapting my teaching methods to online platforms was a huge challenge. I had to rethink my entire approach to make lessons more interactive and engaging for students." |
| Participant 1 | "I definitely had to use different teaching methods because with the social distancing, I couldn't partake in group activities. I couldn't partake in debates. I definitely had to think out the box as to how am I going to get this message across. I definitely had to change my method." |
| Participant 5 | "The need to differentiate instruction became more apparent. I found myself creating multiple versions of the same lesson to accommodate students with different levels of access to technology" |
| Participant 9 | "To a certain extent, because it's more like a lecture process, particularly on Zoom. So, when you ask a question, nobody wants to respond. Or very few, they would mute themselves and couldn't see them." |
| Participant 8 | "Encouraging students to take more responsibility for their learning was essential, but it was challenging as not all students were prepared for self-directed learning" |

**The Change Stage**

Throughout the 'changing' stage, teachers experimented with various digital pedagogical tools and techniques to enhance learner engagement and learning outcomes. This phase involved significant trial and error, reflecting Lewin's (1951) notion of transition, where new behaviours are developed and tested. These are exemplified in the textual statements below:

**Table 9**

*Example Quotes for Theme 1: Navigating Changes, Sub-Theme: Pedagogical Changes in the Change Stage*

| Participant | Example quote |
|---|---|
| Participant 1 | "So, there's the theory, part of it, as well as the practical part. The practical part of it was PE so we got them to create videos and then submit these videos, and then we would give them a mark on the videos. It was very hard to maintain, because not all learners had access to data so they could not submit these videos." |
| Participant 1 | "Even though I was teaching, I wasn't really sure whether all the information was actually going to my students. But the students weren't actually partaking in the lesson. So, it was. It was very, very challenging." |

| Participant | Example quote |
|---|---|
| Participant 1 | "There was, there was always like one or 2 learners that would answer, and that's why. Then I thought, maybe the rest are not listening, or maybe they just join the Google Classroom lesson, and then left their phones running in the background. But I just definitely had a thought of, you know, maybe these learners actually aren't part of this lesson physically." |
| Participant 1 | "I then decided to speak to my subject head to see if, do we not have digital notes that we can also attach to the Google classroom? I also tried to think of ways to also get them engaged in the lessons." |

**The Refreeze Stage**

The ongoing adaptation of new pedagogical methods suggests a gradual movement toward Lewin's 'refreezing' stage, where these methods become normative practices among teachers. However, fully realising this stage requires continued professional development and pedagogical support (Lewin, 1951).

**Table 10**

*Example Quotes for Theme 1: Navigating Changes, Sub-Theme: Pedagogical Changes in the Refreeze Stage*

| Participant | Example quote |
|---|---|
| Focus Group Participant | "Assessment was a significant challenge. Traditional methods didn't work, so I had to develop new ways to evaluate student understanding online" |
| Participant 1 | "Definitely the tone in my voice, because now especially when kids decide to turn off the camera, the tone of my voice must be engaging enough for them to be actually engaged to the lesson. Number two, if I normally was using my board to write down stuff, I can't do that anymore. But I need to use a different platform to get the message across to them. Thirdly, we had to learn we had to get our notes to be a lot more digital. I had to be a lot more creative because of the fact that I actually don't have the learners in front of me." |
| Participant 1 | "Even for getting kids involved in group work activities, some kids don't actually want to get involved, not because they don't like certain kids, but because they got into their habits of doing things on their own. And now it's very hard as teachers to try to break those habits because they've just gotten so used to being in their own space and doing things on their own." |

| Participant | Example quote |
|---|---|
| Participant 8 | "Encouraging students to take more responsibility for their learning was essential, but it was challenging as not all students were prepared for self-directed learning" |

Interview snippets show how the pandemic affected teaching during the initial move to online teaching (unfreeze), as online teaching continued (change) until rotational teaching started (unfreeze).

The need to quickly modify instructional techniques pushed teachers to investigate and use diverse strategies to improve learning. Interactive and engaging lesson plans were essential when teachers realised that traditional approaches were unsuitable for online learning. Teachers had to learn online pedagogy, which took time and effort.

Differentiated education and self-directed learning also emphasised learners' unique requirements. Teachers had to be more aware of learners' needs and adjust their lessons. They regularly went over and above to provide additional help and resources to learners. Teachers had to devise online assessment tools to monitor learner performance and knowledge.

Comparing our findings with previous literature shows that KZN Grade 10 teachers' experiences followed global trends. Hodges et al. (2020) found that emergency online teaching required teachers to quickly change their pedagogical techniques without sufficient preparation or assistance. Teaching during the pandemic required flexibility and creativity, according to Carrillo and Flores (2020), who found that teachers who modified their approaches had better educational outcomes.

The data also showed discrepancies. Researchers like Reimers and Schleicher (2020) proposed that the pandemic might be a chance to improve education and embrace digital learning, but this study found that infrastructure and support can be barriers. This study revealed that teachers need resources and professional development to adjust their teaching methods.

### *5.3.3 Sub Theme 3: Social and Emotional Impact on teachers during online teaching*

**The Unfreeze Stage**

The semi-structured interviews revealed that Grade 10 teachers struggled socially and emotionally to adapt to the coronavirus pandemic during online teaching. The lack of direct connections with colleagues and learners caused teachers to feel isolated and stressed. The

rapid switch to online teaching frustrated many teachers' routines and support structures, causing worry and emotional fatigue. Teachers' concerns about supporting learners' academic and emotional needs online increased their stress.

Managing work and personal issues throughout the pandemic severely affected the participants' mental health. Many teachers struggled to balance their children's schooling with teaching. The absence of clear information and assistance from educational authorities left teachers unsure and powerless as they managed the situation on their own.

The rapid transition to online teaching disrupted existing social and support structures, resulting in significant emotional and social challenges for teachers. This disruption fits Lewin's unfreezing stage, where previous equilibrium is disturbed, leading to feelings of isolation and stress (Lewin, 1951). The participants' responses are listed below:

**Table 11**

*Example Quotes for Theme 1: Navigating Changes, Sub-Theme: Social and Emotional Impact in the Unfreeze Stage*

| Participant | Example quote |
|---|---|
| Participant 1 | "The isolation was overwhelming. I missed the daily interactions with my colleagues and students, which made the whole experience very lonely." |
| Participant 5 | "And my personality, I'm a touchy feeling person. I missed contact like You know, physically seeing people in front of me being able to touch them. You know, like I said, I live alone, you know, so it became very lonely. I mean it definitely you know caused anxiety". |
| Participant 5 | "Personally, and emotionally, you worry because you do care about your learners and you worry what's going to happen, you know, is it going to get worse? |
| Focus Group Participant | "During that period was a very stressful time for me to work. I'm teaching for 36 years. but it was the worst teaching experience". |

**The Change Stage**

The 'changing' stage for teachers involved adapting to new social dynamics and developing coping mechanisms to manage the increased stress and isolation from the pandemic. This stage required substantial emotional adjustment and support, consistent with Lewin's framework (Lewin, 1951). These are exemplified in the textual statements below:

**Table 12**

*Example Quotes for Theme 1: Navigating Changes, Sub-Theme: Social and Emotional Impact in the Change Stage*

| Participant | Example quote |
|---|---|
| Participant 6 | "Balancing my teaching responsibilities with taking care of my own children was incredibly stressful. It felt like there were no boundaries between work and home life" |
| Participant 1 | "But also, it was very hard to teach learners that are also going through their own emotional baggage at home and are also going through so many different challenges within the classroom and the fact that they are overwhelmed." |
| Participant 1 | 'I've got no parents involvement. So, it was very hard to actually mend any kids' involvements. I've got 0 parents involved, regardless of what grade it was. I just got no involvements." |
| Participant 9 | "The lack of support and clear guidelines from the authorities left us feeling abandoned. We had to figure things out on our own, which was very stressful" |
| Focus Group Participant | "I was constantly worried about my students' well-being and whether they were coping both academically and emotionally. It was a heavy burden" |

**The Refreeze Stage**

The refreezing stage in the social and emotional contexts has not been fully realised, as teachers face challenges in adjusting to the new normal. Teachers require continual assistance stabilising and incorporating these changes into their careers (Lewin, 1951). The participants' responses are listed below:

**Table 13**

*Example Quotes for Theme 1: Navigating Changes, Sub-Theme: Social and Emotional Impact in the Refreeze Stage*

| Participant | Example quote |
|---|---|
| Participant 1 | "So as a staff unit prior to Covid, everyone was very close, it was a close-knit staff, and a lot of things were done together, in the staffroom, and so forth. And because of Covid that has now changed. Not a lot of staff activities take place, because I think everyone has just gotten used to the thought of you doing things by yourself or in your |

| Participant | Example quote |
|---|---|
| | department. So, in terms of staff morale that is definitely taken its toll." |
| Participant 4 | "In terms of even kids socialising that is definitely changed. A lot of kids are a lot more reserved, or they want to keep things for themselves as opposed to actually engage with other people. So now, when it comes to teaching face to face that I also find that is also a problem" |
| Participant 1 | "So, when we were back at school, I was actually seeing a lot of people for the first time. Secondly, when people were leaving the school to go to other schools, I thought to myself, but I don't know this person. I was asking a lot of questions from my subject head at the time." |
| Participant 6 | "When we came back to the school, I kind a spent a lot of my breaks within my subject head's classroom because of the fact that a lot of people were still very sceptical of sitting in the staff room. So. in terms of my social life. I had no social life in the school. I was only stationed at a particular place. It was either at my subject head's classroom or in my classroom only." |

The samples show how the pandemic affected teachers emotionally and socially. Losing support networks from their professional community caused loneliness and separation. Professional and personal duties were difficult to reconcile, emphasising the need for greater support mechanisms for teachers. The DoE's indecision and lack of communication made teachers feel helpless and overwhelmed.

Worries for learners' well-being added emotional stress. Online teaching made it difficult for teachers to assist their students' intellectual and emotional well-being. Teachers struggled with burnout due to powerlessness and worry about their learners.

The data conveyed Grade 10 teachers' social and emotional effects from the coronavirus outbreak. Workload, loneliness, and lack of support raised stress and emotional fatigue. The information from teachers reveals global patterns and the need for solid support mechanisms to help students face crises. Learners' emotional well-being and personal and professional challenges hindered pandemic teaching. These unexpected adjustments required resilience.

The data confirmed global pandemic patterns compared to literature. Schleicher (2020) found that abrupt distance instruction and isolation from professional groups increased stress and emotional tiredness in teachers globally. Pressley et al. (2021) also emphasised the emotional toll on teachers and the need for assistance and tools to handle pandemic stress.

The findings also show discrepancies. Kim and Asbury (2020) believe that remote teaching offers opportunities for professional growth and creativity. However, this study's teachers found that the negative social and emotional repercussions generally outweighed the positives. This disparity illustrates the context and the varied support teachers received in different settings.

The data conveyed Grade 10 teachers' social and emotional effects from the coronavirus outbreak. Workload, loneliness, and lack of support increased stress and emotional fatigue. The information from teachers shows global patterns and the need for solid support mechanisms to help them face crises. Learner emotional well-being and personal and professional challenges hindered pandemic teaching. These unexpected adjustments required resilience.

### *5.3.4 Sub Theme 4: Pedagogical Impact during Rotational Teaching*

**The Unfreeze Stage**

During August 2020, the Grade 10 learners and teachers returned to school to commence rotational teaching and learning. These learners were placed into two groups and attended school on alternate days. The semi-structured interviews showed that Grade 10 teachers were significantly impacted, and their teaching techniques changed during the coronavirus pandemic during rotational teaching.

The data confirmed that teachers had to now shift back to rotational teaching which was the unfreeze stage as it was a 'new normal' of face-to-face teaching. These are exemplified in the textual statements below:

**Table 14**

*Example Quotes for Theme 1: Navigating Changes, Sub-Theme: Pedagogical Impact in the Unfreeze Stage*

| Participant | Example quote |
|---|---|
| Focus Group Participant | "There were other duties, I mean, from the morning we start sanitising, and there were all the protocols to follow. And over and above that, the stress levels, and online lessons". |
| Focus Group Participant | "Prior to this they did not insist that we put work on Google classroom. And we now still have to put work on Google classroom. Our teaching workload is heavier than it was before". |

| Participant | Example quote |
|---|---|
| Participant 5 | "But they expect us to do it in the same time frame before COVID, However, you need to go back to basics with most of the stuff so not only teaching that current year, but you also have to go back". |

**The Change Stage**

The change stage witnessed teachers teaching the same lessons three to four times. This resulted in work overload for teachers. Also, teachers conducted online lessons in addition to rotational teaching (hybrid) to accommodate learners who did not come back to school or who were absent because of COVID-19 protocols. The participants' responses are listed below:

**Table 15**

*Example Quotes for Theme 1: Navigating Changes, Sub-Theme: Pedagogical Impact in the Change Stage*

| Participant | Example quote |
|---|---|
| Participant 1 | "We were expected to repeat lessons about 3 times. So, it was very overwhelming, because the workload was tripled." |
| Participant 5 | "Parents were so concerned for their children's lives and scared of COVID that they deregistered their kids and when learners went back to school, they registered their learners to do online. No, I mean, from our experience, online is not the way to go. Online should be seen as additional teaching". |
| Focus Group Participant | Also, the learners are not used to the pace of work that we currently have, like, I'll use for an example, the Grade 10 ATP annual teaching plan. The kids are not used to working so fast because they are used to maybe taking 4 weeks, 5 weeks to complete a section and now is supposed to only take a week because they're playing catch up. |
| Focus Group Participant | "We were teaching full lessons. We weren't getting feedback from the children. Children weren't responding". |
| Participant 4 | "When we came back, we got training. Because now we are sharing, now we are sharing our problems, you share your problem that you had when you're at home, we share problems." |
| Participant 5 | "The frustration with that to me was the monotony because every time you have to teach the same thing". |
| Participant 1 | "This is when we started WhatsApp groups, because with WhatsApp groups, we can still get everyone to be engaged on via WhatsApp, because that could also prevent anyone getting too close to people." |

| Participant | Example quote |
|---|---|
| Participant 2 | "It's something that our principal asked us to do just quickly set up WhatsApp groups with all of our kids. We also had a little bit prior to that already gotten our children onto a system known as Google Classroom." |

**The Refreeze Stage**

Since rotational teaching, methods included a shift from face-to-face teaching and also conducting online teaching, which has continued in the post-pandemic era (refreeze). The participants' responses are listed below:

**Table 16**

*Example Quotes for Theme 1: Navigating Changes, Sub-Theme: Pedagogical Impact in the Refreeze Stage*

| Participant | Example quote |
|---|---|
| Participant 1 | "The online still continued. We were told that some learners didn't come back due to Covid, so we still needed to accommodate them to continue with the online lessons. So, whatever we taught in the classroom, we also had to do online. |
| Participant 2 | "The pandemic forced us to incorporate technology into our teaching, and now I can't imagine going back to the old ways entirely. The tools we've started using have a lot of potential benefits" |

The interview snippets clearly show that during the rotational teaching, most of the teachers continued with online teaching as parents decided not to send their children to school as a safety precaution, or learners or members of their households were infected with the virus and were not present at school. This situation further impacted teachers' workloads and resulted in lessons being taught three to four times.

### *5.3.5 Sub Theme 5: Social Impact During Rotational Teaching*

**The Unfreeze Stage**

The semi-structured interviews showed that Grade 10 teachers struggled socially and emotionally when learners returned to school for rotational teaching and learning during the coronavirus pandemic

The data revealed that the teachers were apprehensive about returning to rotational teaching at school although the classrooms were well organised to accommodate rotational teaching (unfreeze). These are exemplified in the textual statements below:

**Table 17**

*Example Quotes for Theme 1: Navigating Changes, Sub-Theme: Social Impact During Rotation in the Unfreeze Stage*

| Participant | Example quote |
|---|---|
| Participant 1 | "The school was ready because we even moved certain classrooms or certain teachers moved to bigger classrooms because of the number of kids they have in their class. So, we, I think we did all the necessary preparations to get everyone kind of accommodated. Also, certain classrooms were used as isolation areas or isolation venues for kids that needed to come to school, write tests, and go home. So, all the tools that needed to be put in place for the kids coming back" |
| Participant 1 | "So, it was very overwhelming because, we were expected to just pack up and come to work like everything's okay, but a number of us actually were going through certain things personally." |

**The Change Stage**

The change stage included teachers' challenges to encourage social distancing and comply with COVID-19 protocols. In addition, teachers were concerned about their personal safety when they returned to school. The participants' responses are listed below:

**Table 18**

*Example Quotes for Theme 1: Navigating Changes, Sub-Theme: Social Impact During Rotation in the Change Stage*

| Participant | Example quote |
|---|---|
| Participant 1 | "We also were encouraged to make sure that the kids were actually social distance during a lesson, and then that would also make it very difficult for me to move around the classroom, as I would normally move around the classroom. And if there's a cough and was also, I had to also think about myself as well in terms of my personal health, as well as also my family's health. So, it did affect me a lot." |
| Participant 1 | "It did affect me in terms of when I'm doing the face-to-face teaching. How often do I sanitise? Oh, by the way. During those seasons we were expected to sanitise our tables and our chairs before and after every lesson. |

| Participant | Example quote |
|---|---|
| Participant 1 | "When we were teaching in a rotational manner. I had to also be careful as to how close I am to kids, because I've got a 6-year-old. He is very asthmatic, and he's got a big problem with the sinuses. I had to be aware that I don't put myself into jeopardy way and also risk his life. So, I had to be very, very careful, especially for his health." |
| Participant 1 | "It was a lot of pressure. I mean, we are in a Co-Ed school. So obviously, there are kids dating one another to try to split up those kids was a mission and a half. Teachers would complain. Some parents said, Okay, with this child dating this child. So, who are we to say, hey, split up, walk apart, you understand? So, it was a challenge. It was really difficult." |
| Participant 1 | "With WhatsApp groups, we can still get everyone to be engaged via WhatsApp, because that could also prevent anyone getting too close to people and so forth." |
| Participant 5 | "So did you have to unlearn some old habits, you know, face to face because now your interaction with the learners had some boundaries now". |

**The Refreeze Stage**

In the post-pandemic era, some teachers did not recognise learners who they had taught during rotational teaching. Teachers avoided interaction in the staffroom due to social distancing, and this continued in the post-pandemic era. Learners who communicated with teachers during rotational teaching continued to engage teachers on WhatsApp (refreeze). These messages are time consuming and a great concern for teachers. These are exemplified in the textual statements below:

**Table 19**

*Example Quotes for Theme 1: Navigating Changes, Sub-Theme: Social Impact During Rotation in the Refreeze Stage*

| Participant | Example quote |
|---|---|
| Focus Group Participant | "So, I'm sure there are lots of children whom I taught in those 2 years, who I don't teach currently that I walk past them on the corridor, and I have no clue that I taught them. I do think there might have been some human interaction loss". |
| Participant 5 | "At our staff briefing he said something that he picked up is that before COVID, the staff room was the socialising place during break times. And now it is very, very quiet". |

### *5.3.6 Sub Theme 6: Administrative and Institutional Support*

**The Unfreeze Stage**

In the semi-structured interviews, the respondents reported that they had received some technology training before COVID-19 and further training during rotational teaching, as well as assistance from the SMT but none from the DoE. This affected teachers' ability to adopt new approaches as they received theoretical training, which was unused during the pre-covid period. Some teachers received digital resources, new teaching platform training, and frequent communication from the school administration. Support was crucial for transitioning to online teaching with its challenges.

Other teachers blamed insufficient aid for their slow adaption. Poor digital tool training, resources, and school communication were significant obstacles. Unsupported online instruction left them overwhelmed and unprepared. School and district support differed, showing how educational institutions handled the situation.

Teachers also received little support and training in the unfreeze stage when the initial transition to online teaching had taken place.

These are exemplified in the textual statements below:

**Table 20**

*Example Quotes for Theme 1: Navigating Changes, Sub-Theme: Administrative and Institutional Support in the Unfreeze Stage*

| Participant | Example quote |
|---|---|
| Participant 7 | "We received very little support from the school. There was no proper training, and we had to figure out everything on our own. It was very frustrating" |
| Participant 2 | "At the time of Covid, there wasn't really a huge deal of support, nor direction given. They just kind of it felt like they were very much on survival mode for themselves, and it was more down to the individual teachers to sort of make up a plan and to strategise and to take something forward. And that's what people did". |
| Focus Group Participant | "The lack of support made everything so much harder. It felt like we were left to fend for ourselves" |
| Participant 3 | "If we did get anything, it was probably just said that we had to make a plan and still teach the kids" |

**The Change and Refreeze Stages**

Teachers started to receive more support, and communication improved during the change and refreeze stages of online teaching and in the rotational teaching stage, which assisted teachers in their teaching. Teachers also began supporting each other during this stage of online teaching and in rotational teaching. The participants' responses are listed below:

**Table 21**

*Example Quotes for Theme 1: Navigating Changes, Sub-Theme: Administrative and Institutional Support in the Change and Refreeze Stages*

| Participant | Example quote |
|---|---|
| Participant 4 | "The training and resources provided by our school were invaluable. They really helped me adapt to the new teaching methods and feel more confident in my ability to teach remotely" |
| Participant 3 | "Regular communication from the school administration was a lifesaver. It kept us informed and reassured that we were all in this together" |
| Participant 6 | "We were reasonably supportive of each other" |

The excerpts illustrate how administrative and institutional support helps teachers react to crises. Due to school officials' training, resources, and regular interaction, teachers felt more prepared to teach online. Assistance was vital in reducing stress and anxiety from the abrupt move to new teaching methods. Insufficient support caused teachers many challenges. Limited training, resources, and communication left many teachers overwhelmed and unprepared. This disparity in assistance highlights the inequalities in educational responses to the pandemic which affected teachers' experiences and their capacity to teach.

Our findings reflect worldwide trends. According to Darling-Hammond et al. (2020), administrative assistance helps distant teachers overcome problems, and Trust and Whalen (2020) found that crisis help for teachers requires good communication and resources. These teachers' experiences contradict the notion of O'Leary and Quinlan (2021) that the pandemic helped schools adjust and develop support networks. Support disparities demonstrate the need for a more consistent and fair approach to helping teachers across regions and schools. Research reveals that Grade 10 teachers need administrative and institutional support to react confidently to the coronavirus outbreak. Online instruction worked for some teachers, while others suffered because of insufficient training and resources. These findings show that all teachers require continuous and fair emergency preparation help. Thus, our findings reflect

global trends but underscore the need to improve administrative help and communication at educational institutions.

## 5.4 Major Theme 2: Strategies for Adapting to Changes in Teaching and Learning

### *5.4.1 Sub Theme 1: Implementing Online Teaching*

**The Unfreeze Stage**

The semi-structured interviews showed that Grade 10 teachers conducting online teaching during the coronavirus pandemic faced several challenges. The rapid transformation from traditional to online classrooms pushed teachers to rethink their methods. Adjustments included learning new digital platforms, adjusting course ideas for online delivery, and finding new ways to engage learners online.

Initial unfamiliarity with digital teaching tools plagued teachers. Change requires technology skills and instructional flexibility to engage learners, and the steep learning curves of the digital systems overwhelmed many teachers. Learners' irregular internet and technological access also affected attendance and participation.

Teachers struggled to track learner progress and post timely remarks online. The lack of face-to-face interaction made assessing learners' understanding and adjusting to schooling difficult. Teachers also noted the extra difficulty of organising and delivering online lessons and the need for continual professional development to keep up with new digital technologies and pedagogical concepts.

The swift transition to online teaching initiated the unfreezing stage, as identified by Lewin's Change Theory, where traditional classroom practices were disrupted, compelling teachers to reevaluate and modify their teaching methods. This stage involved confronting the limitations of existing educational norms, which included adapting to new digital platforms, restructuring course materials for online delivery, and devising new ways to engage learners online (Lewin, 1951). The participants' responses are listed below:

**Table 22**

*Example Quotes for Theme 2: Strategies for Adapting to Changes, Sub-Theme: Implementing Online Teaching in the Unfreeze Stage*

| Participant | Example quote |
|---|---|
| Participant 2 | "The shift to online teaching was a massive adjustment. Learning to use the new platforms was initially very daunting" |
| Participant 1 | "That was also a huge challenge because there was even an incidence where some learners did not even have computers or laptops at home, and maybe they would carry phones that were not able to log into Google classroom or Zoom or Skype. So, a lot of them also then requested, ma'am, if we ever had the situation, can you minimise the video? So, you can send them through to WhatsApp because every phone can take WhatsApp. So, yeah, there were. There were big challenges on that" |

## The Change Stage

Teachers faced substantial challenges, such as unfamiliarity with digital tools, steep learning curves, and inconsistent access to technology among learners, which hindered participation and engagement. This scenario aligns with the changing stage, where teachers actively experiment with and adapt new skills and strategies to manage online instruction effectively. These adaptations were necessary to maintain continuity in education and address the immediate needs of learners (Kotter, 2021). These are exemplified in the textual statements below:

**Table 23**

*Example Quotes for Theme 2: Strategies for Adapting to Changes, Sub-Theme: Implementing Online Teaching in the Change Stage*

| Participant | Example quote |
|---|---|
| Participant 5 | "Engaging students in a virtual classroom required a complete rethinking of my teaching methods. It was a significant challenge to keep them interested and motivated" |
| Participant 8 | "The disparity in students' access to technology was a major issue. Some students struggled to participate regularly due to poor connectivity" |
| Participant 4 | "And until we receive messages through our WhatsApp and email that we have to try and teach online. So, the first thing that you think about is that how? What am I going to cover? And how am I going to cover it? Is it going to be suitable for me to cover this particular |

| Participant | Example quote |
|---|---|
| | chapter online? What about learners? They won't be able to have connection, So those things they were running all in my mind". |

**The Refreeze Stage**

Refreezing has yet to fully occur, as ongoing challenges such as tracking learner progress, providing timely feedback, and the need for continuous professional development indicate that new practices are still being stabilised. Teachers' experiences underscore the need for systematic support to solidify these new educational practices into regular routines (Lewin, 1951). The participants' responses are listed below:

**Table 24**

*Example Quotes for Theme 2: Strategies for Adapting to Changes, Sub-Theme: Implementing Online Teaching in the Refreeze Stage*

| Participant | Example quote |
|---|---|
| Participant 5 | "Engaging students in a virtual classroom required a complete rethinking of my teaching methods. It was a significant challenge to keep them interested and motivated" |
| Focus Group Participant | Focus Group participant: "Providing feedback and monitoring progress in an online setting was difficult. I missed the immediate interactions that we have in a traditional classroom". |

These snippets demonstrate the various online learning challenges of teachers. Teachers were pressured to swiftly master technology and alter pedagogies. They needed to innovate to engage students and improve learning. The digital divide complicated these efforts by revealing how learners' technology responses influenced learning.

Statistics show that switching to online teaching was tough but contributed to professional growth and inventiveness. Teachers developed digital literacy and tested new teaching strategies to engage pupils. However, poor technology and inadequate support from educational authorities restricted these changes from being applied.

The data and the available literature supported the observation that KZN Grade 10 teachers share the international experiences. Hodges et al. (2020) note that the quick pivot to online learning or emergency remote teaching caused pedagogical and technical challenges. The need for proper professional development for online teachers has also been highlighted by Carrillo

and Flores (2020). The data also revealed inconsistencies. Bao (2020) showed that e-learning can enhance outcomes by providing flexible instruction tailored to individual needs. However, teachers were unanimous in saying they would fail to reap these gains because of a lack of support and resources. There is a need for a coherent e-learning strategy that addresses the technological and pedagogical demands of both teachers and learners. The post-COVID-19 pandemic difficulties for online teaching were experienced by Grade 10 teachers. Change happened quickly, and skill solutions only opened a new but quite challenging situation. This situation is consistent with global trends; however, it highlights how much upskilling and resourcing need to go into online teaching.

### *5.4.2 Sub Theme 2: Developing New Teaching Materials*

**The Unfreeze Stage**

According to the semi-structured interviews, most Grade 10 teachers had a hard time building online learning materials during the coronavirus epidemic. They needed good digital resources to teach in an engaging and instructional way in a remote learning environment. The new format necessitated teachers to adapt their materials online. Online content had to be made available to support teachers in their subject and classroom requirements. Creating interactive presentations, video lessons, and online quizzes from the ground up proved to be a challenging experience for several teachers. It was a painstaking and creative effort that required technical know-how and resourcefulness. Clarity comes as much from the online literacy of learners as from the thinking of teachers. Teachers stressed the significance of multimedia appealing to students. They incorporated videos, animations, and interactive quizzes into online classes to keep students engaged. However, generating and using these multimedia pieces provided technological challenges, especially for teachers new to digital content production.

In the unfreezing stage, teachers had to forgo resource-dependent practices and innovate with digital content to create new online teaching tools. Interactive presentations, video courses, and online quizzes must be created from scratch to accommodate this pedagogical transition. These sentiments are exemplified in the textual statements below:

**Table 25**

*Example Quotes for Theme 2: Strategies for Adapting to Changes, Sub-Theme: Developing New Teaching Materials in the Unfreeze Stage*

| Participant | Example quote |
|---|---|
| Participant 3 | "Developing new teaching materials for online classes was incredibly time-consuming. I had to create everything from scratch |
| Focus Group Participant | "The lack of pre-existing digital resources meant that I had to invest a lot of time and effort into creating effective online content." |

**The Change Stage**

Teachers had to combine online platform technical requirements of the online platform with learner engagement at the change stage of digital content development. They needed to improve their digital skills, and this presented a steep learning curve (Burnes, 2020). The participants' responses are listed below:

**Table 26**

*Example Quotes for Theme 2: Strategies for Adapting to Changes, Sub-Theme: Developing New Teaching Materials in the Change Stage*

| Participant | Example quote |
|---|---|
| Participant 6 | "Incorporating multimedia elements into my lessons was essential to keep students engaged, but it was a steep learning curve for me." |
| Participant 7 | "I was forced in a good way to learn all of these new skills. I mean, my PowerPoint skills went up tremendously. Just yeah. I've just gotten so much better. |

**The Refreeze Stage**

Refreezing requires integrating these new materials and procedures into teaching practice to make them standard tools. However, learners' resource availability and digital literacy gaps require fair technology access and regular pedagogical assistance (Cummings & Worley, 2022). The participants' responses are listed below:

**Table 27**

*Example Quotes for Theme 2: Strategies for Adapting to Changes, Sub-Theme: Developing New Teaching Materials in the Refreeze Stage*

| Participant | Example quote |
|---|---|
| Participant 5 | "So, after each lesson I would receive an email, of the recording. Most of the times we shared the videos. So, in the event of learners not |

| Participant | Example quote |
|---|---|
| | being able to be online for certain reasons, there were videos, and we really tried to communicate as far as possible." |
| Participant 10 | "Ensuring that the materials were accessible to all students, regardless of their digital literacy levels, was a major challenge." |

These snippets show how much work and imagination go into creating online learning resources, demanding teacher time due to a shortage of resources and teachers' other duties. Making entertaining and accessible materials adds complexity, forcing teachers to learn new skills and methods.

According to the statistics, new teaching materials were crucial to adaptation. Teachers always innovated to make online resources effective. This required digital content generation and multimedia integration to engage learners. Making online educational resources accessible to all students highlighted the necessity of recognising varied needs and abilities.

These findings match the pandemic tendencies identified in the literature. Trust and Whalen (2020) stressed the need for high-quality digital material for online learning, and Korkmaz and Toraman (2020) emphasised the role of multimedia in learner engagement and online learning.

Digital resources can improve online education. Niemi and Kousa (2020) discovered that the lack of digital resources was difficult for teachers. This highlights the need to invest more in high-quality digital teaching tools to help teachers transition to online teaching. Grade 10 teachers struggled to establish online learning materials. Time and effort were required to provide appealing and accessible content due to resource constraints. Following global trends, instructors prioritise high-quality digital content and multimedia in online training. The findings also show that online learning methods require additional support and investment in digital teaching tools.

### *5.4.3 Sub Theme 3: Engaging with Learners Online*

**The Unfreeze Stage**

Engaging learners online required teachers to unfreeze traditional interaction patterns and adopt new, more flexible engagement strategies. This adaptation was crucial to address the reduced physical presence in virtual classrooms, which often led to decreased learner motivation and increased distractions.

The semi-structured interviews suggested that Grade 10 teachers had the most challenging time engaging leaners online during the coronavirus pandemic. Online learning transformed teacher-student interactions, requiring new engagement approaches. Teachers stated that online classrooms decreased learner excitement and increased distractions, necessitating inventive strategies to attract learners' attention.

Interactive classrooms, multimedia materials, and online collaborative learning platforms increased engagement. Technological issues and learners' irregular internet and digital device access impeded their efforts. Teachers reported a lack of fast feedback and an inability to study learners' nonverbal indicators, making real-time knowledge assessment and training changes difficult.

Teachers emphasised continuous touch with learners and parents to keep them on track. Communication was essential for attendance, participation, and job fulfilment. Still, teachers reported mixed outcomes, with some learners grasping online learning and others suffering. Participants statements are as follows:

**Table 28**

*Example Quotes for Theme 2: Strategies for Adapting to Changes, Sub-Theme: Engaging with Learners Online in the Unfreeze Stage*

| Participant | Example quote |
|---|---|
| Participant 4 | "Keeping students engaged online was a constant struggle. They were easily distracted, and it was hard to gauge their understanding without seeing them in person." |
| Participant 1 | "There was always like one or two learners that would answer, and that's why I thought, maybe the rest are not listening, or maybe they just join the Google Classroom lesson, and then left their phones running in the background. Or but I just definitely had a thought of, you know, maybe these learners actually aren't part of this lesson physically." |
| Focus Group Participant | Focus Group Participant: "Some students adapted well to online learning, but many struggled, and it was challenging to provide the support they needed remotely. |

As these examples demonstrate, online learning engagement is challenging. Teacher problems increased with technology, sometimes without training or resources. Teachers had to innovate

to reproduce classroom engagement and assistance online. These strategies were occasionally hindered by technology and student digital divide.

### The Change Stage

Teachers used interactive techniques and multimedia to engage learners during the changing stage. Technical challenges and learner access to digital devices sometimes undercut these efforts, thus making active and inclusive learning settings difficult (Lewin, 1951). The participants' responses are listed below:

**Table 29**

*Example Quotes for Theme 2: Strategies for Adapting to Changes, Sub-Theme: Engaging with Learners Online in the Change Stage*

| Participant | Example quote |
|---|---|
| Participant 7 | "I tried to use interactive tools and multimedia to make lessons more engaging, but technical issues often disrupted the flow of the class." |
| Participant 1 | "So, I obviously had a class record, and I was expecting about 30 late learners, or 28, or 29. I probably received like 18 or 15 learners coming to the online lessons. And that was the biggest challenge. Because even though I was teaching, I wasn't really sure whether all the information was actually going to my students. The other thing is because of the lessons some students had their cameras off. So, you actually wouldn't be sure whether the students were actually listening in the lesson or not. Or the camera was just off, and the lesson was going on. But the students weren't actually partaking in the lesson. So, it was. It was very, very challenging." |
| Participant 1 | "Communication with students and parents was crucial. It was the only way to ensure students stayed on track, but it was time-consuming and not always effective." |

### The Refreeze Stage

The refreezing solutions are still being implemented into teaching practices for online engagement. Teachers struggle to ensure regular involvement and provide relevant feedback, showing that these novel engagement approaches require more adaption and support. (Lewin, 1951). The participants' responses are listed below:

**Table 30**

*Example Quotes for Theme 2: Strategies for Adapting to Changes, Sub-Theme: Engaging with Learners Online in the Refreeze Stage*

| Participant | Example quote |
|---|---|
| Participant 3 | "So, I think the first couple of lessons, we had a fairly good turnout, probably about 60%. Okay. And after about the first week, I think that dropped down 50%. But initially, we would have you know, about 60% kids on lessons after about a week or 2. But within the first kind of 2 weeks. I think that number dropped quite significantly. And then we were having kind of a standard, maybe 30%" |
| Participant 4 | "So out of the 25, we'll probably have about 10 initially, and then they'll join as you teach. You'll end up, maybe, with 8 or 7 learners who have connection. It was really frustrating. It was really a problem. It was a struggle to get at least half of the class attending the online lesson. Something that you could cover one in one lesson. It probably extended now to maybe 2 lessons or 3 lessons. some of them will log in and just carry on with whatever they want to do, and just log in, switch off their video and switch off mute, and then carry on with whatever." |
| Participant 10 | "Let's say, there was a population of 100 learners doing maths core Grade 10 in 2020 that we would only see that initial start was maybe about 40 learners. So, it wasn't. The numbers were not that great? Right? We'll get maybe about a 40 to 45 turnout and then what a lot of them would do they would log in so that we could see their names pop up on the side so that we could see, oh, ! They're registering. They're coming online, etc. But then they would turn their cameras off. and then they would do their own thing. So, let's say a 2 h lesson. You would be lucky maybe 20% would stay on for that full duration of a 2 h lesson. The turnout became poorer and poorer as time went on." |
| Participant 8 | "I wasn't expecting many, but we had a lot of students who did log on in the first few lessons, but soon that kind of dwindled. So, in the beginning, I would say it was as high as 80% somewhere there. But by the time we were sort of middle of Covid near the end of that first year we got 50%." |

The findings demonstrate that some learners flourished in online learning while many suffered. Teachers' engagement attempts had mixed results, emphasising the need for customised methods considering all learners' needs and conditions. Effective learner-family communication was also promoted to encourage student engagement and accountability.

KZN Grade 10 teachers faced similar challenges to those found in other studies. As Borup, Graham, and Drysdale (2020) observed, teachers struggled to adapt their techniques to online learning, making student engagement difficult. Excellent communication and interactive technology increase distant learning student engagement, according to Hodges et al. (2020).

This research detected some gaps. Teachers observed that a lack of infrastructure and support may restrict the benefits of online learning, which is individualised and adaptable. The digital gap must be addressed, and online teachers must be trained and equipped.

### *5.4.4 Sub Theme 4: Overcoming Technological Barriers*

**The Unfreeze Stage**

Semi-structured interviews indicated that Grade 10 teachers struggled with technology during the coronavirus pandemic. Teachers asserted that the unexpected switch to online schooling revealed gaps in their digital literacy and the technology accessible to them and their learners. These hurdles included inconsistent internet connections, inadequate gadgets, and insufficient training for digital teaching tools.

Teachers complained about regular technological issues that disrupted sessions and hampered learners' learning. Many teachers spent a lot of time fixing these errors, which took time away from their teaching. Teachers had to acquire various technologies with different learning curves due to the need for standardised platforms and resources across schools and districts.

Teachers used numerous methods to overcome technical limitations. Some used pre-recorded classes and online discussion forums for students with intermittent internet connections. Others sought help from colleagues, professional networks, and internet resources to improve their digital teaching. Teachers emphasised flexibility and tolerance in negotiating these hurdles, recognising that the pandemic demanded continual learning for teachers and learners.

This data shows how difficult it was to overcome technical limitations while teaching online in the unfreeze_stage. The participants' responses are listed below:

**Table 31**

*Example Quotes for Theme 2: Strategies for Adapting to Changes, Sub-Theme: Overcoming Technological Barriers in the Unfreeze Stage*

| Participant | Example quote |
|---|---|
| Participant 6 | "The technical difficulties were a major headache. Every day it seemed like there was a new issue to resolve, which made it hard to focus on teaching |
| Participant 9 | "I had to spend a lot of time learning how to use different online platforms. It was a steep learning curve, but it was necessary to keep the classes running" |
| Focus Group Participant | "Collaboration with colleagues and finding online resources were crucial in overcoming the technological challenges. We had to support each other through this process" |

**The Change Stage**

Teachers spent much time troubleshooting and adjusting to new tools and platforms due to the steep learning curve in the change stage, as shown in the textual statements below:

**Table 32**

*Example Quotes for Theme 2: Strategies for Adapting to Changes, Sub-Theme: Overcoming Technological Barriers in the Change Stage*

| Participant | Example quote |
|---|---|
| Focus Group Participant | "Collaboration with colleagues and finding online resources were crucial in overcoming the technological challenges. We had to support each other through this process" |
| Participant 10 | Because the learner population weren't used to the online facility and the Google meets and how to actually log in using the school emails. We were preparing work packs for learners. because we knew that some learners didn't have the facilities, the data, the laptops, and it was very difficult for some learners. In terms of the school, we offered a very fast crash course. And how to use Google meet and how to post on Google classroom. So, what we did was we realised that some educators, they didn't have devices to actually go and use Google classroom. |

**The Refreeze Stage**

However, teachers' asynchronous methods and teamwork enabled them to overcome these obstacles and continue teaching by adding digital notes to Google platforms for learners to view later (refreeze). Work packs were also given to learners during online and rotational

teaching to assist them. In the refreeze stage, teachers collaborated more with one other to find online resources to overcome technological barriers. The participants' responses are listed below:

**Table 33**

*Example Quotes for Theme 2: Strategies for Adapting to Changes, Sub-Theme: Overcoming Technological Barriers in the Refreeze Stage*

| Participant | Example quote |
|---|---|
| Participant 3 | "Using asynchronous methods helped a lot. It allowed students with poor internet access to catch up on their own time, but it also meant more work for me" |
| Participant 1 | " I then decided to speak to my subject head to see if, do we not have digital notes that we can also add attached to the Google classroom? also tried to think of ways to also get them to be engaged in terms of also getting them to engage in the lessons |

According to published literature, these findings mirror global pandemic trends. Moorhouse (2020) stated that teachers worldwide struggle with online education because of a lack of training and resources. Trust and Whalen (2020) also stated that professional development and peer assistance help teachers adjust to new digital tools and platforms. These studies highlight the need for technological and pedagogical changes for teachers to overcome technological barriers. Teachers must be enabled to increase their digital skills and find innovative ways to give all learners online learning. Online teaching requires flexibility, teamwork, and professional development. The teachers' experiences show this.

The results are similarly inconsistent. Huang et al. (2020) argued that the rapid adoption of digital technologies during the pandemic might boost long-term educational technology advancements. However, the teachers in this study teachers discovered that infrastructure and support can be an obstacle. Technology integration in education must be more organised and equitable to guarantee that all teachers and learners have the resources and support they require to succeed.

## 5.5 Major Theme 3: Implications of Pandemic-Induced Changes on Teaching and Learning

### *5.5.1 Sub Theme 1: Long-term Changes in Teaching Methods*

**The Unfreeze Stage**

The shift to online teaching initiated by the pandemic represents Lewin's unfreezing stage, in which existing educational practices were disrupted, compelling teachers to explore and adopt new methods and technologies. This stage was crucial for questioning and moving away from traditional classroom settings toward integrating both online and in-person instruction (Lewin, 1951).

According to data from the semi-structured interviews, the teaching methods of Grade 10 teachers have changed due to the coronavirus pandemic. The pandemic's rapid shift to online instruction prompted teachers to adopt new methods and technology, many of which will likely survive. Teachers use technology for instruction, evaluation, and classroom management. These developments represent a shift toward blended learning, which combines online and in-person instruction.

Teachers said the pandemic had made them reassess their techniques. Online teachers emphasised learner-centred learning in more interactive and collaborative ways. This transformation has made digital literacy and online pedagogy essential for teachers. Data analytics to measure learner achievement and engagement have also increased, helping teachers better fulfil learner needs.

The interviews revealed that the teachers expected these changes to affect their teaching techniques in the long term. Many pledged to use digital tools and resources after returning to in-person education. Technology can improve learning by giving students more freedom and accessibility, they say. Teachers agreed that these adjustments will require continuous professional development and the assistance of educational authorities. The participants experiences are highlighted below:

**Table 34**

*Example Quotes for Theme 3: Implications of Changes, Sub-Theme: Long-term Changes in the Unfreeze Stage*

| Participant | Example quote |
|---|---|
| Participant 2 | It's something that our principal asked us to do just quickly set up WhatsApp groups with all of our kids, so that we had that infrastructure in place, and we also had a little bit prior to that already gotten our children onto a system known as Google Classroom |
| Focus Group Participant | "Even when we go back to the classroom, I plan to keep using some of the digital tools we've adopted. They've made teaching and learning more flexible" |

### The Change Stage

As teachers adapted to these new methods, they entered the changing stage, characterised by the adoption of learner-centred learning and the increased use of digital tools for instruction and evaluation. This period of adjustment involved significant learning and adaptation, but also fostered greater digital literacy and pedagogical flexibility among teachers. The participants' responses are listed below:

**Table 35**

*Example Quotes for Theme 3: Implications of Changes, Sub-Theme: Long-term Changes in the Change Stage*

| Participant | Example quote |
|---|---|
| Participant 5 | "I've had to rethink how I teach and make my lessons more engaging and interactive for students online. This has actually improved my overall teaching practice" |
| Participant 8 | "Using data to track student progress has been really helpful. It allows me to see which students need more support and adjust my teaching accordingly" |

### The Refreeze Stage

From the rotational teaching stage and moving into the post-covid stage, the refreezing stage solidifies these new teaching methods into long-term practices. Teachers anticipated that the integration of technology in teaching will persist beyond the pandemic, suggesting a lasting transformation of teaching practices. Continuous professional development and support from

educational authorities will be essential to ensure that these changes are effectively embedded into everyday teaching strategies (Lewin, 1951). The participants' responses are listed below:

**Table 36**

*Example Quotes for Theme 3: Implications of Changes, Sub-Theme: Long-term Changes in the Refreeze Stage*

| Participant | Example quote |
|---|---|
| Participant 2 | "The pandemic forced us to incorporate technology into our teaching, and now I can't imagine going back to the old ways entirely. The tools we've started using have a lot of potential benefits" |
| Participant 2 | "Technology is so deeply entrenched. Now in our subject in terms of the videos and the PowerPoints and the audios that we share with the students and the online quizzes. and the way that we even do revision". |

These samples show how the pandemic changed education. Technology and learner-centredness have transformed how teachers educate and interact with learners. Data analytics in education improve personalisation and effectiveness.

The statistics indicate that these changes will affect schooling in the long term. Teachers have embraced technology and learned new abilities that will influence their teaching. It is particularly important that educational models become more inclusive and flexible.

Our findings match global trends compared to published literature. Reimers and Schleicher (2020) found that the pandemic has boosted the global usage of digital technologies and integrated learning for education. Hodges et al. (2020) further emphasised the need for more interactive and student-centred education to address distant learning problems.

The findings also revealed discrepancies. Some studies, like Bao (2020), emphasised technology's potential to improve education, but the experiences of the teachers in this study imply that these improvements require significant assistance and professional development. Giving teachers the tools and training they need to incorporate new technology and pedagogical methods is crucial.

### *5.5.2 Sub Theme 2: Learner Performance and Engagement*

**The Unfreeze Stage**

The unfreezing stage was evident as the rapid shift to online learning created new challenges and opportunities for learner engagement and performance. The semi-structured interviews revealed that pandemic-induced online learning has had different effects on learner performance and engagement. Some learners flourished in the new learning environment, while others suffered, according to teachers. Technology, home learning settings, and learning styles affected student results.

Teachers found that learners with reliable internet access and a good home learning environment performed better and were more engaged. Online learners took advantage of flexibility and demonstrated enhanced autonomy and self-regulation. However, technical issues and a lack of help at home made it difficult for learners to study. Disengagement and academic degradation were more common among these learners.

Teachers also thought that the lack of face-to-face connection and the difficulty of online learner participation affected learner outcomes. The lack of fast response and difficulties tracking learner involvement and knowledge were major issues. Teachers were concerned about the long-term effects of these disturbances on learners' academic achievement and well-being. These views are exemplified in the textual statements of participants below:

**Table 37**

*Example Quotes for Theme 3: Implications of Changes, Sub-Theme: Learner Performance and Engagement in the Unfreeze Stage*

| Participant | Example quote |
|---|---|
| Participant 10 | "Keeping students engaged in a virtual setting was a big challenge. Without the usual face-to-face interaction, it was hard to keep them motivated." |
| Focus Group Participant | "It was a little bit draining because you have to repeat yourself. You had to remember what you taught. Group A mustn't be repeated. Now again in Group B, where are you in the syllabus with group A and group B, and plus the Covid fog was in your head." |

**The Change Stage**

Teachers tried many methods to boost online engagement and performance during the change to online teaching. The change demanded creative ways to engage learners and measure online learning. They stressed the necessity of reliable internet connectivity and learners' favourable

home settings for learning achievement. These views are exemplified in the textual statements below:

**Table 38**

*Example Quotes for Theme 3: Implications of Changes, Sub-Theme: Learner Performance and Engagement in the Change Stage*

| Participant | Example quote |
|---|---|
| Focus Group Participant | "I worry about the long-term impact on students who struggled during this time. It's going to take a lot of effort to help them catch up." |
| Participant 2 | "So, the initial response, as you can imagine with novelty, there was quite a lot of buy-in. So, we had probably around half our kids show up for each of our classes, initially. Then very quickly the novelty wore off. I think something to do with the parents taking their computers back and we generous in saying about a third of our classes actually showing up online to experience a lesson of some sort, and that was quite difficult. Because you do get a sense actually of. Is this worth it? because you want to teach the whole class you want to reach every child." |
| Participant 2 | "So, some of the learners didn't even come to school to get the face-to-face lessons and then they also not even attending sending the online lessons |
| Participant 6 | "Students who didn't have reliable internet or a quiet place to study really struggled. It was heart-breaking to see them fall behind" |

**The Refreeze Stage**

The refreezing stage involves designing techniques to provide equal and successful learning experiences for all learners, regardless of their home circumstances. This involves institutional attempts to reduce the digital gap and equip learners for a hybrid educational future. The participants' responses are listed below:

**Table 39**

*Example Quotes for Theme 3: Implications of Changes, Sub-Theme: Learner Performance and Engagement in the Refreeze Stage*

| Participant | Example quote |
|---|---|
| Participant 2 | "Traditional teaching methods while they work face to face need to be adapted to interact with children who actually live a hybrid existence of a life face to face and a life that's online as well" |

| Participant | Example quote |
|---|---|
| Participant 3 | "Some students adapted well to online learning and even thrived. They enjoyed the flexibility and were able to manage their time effectively" |

These samples show learners' different distant learning experiences. The variation in student performance and engagement demonstrates how external variables like technology and home learning settings affect educational outcomes. Teachers were concerned about online learner involvement and assistance.

The results revealed that online learning helped some learners to succeed but also increased inequality and generated new obstacles. Outside influences often limited teachers' efforts to engage and encourage learners, underlining the need for a more equal and supportive education system.

These findings match the pandemic tendencies identified in the literature. Kuhfeld et al. (2020) found that online learning has worsened learning outcomes, especially for underprivileged pupils. Dorn et al. (2020) also discussed student engagement difficulties and their long-term effects on academic advancement and equality.

The findings also show discrepancies. The experiences of teachers in this study revealed that online learning only sometimes improves learner engagement and performance through personalised and flexible instruction, according to Yang (2020). The variable learner results highlight the need to improve engagement and performance components like technology and support systems.

### *5.5.3 Sub Theme 3: Emotional and Social Effects on Teachers*

**The Unfreeze Stage**

Teachers' emotional and social responses to the pandemic showed considerable unfreezing of support networks and coping methods. The semi-structured interviews revealed the emotional and social effects of the pandemic on the Grade 10 teachers. The teachers were stressed and exhausted by the unexpected transition to online instruction. Many teachers were overburdened by the rising workload and having to adopt new methods and technology. Not seeing co-workers and learners caused them to feel alienated and estranged and upended their personal and professional lives.

They spoke about the emotional toll of supporting poor learners and worried about their own children's health and academic performance. Those teachers who worked from home became emotionally exhausted and burned out. Many felt unsupported and devalued due to poor communication and help from educational authorities.

The sentiments are exemplified in the textual statements below:

**Table 40**

*Example Quotes for Theme 3: Implications of Changes, Sub-Theme: Emotional and Social Effects on Teachers in the Unfreeze Stage*

| Participant | Example quote |
|---|---|
| Participant 4 | "Not being able to see my students and colleagues in person made me feel very isolated. It was a lonely experience" |
| Participant 2 | "Firstly, straight away. I think there's thoughts of anxiety |
| Participant 3 | "But I found myself quite anxious during Covid. Are we going to get our salaries are we going to get Covid? And like that was quite like an emotional strain". |
| Participant 2 | "The stress of managing everything from home was overwhelming. There was no clear separation between work and personal life, which made it hard to relax and recharge" |
| Participant 1 | "I'm part of a family. I've got 2 kids of my own. I've got a husband. We live together in a complex. It did create a lot of uncertainty, and I was very anxious are going through that., so it created a lot of emotions that I went through because of the anxiety and so forth. So yes did it affect me a lot? |
| Participant 6 | "As I said, the initial stages were a little bit stressful. We must get up early in the morning set up, and then we have online lessons classes that were set up and we had to teach in those time frames. So, everybody was in a traumatic situation". |

**The Change Stage**

Throughout the changing stage, teachers felt unsupported and overwhelmed as they adjusted to these new circumstances. This period has highlighted the necessity for strong support structures to help teachers cope emotionally and socially with these shifts. The participants' responses are listed below:

**Table 41**

*Example Quotes for Theme 3: Implications of Changes, Sub-Theme: Emotional and Social Effects on Teachers in the Change Stage*

| Participant | Example quote |
|---|---|
| Focus Group Participant | "The lack of support and clear communication from the authorities made everything more stressful. We were left to figure things out on our own" |
| Participant 5 | "I think post COVID, teacher burnout is more frequent, more evident and I think It's not COVID. The department of basic education put unrealistic demands, expectations on you know the teachers. The admin work is killing us. I've never done so much admin in my life". |

## The Refreeze Stage

New support and communication mechanisms are needed to assist teachers in managing stress and staying healthy throughout the refreezing period. The lack of support structures hindered teachers' ability to adapt to new norms and prepare for future problems. The participants' responses are listed below:

**Table 42**

*Example Quotes for Theme 3: Implications of Changes, Sub-Theme: Emotional and Social Effects on Teachers in the Refreeze Stage*

| Participant | Example quote |
|---|---|
| Focus Group Participant | "It was a little bit draining because you must repeat yourself. You had to remember what you taught. Group A mustn't be repeated. Now again in Group B, where are you in the syllabus with group A and group B, and plus the Covid fog was in your head." |
| Participant 1 | "I was constantly worried about my students and whether they were coping with the changes. It was a heavy burden to carry" |

These snippets reveal teachers' emotional and social struggles during the pandemic. Workload, lack of separation between job and home life, and student well-being issues caused stress and emotional tiredness. Isolation from co-workers and learners worsened these issues, causing loneliness and alienation.

Online teaching, a lack of educational authority support, and the stress of maintaining personal well-being may have contributed to the pandemic's emotional and social effects on teachers. The teachers' feedback shows their need for comprehensive emotional and social crisis care.

Our findings mirror global trends compared to literature. Pressley et al. (2021) discovered that remote instruction and educational authority neglect increased stress and emotional exhaustion in teachers worldwide. Kim and Asbury (2020) observed that the pandemic affected teachers emotionally, underlining the need for increased support and resources.

The results are similarly inconsistent. Online teaching may improve work-life balance. However, Greenberg et al. (2020) observed that unclear boundaries generally increase stress and emotional tiredness. This highlights the need for equipping teachers to balance work and life during crises.

### *5.5.4 Sub Theme 4: Institutional Policy and Support Changes*

**The Unfreeze Stage**

According to the data of the semi-structured interviews, the pandemic affected institutional policies and support systems for Grade 10 teachers as their schools implemented new online learning policies and assistance. Examples were online tools and training, evaluation and grading policy revisions, and staff co-operation.

These policies and aid programmes varied in success. Some teachers received full school support, including professional development and digital tools. Conversely, insufficient training, inadequate resources, and poor school administration interaction plagued other teachers, leaving many teachers unprepared and overwhelmed. However, more training was provided during rotational teaching.

Teachers stressed that policies must be flexible and responsive. Schools that quickly adjusted their policies to fit the needs of teachers and learners survived the pandemic better. These policies include flexible scheduling, curriculum adjustments, and teacher/learner mental health support.

Participants shared the following views:

**Table 43**

*Example Quotes for Theme 3: Implications of Changes, Sub-Theme: Institutional Policy and Support in the Unfreeze Stage*

| Participant | Example quote |
|---|---|
| Participant 6 | "There was a lack of clear communication from the school administration, which made it difficult to know what was expected of us." |
| Participant 4 | "When we came back, we got training. Because now we are sharing, now we are sharing our problems, you share your problem that you had when you're at home, we share problems." |

**The Change Stage**

Institutional regulations and support impacted teachers' pandemic experiences. Some teachers were assisted with flexible scheduling and mental health support during the change stage of Lewin. The participants' responses are listed below:

**Table 44**

*Example Quotes for Theme 3: Implications of Changes, Sub-Theme: Institutional Policy and Support in the Change Stage*

| Participant | Example quote |
|---|---|
| Participant 3 | "The training and resources provided by my school were invaluable. They helped me feel more confident and prepared to teach remotely." |
| Focus Group Participant | "Having access to mental health support made a big difference. It helped me cope with the stress and emotional toll of the pandemic." |

**The Refreeze Stage**

Institutional regulations and support impacted teachers' pandemic experiences during the refreeze period of the online teaching period and in rotational teaching when the Grade 10 learners returned to school. Teachers were now compelled to teach face-to-face as well as conducting online lessons with learners who did not return to school. They also had to ensure their own safety. These sentiments are exemplified in the textual statements below:

**Table 45**

*Example Quotes for Theme 3: Implications of Changes, Sub-Theme: Institutional Policy and Support in the Refreeze Stage*

| Participant | Example quote |
|---|---|
| Participant 1 | "So, the traditional way of teaching, even if it was rotational, had to change". |
| Participant 1 | "When we were teaching in a rotational manner. I had to also be careful as to how close I am to kids, because I I've got a 6-year-old. He is very asthmatic, and he's got a big problem with the sinuses". |
| Participant 4 | "So, you were doing both, you're doing the rotational and doing. You had to still teach online. So, it was like double teaching". |

This shows how institutional regulations and support impacted teachers' pandemic experiences. Online teachers overcame challenges using digital tools, flexible schedules, and mental health support. However, insufficient communication and support left many teachers overwhelmed and underprepared.

Statistics indicate that institutional regulations and assistance helped teachers adjust to the new educational environment. Schools with more comprehensive and more flexible support had better online teachers. These schools emphasised clear communication and professional development to help teachers. This finding is in line with trends in the literature. Darling-Hammond et al. argued that online teachers require significant assistance and professional development (2020), and Trust and Whalen (2020) noted that effective communication and adaptable policies can assist teachers during crises. However, Harris et al. (2020) argued that the pandemic forced schools to innovate and increase such support networks, although the teachers in this study viewed the situation differently.

More consistent and equitable policy and institutional support is needed for all teachers to access the resources and support they require to succeed. For Grade 10 teachers, the pandemic affected major institutional changes and support mechanisms. Online teachers navigated challenges with digital tools, had flexible schedules, and were supported in mental health. The global changes highlighted the necessity of providing support on a large, scalable, and adaptive scale to help teachers reinvent their pedagogy in educational environments.

### 5.6 Discussion of the Findings

The study's data revealed how Grade 10 teachers experienced teaching, what they did, and what implications their teaching had for teaching and learning during the pandemic and in the post-pandemic era.

### *5.6.1 Navigating Changes in Technology*

The sudden use of online learning revealed technological issues. Teachers experienced severe digital challenges. New software and internet instruction frightened less technical teachers, and inconsistent internet and gadget use worsened educational disparity.

These experiences demonstrate that teachers need digital technology and policy training to close the digital gap. Although some teachers used technology successfully, their overall experiences highlighted digital literacy and infrastructural difficulties.

### *5.6.2 Pedagogical Adaptations*

Pedagogical problems showed that online teaching requires significant pedagogical changes. Monitoring student progress and providing timely feedback was challenging without face-to-face interaction, and online learner involvement and participation required creativity and extra work for teachers. Their experiences revealed the significance of interactive, learner-centred teaching to boost online learning engagement.

Teachers require continual professional development to teach online, and online instruction must be interactive and engaging for learners.

### *5.6.3 Social and Emotional Impact*

The social and emotional effects of the pandemic on teachers was significant. Distanced from co-workers and learners, teachers felt lonely and detached. The pressure to adopt new teaching methods led to stress and emotional depletion. Teachers' worries about learners' well-being and academic development added to their emotional load.

These findings emphasise the necessity of emotional and psychological support for teachers during crises. Teachers need robust support networks and resources to handle stress and remain healthy.

### *5.6.4 Institutional Policy and Support*

The efficacy of policies and support varied significantly. Some teachers received digital tool training, resources, and regular administrative communication from their schools. Others cited inadequate training and imprecise communication as key impediments.

These examples demonstrate the need for institutional support for remote instruction. Teachers need effective procedures and communication to adapt to changes and maintain instruction.

### *5.6.5 Implications for Teaching and Learning*

Pandemic-induced alterations greatly affected teaching and learning. The teachers' experiences also highlight the need to close the digital gap and give all learners equal access to technology. Learner engagement and learning can also improve with the move towards student-centred and interactive education. Technology in education will continue to promote blended learning.

These findings show that pandemic modifications can enhance teaching and learning over time. However, these benefits require continued support and investment in digital infrastructure, professional development, equity, and access regulations.

## 5.7 Chapter Conclusion

KZN Grade 10 teachers' experiences during the coronavirus pandemic revealed the challenges and adjustments that are needed to address extraordinary school interruptions. Technological, pedagogical, and social factors are highly influential constructs in the teachers' lived experiences, and holistic support systems are required to effect better teaching and learning. The results of this study suggest that although the pandemic was a challenge, it was also a blessing in disguise, promoting education innovation and development. Improvements in education must go beyond pandemic lessons. It is vital to focus on closing the digital gap, providing continuing professional development, and promoting flexible and adaptable teaching approaches.

# CHAPTER 6

# CONCLUSIONS AND RECOMMENDATIONS

## 6.1 Introduction

This research examined Grade 10 teachers' experiences as they navigated changes in teaching, at Aspire High, a public school in KZN. The study examined how teachers managed technological, pedagogical, and social changes and their implications for teaching and learning during the pandemic and in the post-pandemic era. The results showed that the coronavirus pandemic resulted in major education system changes.

This study was underpinned by the interpretive paradigm, which explores phenomena by interacting with participants and portraying the reality of people's experiences. The study adopted a qualitative approach, with semi-structured interviews and a single focus group discussion. The sample comprised 10 participants, five males and five females. The results were categorised into three broad themes: navigating changes in teaching during the coronavirus pandemic, strategies for adapting to changes in teaching and learning, and implications of pandemic-induced changes on teaching and learning. There were 14 sub-themes extracted from these broad themes for thematic analysis.

This chapter reviews the study's empirical findings and their implications for the research goals in the context the literature. It synthesises the findings on the teachers' experiences as they navigated changes in teaching in a public school in KZN in the Pinetown District. The chapter concludes with recommendations that emerged from the study.

## 6.2 Summary of the Findings

Educational institutions globally changed rapidly due to the coronavirus pandemic (COVID-19). This study examined how Grade 10 teachers at Aspire High, a public school in KZN, adjusted to these changes. Aspire High's qualitative study uncovers the challenges and how these Grade 10 teachers navigated the challenges during the coronavirus pandemic. The semi-structured interviews and the single focus group discussion using thematic analysis produced the study's objectives-aligned findings. These findings align with the unfreeze stage of Lewin's Theory of Change, where the need for change is recognised, the change stage where teachers continued to teach online and later rotational teaching, and the refreeze stage that occurred towards the end of the change stage and in the post-pandemic era (Lewin, 1951).

The study revealed that for change to be effective, there must be co-operation from all parties involved. Most teachers exceeded expectations, whereas learners failed to contribute adequately especially during the online teaching (Suddaby & Foster, 2017).

The three broad themes identified in the data are referred to as major themes and structured by the study's theoretical framework which comprised the key challenges of technology, pedagogy, and social aspects (Ferri et al., 2020) within the structure of Lewin's Theory of Change model. These are discussed, in turn, for each of Lewin's three stages, with Ferri's challenges referred to as sub-themes.

## 6.3 Major Theme 1: Navigating Changes in Teaching during the Coronavirus Pandemic

### *6.3.1 Changes During Online Teaching (Unfreeze, Change and Refreeze)*

Online teaching needed major technology interventions initially (unfreeze), the change stage, and later extending to the post-pandemic era (refreeze). Teachers found online platforms and technologies difficult to navigate during the unfreeze, change, and refreeze stages of the pandemic. Using new software and online teaching techniques frustrated the anxious Grade 10 teachers, especially those less technologically proficient. Learners' inconsistent internet access and gadgets worsened the situation.

These experiences demonstrate the need for thorough teacher training and assistance with online technologies and policies to close the digital gap.

### *6.3.2 Pedagogical Changes During Online and Rotational Teaching*

Teaching online required pedagogical shifts during the stages of unfreeze, change, and refreeze. If teachers wanted learners to engage on online platforms, there had to be interaction elements. It is also true that monitoring learner progress was difficult without face-to-face interactions. Teachers said interacting with learners online required some creativity and more work than usual, with little success. Such pedagogical challenges highlight the need for ongoing teacher professional development in online teaching. The experiences also stressed the significance of interactive, learner-centred teaching to boost online learning engagement. The semi-structured interviews and single focus group discussion revealed that Grade 10 teachers were greatly impacted, and their teaching techniques changed during the coronavirus pandemic when conducting rotational teaching. Teachers also continued online teaching during rotational

teaching (unfreeze, change, and refreeze stages) because parents decided not to send their children to school as a safety precaution or learners or members of their households were infected with the virus and were not present at school. This situation also impacted teachers' workloads and resulted in lessons being taught three to four times.

### *6.3.3 Social and Emotional Impact During Online and Rotational Teaching*

The social and emotional effects of the pandemic on teachers was significant during the unfreeze, change, and refreeze stages of online teaching. Distance from co-workers and learners caused loneliness and detachment. The increasing effort and pressure to adopt new teaching methods led to stress and emotional depletion. Teachers' concerns about learners' well-being and academic development added to their emotional load. The data also revealed that Grade 10 teachers struggled socially and emotionally when learners returned to school for rotational teaching and learning during the coronavirus pandemic (unfreeze). Teachers were apprehensive about returning to school and undertaking rotational teaching. The change stage included teachers' challenges in encouraging social distancing and complying with COVID-19 protocols. Teachers did not recognise learners in the post-pandemic era and avoided interaction in staffrooms due to social distancing, which continued throughout the pandemic. Learners who communicated with teachers during rotational teaching continued to engage teachers on WhatsApp (refreeze), thus increasing the teacher workload.

These findings emphasise the necessity of emotional and psychological support for teachers during crises. Teachers needed healthy support networks and resources to manage stress and to remain healthy.

## 6.4 Major Theme 2: Strategies for Adapting to Changes in Teaching and Learning

### *6.4.1 Implementing Online Teaching*

The transition from traditional to online classrooms compelled teachers to reconsider their methods in the stages of unfreeze, change, and refreeze. Adjustments included learning new digital platforms, adjusting course ideas for online delivery, and finding new ways to engage learners online. Irregular internet and technological access also hindered attendance and participation.

### *6.4.2 Developing New Teaching Materials*

Teachers stressed the significance of multimedia in appealing to learners. They incorporated videos, animations, and interactive quizzes into online classes to keep learners engaged in the change stage. However, generating and using these multimedia pieces faced technological challenges, especially for teachers who needed help with technology (unfreeze, change, and refreeze stage).

### *6.4.3 Engaging with Learners Online*

Teachers stated that online classrooms decreased learner excitement and increased distractions, necessitating inventive strategies to attract learners' attention in the unfreeze, change, and refreeze stages. Teachers emphasised continuous engagement with learners and parents to ensure consistency. Teachers had to innovate to reproduce classroom engagement and assistance online. Their engagement attempts had mixed results, emphasising the need for customised methods considering all learners' needs and conditions.

### *6.4.4 Overcoming Technological Barriers*

Teachers stated that the unexpected transition to online schooling revealed gaps in their digital literacy and the technology accessible to them and their learners during the unfreeze, change, and refreeze stages. Teachers used numerous methods to overcome technical limitations. Some participants used pre-recorded classes and online discussion forums for learners with intermittent internet connection. This study's teachers discovered that infrastructure and support can be obstacles. Technology integration in education must be more organised and equitable to guarantee that all teachers and learners have the resources and support they require to succeed.

## 6.5 Major Theme 3: Implications of Pandemic-Induced Changes on Teaching and Learning

### *6.5.1 Long-term Changes in Teaching Methods*

The pandemic's rapid shift to online teaching has prompted teachers to adopt new methods and technology, many of which are currently being used in the post-pandemic era. Teachers use technology in teaching, evaluation, and classroom management. These developments represent

a shift toward blended learning, which combines online and in-person instruction. This transformation has made digital literacy and online pedagogy essential for teachers.

### *6.5.2 Learner Performance and Engagement*

Pandemic-induced online learning has had conflicting effects on learner performance and engagement. According to teachers, some learners flourished in the new learning environment, but others suffered. Technology, home learning settings, and learning styles affected learners' results. The results showed that online learning helped some learners succeed but also increased inequality and generated new obstacles. Outside influences often limited teachers' efforts to engage and encourage learners, underlining the need for a more equal and supportive education system.

### *6.5.3 Emotional and Social Effects on Teachers*

Teachers were stressed by the unexpected transition to online teaching during the pandemic. Their concerns about their children's health and academic performance raised their stress. Teachers who worked from home became emotionally exhausted and burned out. Many teachers felt unsupported and devalued due to poor communication and help from educational authorities. This study revealed that teachers had emotional and social struggles throughout the pandemic. Workload, lack of separation between job and home life, and learner well-being issues caused stress and emotional tiredness. Isolation from co-workers and learners caused these issues, resulting in loneliness and alienation. Online teaching, a lack of educational authority support, and the stress of maintaining personal well-being may have contributed to the pandemic's emotional and social effects on teachers. These teachers' feedback shows the reasons why they need comprehensive emotional and social crisis care.

### *6.5.4 Institutional Policy and Support*

Policy and support varied greatly. Some teachers received digital tool training, resources, and regular administrative communication from their schools. Others cited inadequate training and imprecise communication as critical obstacles to online learning. These examples demonstrate the need for institutional support for online instruction. Teachers need effective procedures and communication to adapt to changes and maintain instruction.

## 6.6 Implications for Teaching and Learning in the Post-Pandemic Era

Pandemic-induced changes greatly affect teaching and learning. Technology in education will continue to promote blended learning. The experiences also highlighted the need to close the digital gap and give all learners access to technology. Learner engagement and learning can also improve with the move toward learner-centred and interactive education.

These findings demonstrate that pandemic adaptations can enhance teaching and learning over time. However, these benefits require continued support and investment in digital infrastructure, professional development, and access regulation.

The data analysis highlighted the three conceptual challenges within the three phases of change. The first is technological, where teachers faced challenges transitioning to online platforms, reflecting the unfreeze, change, and refreeze stages of Lewin's Theory of Change. The second is pedagogical, whereby adaptations in teaching methods were required to engage learners online and during rotational teaching in the unfreeze, change, and refreeze stages. The third is social and emotional, with teachers experiencing stresses and isolation in the unfreeze, change, and refreeze stage due to the transition from face-to-face to online instruction and later to rotational teaching.

## 6.7 Recommendations of the Study

This study addressed a gap in the literature on teachers' experiences in navigating changes in teaching during the coronavirus pandemic in a public school in KZN. This study contributed significantly to the body of knowledge on how teachers implemented and sustained change in the middle of various challenges during the coronavirus pandemic during the unfreeze, change, and refreeze stages of Lewin's Change model. The findings of this research also provide an opportunity for research to be conducted with teachers' perceptions of the lag in learning due to online and rotational teaching. Teachers, SMTs and the DoE can also apply the findings of this research when further change occurs in the education sector. Practical guides can be communicated on how to deal technology, pedagogy, and social issues at schools. A further recommendation is for schools or organisations at large to communicate the concepts of change and the stages of change to their teams and to recognise team players involved in the change (such as teachers and SMTs in the context of this study).

The following recommendations based on the empirical study and literature analysis can help Grade 10 teachers adjust to instructional changes during and after crises like the coronavirus pandemic.

### *6.7.1 Enhancing Technological Support and Training*

Online teaching revealed limitations in digital literacy and technology access among teachers and learners. Educational institutions must undertake in comprehensive teacher training programmes to use digital tools and platforms efficiently. Teachers need ongoing professional development to keep up with current technology and pedagogy (Hodges et al., 2020).

Moreover, the digital gap must be addressed. Schools should work together with government and private sector partners to provide all learners with reliable internet and online learning equipment. Technical support for teachers and learners can reduce remote learning obstacles (Trust & Whalen, 2020).

### *6.7.2 Promoting Pedagogical Innovation*

Online and hybrid teaching formats require innovative pedagogies that engage and educate learners. Teachers should try participatory, learner-centred strategies. Digital resources and solutions that enable interactive learning can help institutions achieve this (Carrillo & Flores, 2020).

Promote collaborative learning via virtual venues where learners can collaborate on projects and assignments that foster community and improve learning. Teachers should also learn efficient online assessment strategies to monitor learners' progress and offer timely feedback (Bao, 2020).

### *6.7.3 Provision of Emotional and Psychological Support*

The pandemic affected teachers emotionally and socially. Schools should provide vital emotional and psychological support for teachers. Examples include counselling, peer support, stress management, and resilience professional development programmes (Pressley et al., 2021).

Creating a supportive school atmosphere is crucial. School administrators should prioritise clear and consistent communication, recognise teachers' efforts and successes, and foster a culture of support (Kim & Asbury, 2020).

### *6.7.4 Adapting Institutional Policies and Support Structures*

Institutional strategies and support structures have produced mixed results during the pandemic. Educational institutions should design flexible rules that can be altered to meet teachers' and learners' needs. Examples include flexible scheduling, curriculum adjustments, and mental health support (Harris & Jones, 2020).

School management teams must communicate. Teachers can relax with regular updates and communication. Feedback systems and teacher involvement in teaching and learning decisions are needed (Darling-Hammond et al., 2020).

### *6.7.5 Incorporating the TPACK Framework*

Future studies should explore the integration of the Technological Pedagogical Content Knowledge (TPACK) framework to enhance teachers' capabilities in merging technology with pedagogical skills and content knowledge to ensure effective teaching across various disciplines and strategies.

## 6.8 Limitations of the Study

This study provides valuable insights into Grade 10 teachers' pandemic experiences despite its disadvantages. A significant limitation is the sample size. The study's 10 KZN public school teachers may restrict its results. Future research may employ a larger, more diverse sample to understand teacher experiences in SA schools better.

Another issue is self-reported data. Participants' subjective experiences and perceptions inform findings in semi-structured interviews and focus groups. This strategy provides deep insights but may be biased. Data triangulation using classroom observations or learners' comments may increase reliability.

This study focused on teachers' experiences, excluding learners, parents, and administrators. Understanding other stakeholders' interests may help understand how the pandemic has influenced education. Future studies should consider several perspectives to understand the situation holistically.

## 6.9 Suggestions for Future Studies

This study offers three recommendations for future research exploring teachers' experiences during the pandemic. Based on this study's findings and limitations, various research fields can be identified.

### *6.9.1 Exploring the Long-term Impact of the Pandemic on Teaching and Learning*

The first recommendation is to study pandemic-induced changes in teaching and learning across time. It is important to assess whether pandemic-related technical and pedagogical improvements can be sustained and how they influence learner outcomes and teacher effectiveness (Reimers & Schleicher, 2020). This recommendation is to conduct a study highlighting experiences of both teachers and learners during the post-covid era. This study would explore and confirm the reasons for learners not participating or attending online and rotational lessons during the coronavirus pandemic and would also assess learner retention during the online and rotational learning period. A finding in this study revealed that learners on the online platform did not retain concepts, thereby compelling teachers to re-teach concepts during rotational teaching.

### *6.9.2 Comparative Studies Across Different Educational Contexts*

The second recommendation is to compare teachers' experiences across locations, school types, and educational systems to clarify the contextual elements that affect online and blended instruction. Such a study could use a mixed-methods methodology with a larger sample and include schools from all provinces in South Africa. Integrating qualitative and quantitative results from a larger sample could yield rich insights into the varying challenges experienced by teachers in navigating changes in teaching during the coronavirus pandemic in our country. These studies can identify best practices and inform policies (Schleicher, 2020).

### *6.9.3 Integrating Learner and Parent Perspectives*

The third recommendation for future research is to include learners' and parents' perspectives to better understand how the outbreak influenced education. This recommendation is to conduct a study that reveals the experiences of both parents and learners. This study would explore and confirm why learners do not attend online and rotational lessons during the coronavirus pandemic. Multiple views on educational difficulties and successes might help generate more effective and inclusive solutions for all stakeholders (Yang, 2020).

### *6.9.4 Evaluating the Effectiveness of Support Programs*

The final recommendation for future research is to assess the effectiveness of pandemic assistance programmes. This research would investigate how professional development, mental health assistance, and technology affect teacher well-being and learner success. Evaluations can shape future assistance programmes and policies (Trust & Whalen 2020).

## 6.10 Conclusion

Education faces significant difficulties and adjustments due to the coronavirus pandemic. The experiences of the Aspire High Grade 10 teachers reveal how these changes affected teaching, teacher well-being, and learner learning. The pandemic has brought current challenges to the fore, although it has allowed education to innovate and flourish. This study further underscores the importance of systemic support, flexible policy, and ongoing professional development for those facilitating asynchronous and hybrid learning. Teachers and learners will have to be supported in changing the previous educational context by addressing the digital gap and helping instructional innovation. Teachers also require emotional and psychological support. The education sector needs to learn from pandemic experiences as it moves ahead. The recommendations aim to support ongoing improvements in educational practices, ensuring that teachers are well-equipped to face future challenges. The integration of the TPACK framework, as suggested for future studies, could further enhance the ability of learners to effectively merge technology with pedagogical skills and content knowledge, promoting a more holistic approach to teaching and learning in the digital age. Teachers need a fundamental shift in mindset pertaining to technology, adaptable policies, and a school culture that will allow them to provide all stakeholders with a quality education as part of a more flexible and inclusive education system.

# REFERENCES


Aboagye, E. O., Yawson, J. A., & Appiah, K. N. (2021). COVID-19 and E-learning: The challenges of students in tertiary institutions. *Social Education Research, 2*(1), 1-8.

Adams, J. M. (2019). The value of worker well-being. *Public Health Reports, 134*, 583-586. https://doi.org/10.1177/0033354919878434

Airiodion Global Services. (2020). Lewin's Change Management Model: A Clear Guide. *Airiodion Global Services*. Retrieved from https://airiodion.com/lewins-change-management-model/

Alea, L. A., Fabrea, M. F., Roldan, R. D. A., & Farooqi, A. Z. (2020). Teachers' COVID-19 awareness, distance learning education experiences and perceptions towards institutional readiness and challenges. *International Journal of Learning, Teaching and Educational Research, 19* (6), 127-144.

Allen, I. E., & Seaman, J. (2017). Digital learning compass: Distance education enrollment report 2017. *Babson Survey Research Group, e-Literate, and WCET*. Retrieved from https://onlinelearningsurvey.com/reports/digtiallearningcompassenrollment2017.pdf

Ali, A., & Smith, D. (2015). Comparing social isolation effects on students' attrition in online versus face-to-face courses. *The Online Journal of Distance Education and e-Learning, 3*(2), 20.

Alonso-García, S., Aznar-Díaz, I., Cáceres-Reche, M. P., Trujillo-Torres, J. M., & Romero-Rodríguez, J. M. (2021). Systematic review of good teaching practices with ICT in Spanish higher education: Trends and challenges for sustainability. *Sustainability, 13*(4), 1-18.

Alsolais, A., Alquwez, N., Alotaibi, K. A., Alqarni, A. S., Almalki, M., Alsolami, F., Almazan, J., & Cruz, J. P. (2021). Risk perceptions, fear, depression, anxiety, stress, and coping among Saudi nursing students during the COVID-19 pandemic. *Journal of Mental Health, 30* (2), 194-201. https://doi.org/10.1080/09638237.2021.1922636

Anderson, D., & Anderson, L. A. (2010). *Beyond change management: How to achieve breakthrough results through conscious change leadership*. John Wiley & Sons.

Anderson, D.L., Watt, S.E., Noble, W. & Shanley, D.C., 2012, 'Knowledge of attention deficit hyperactivity disorder (ADHD) and attitudes toward teaching children with ADHD: The role of teaching experience', *Psychology in the Schools* 49(6), 511–

Aperribai, L., Cortabarria, L., Aguirre, T., Verche, E., & Borges, Á. (2021). Teacher's physical activity and mental health during lockdown due to the COVID-2019 pandemic. *Frontiers in Psychology, 11*, 1-14. https://doi.org/10.3389/fpsyg.2020.577886

Apriyanti, C., Syafitri, L. N., & Astuti, S. (2022). Online learning and COVID-19 pandemic: The challenges and opportunities. *JPBI (Jurnal Pendidikan Biologi Indonesia), 8(*1), 37-45.

Azubuike, O. B., Adegboye, O., & Quadri, H. (2021). Who gets to learn in a pandemic? Exploring the digital divide in remote learning during the COVID-19 pandemic in Nigeria. *International Journal of Educational Research Open, 2*, 100022.

Bakaria, H., Hunjra, A. I., & Niazi, G. S. K. (2017). Empirical analysis of methodologies and approaches used in change management. *Journal of Change Management, 17*(4), 367-384.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. W H Freeman/Times Books/ Henry Holt & Co.

Bao, W. (2020). COVID-19 and online teaching in higher education: A case study of Peking University. *Human Behaviour and Emerging Technologies, 2*(2), 113-115.

Barhem, B., Younies, H., & Muhamad, R. (2009). Religiosity and work stress coping behavior of Muslim employees. *Education, Business and Society: Contemporary Middle Eastern Issues, 2*(2), 123-137. https://doi.org/10.1108/17537980910960690

Bartunek, J. M., & Moch, M. K. (1987). First-order, second-order, and third-order change and organization development interventions: A cognitive approach. *The Journal of Applied Behavioral Science, 23*(4), 483-500.

Barzilay, R., Moore, T. M., Greenberg, D. M., DiDomenico, G. E., Brown, L. A., White, L. K., Gur, R. C., & Gur, R. E. (2020). Resilience, COVID-19-related stress, anxiety, and depression during the pandemic in a large population enriched for healthcare providers. *Translational Psychiatry, 10*(1), Article 291. https://doi.org/10.1038/s41398-020-00982-4

Beames, J. R., Christensen, H., & Werner-Seidler, A. (2021). School teachers: The forgotten frontline workers of COVID-19. *Australasian Psychiatry*. https://doi.org/10.1177/10398562211006145

Beaunoyer, E., Dupéré, S., & Guitton, M. J. (2020). COVID-19 and digital inequalities: Reciprocal impacts and mitigation strategies. *Computers in Human Behavior, 111,* Article 106424.

Becher, T., & Trowler, P. R. (2001). *Academic tribes and territories* (2nd ed.). SRHE & Open University Press.

Bertram, C., & Christiansen, I. (2014). *Understanding research: An introduction to reading research*. Pretoria: Van Schaik.

Bloomberg, L. D. (2023). *Completing your qualitative dissertation: A road map from beginning to end*. (5th ed.). Sage.

Bolliger, D. U., & Wasilik, O. (2009). Factors influencing faculty satisfaction with online teaching and learning in higher education. *Distance Education, 30*(1), 103-116.

Bond, M. (2020). Facilitating student engagement through the flipped classroom approach in K-12: A systematic review. *Computers & Education, 151,* Article 103819.

Borup, J., Graham, C. R., & Drysdale, J. S. (2020). The nature of teacher engagement at an online high school. *British Journal of Educational Technology, 51(*3), 707-722. References:

Braun, V. & Clarke, V. (2012) Thematic analysis. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds), *APA handbook of research methods in psychology, Vol. 2: Research designs: Quantitative, qualitative, neuropsychological, and biological* (pp. 57-71). Washington, DC: American Psychological Association.

Bryman, A. (2008). *Social research methods* (3rd ed.). Oxford University Press.

Bubb, S., & Jones, M. A. (2020). Learning from the COVID-19 home-schooling experience: Listening to pupils, parents/carers and teachers. *Improving Schools, 23(*3), 209-222.

Burnes, B. (2020). The origins of Lewin's three-step model of change. *The Journal of Applied Behavioral Science, 56*(1), 32-59.

Burnes, B., & Bargal, D. (2017). Kurt Lewin: 70 Years on. *Journal of Change Management, 17(2),* 91-100.

Caglar, D. (2019). *Handbook of Research on Contemporary Approaches in Management and Organizational Strategy*. Hershey: IGI Global.

Carrillo, C., & Flores, M. A. (2020). COVID-19 and teacher education: A literature review of online teaching and learning practices. *European Journal of Teacher Education, 43(*4), 466-487.

Chen, L., & Zhang, Y. (2023). A systematic review of empirical studies on online teaching and learning during COVID-19: Implications for teacher education. *Journal of Research on Technology in Education*, 1-20.

Cho, M. H., & Shen, D. (2013). Self-regulation in online learning. *Distance Education, 34(*3).

Choy, L. T. (2014). The strengths and weaknesses of research methodology: Comparison and complimentary between qualitative and quantitative approaches. *Journal of Humanities and Social Science, 19*, 99-104.

Christensen, C. M., Horn, M. B., & Staker, H. (2013). *Is K-12 blended learning disruptive? An introduction to the theory of hybrids. Clayton Christensen Institute for Disruptive Innovation*. https://www.christenseninstitute.org/wp-content/uploads/2014/06/Is-K-12-blended-learning-disruptive.pdf

Cirrincione, L., Plescia, F., Ledda, C., Rapisarda, V., Martorana, D., Moldovan, R. E., & Cannizzaro, E. (2020). COVID-19 pandemic: Prevention and protection measures to be adopted at the workplace. *Sustainability, 12*(9), Article 3603.

Clandinin, D. J., & Connelly, F. M. (1996). Teachers' professional knowledge landscapes: Teacher stories. *Educational Researcher, 25*(3), 24-30.

Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education* (6th ed.). London and New York, NY: Routledge Falmer.

Cohen, L., Manion, L., & Morrison, K. (2011). *Descriptive statistics* in *Research methods in education* (7th ed.), pp. 622-640. London: Routledge.

Cohen, L., Manion, L., & Morrison, K. (2018). *Research methods in education*. London: Routledge.

Collins, J., & Hansen, M. T. (2012). *Great by choice: Uncertainty, chaos, and luck - Why some thrive despite them all*. Random House.

Creswell, J. W. (1998*). Qualitative inquiry and research design: Choosing among five traditions*. London: Sage Publications.

Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches* (2nd ed.). California: Sage Publications.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approach* (3rd Ed.). Los Angeles: Sage.

Creswell, J. W. (2011). *Educational research: Planning, conducting, and evaluating quantative and qualitative research*. New Jersey: Pearson Education International.

Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed method research* (2nd ed.). Thousand Oaks, CA: Sage.

Creswell, J. W. (2014). *Qualitative inquiry & research design; Choosing among five approaches*. Thousand Oaks, CA: Sage.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approach*. Thousand Oaks, CA: Sage Publications.

Cristobal-Fransi, E., Montegut-Salla, Y., Ferrer-Rosell, B., & Daries, N. (2020). Rural cooperatives in the digital age: An analysis of the Internet presence and degree of maturity of agri-food cooperatives' e-commerce. *Journal of Rural Studies, 74,* 55–66. https://doi.org/10.1016/j.jrurstud.2019.11.011

Cucinotta, D., & Vanelli, M. (2020). WHO Declares COVID-19 a Pandemic. *Acta bio-Medica: AteneiParmensis, 91*, 157-160.

Cummings, T. G., & Worley, C. G. (2022). *Organization development and change (*11th ed.). Cengage Learning.

Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2020). Effective teacher professional development. *Learning Policy Institute*.

Dayal, H. C., & Tiko, L. (2020). When are we going to have the real school? A case study of early childhood education and care teachers' experiences surrounding education during the COVID-19 pandemic. *Australasian Journal of Early Childhood*, *45*(4), 336-347.

DBE. (2020). *School recovery plan in response to COVID-19*. Department of Basic Education.

DBE. (2022). *The COVID-19 pandemic, enrolments, dropping out and attendance explained.* Report by Gustafsson, M. Pretoria, Department of Basic Education.

Dewey, J. (1938). *Experience and education*. Collier-Macmillan.

Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of Educational Technology Systems*, *49*(1), 5-22.

Dorn, E., Hancock, B., Sarakatsannis, J., & Viruleg, E. (2021). COVID-19 and education: The lingering effects of unfinished learning. *McKinsey & Company*. https://www.mckinsey.com/industries/public-and-social-sector/our-insights/covid-19-and-education-the-lingering-effects-of-unfinished-learning

Dorn, E., Hancock, B., Sarakatsannis, J., & Viruleg, E. (2020). COVID-19 and student learning in the United States: The hurt could last a lifetime. *McKinsey & Company*.

Dube, B. (2020). Rural online learning in the context of COVID-19 in South Africa: Evoking an Inclusive Education Approach. *Multidisciplinary Journal of Educational Research, 10*(2), 135-157. http://dx.doi.org/10.447/remie.2020.5607

Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development, 82*(1), 405-432.

Durr, T., Graves, A., Wilson, A., (2021). A comparison of burnout experienced by family and consumer sciences teachers with other content teachers during COVID-19 remote teaching. *Journal of Family and Consumer Sciences, 113*(3), 27-35. DOI: https://doi.org/10.14307/JFCS113.3.2

Easton, L. B. (2008). From professional development to professional learning. *Phi Delta Kappan, 89*(10), 755-761. https://doi.org/10.1177/003172170808901014

Ebrahim, S. H., Ahmed, Q. A., Gozzer, E., Schlagenhauf, P., & Memish, Z. A. (2020). COVID-19 and community mitigation strategies in a pandemic. British Medical Journal, 2, 368-378.

Eliaeson, S. (2002). *Max Weber's Methodologies*. Cambridge: Polity.

Elster, J. (2007). *Explaining Social Behaviour: More Nuts and Bolts for the Social Sciences*. Cambridge: Cambridge University Press. http://dx.doi.org/10.1017/CBO9780511806421

Ertmer, P. A., & Ottenbreit-Leftwich, A. T. (2010). Teacher technology change: How knowledge, confidence, beliefs, and culture intersect. *Journal of Research on Technology in Education, 42*(3), 255-284.

Etikan I, Suluaiman A. M., Rukayya S. A. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and applied statistics, 6*(1), 1-4.

Evans, I. A., Bosch, M. L., Harrington, S., Schoofs, N., & Coviak, C. (2016). Belonging among novice nurses: Cultivating leaders of the future. *Nursing Science Quarterly, 29*(2), 148-152.

Federkeil, L., Heinschke, F., & Klapproth, F. (2020). Teachers' experiences of stress and their coping strategies during COVID-19 induced distance teaching. *Journal Pedagogical Research, 4*(4). https://doi.org/10.33902/JPR.2020062805

Ferri, F., Grifoni, P., & Guzzo, T. (2020). Online learning and emergency remote teaching: Opportunities and challenges in emergency situations. *Societies, 10*(4), 1-18.

Flick, U. (2016). Mixing methods, triangulation, and integrated research. *Interaction Design and Architecture(s) Journal, 132-152*, 45.

Fullan, M. (2020). Learning and the pandemic: What's next? *Prospects, 49*(1), 25-28. https://doi.org/10.1007/s11125-020-09502-0

García-Alberti, M., Suárez-Silgado, S., Martín-Morales, M., & Rodríguez-Sánchez, C. (2023). Training and performance of professors in the transition to online and blended teaching due to COVID-19. *Education Sciences, 13*(2), 116.

Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education, 2*(2-3), 1-19.

Giovannella, C., Passarelli, M., & Persico, D. (2020). The effects of the COVID-19 pandemic on Italian learning ecosystems: The school teachers' perspective at the steady state. *Interaction Design and Architecture(s) Journal, 45*, 264-286.

Grant, C., & Osanloo, A. (2014). Understanding, selecting, and integrating a theoretical framework in dissertation research: Creating the blueprint for your "house". *Administrative Issues Journal: Connecting Education, Practice, and Research, 4*(2), 12-26.

Green, M. (2007). *Change management masterclass: A step by step guide to successful change management*. Kogan Page.

Greenberg, J., Brown, S., & Abenavoli, R. (2020). Teacher stress and health effects on teachers, students, and schools. *Edna Bennett Pierce Prevention Research Center, Pennsylvania State University*.

Greene, J. C. (2007). *Mixed Methods in Social Inquiry*. Jossey-Bass.

Haie, E. M., Edyburn, K. L., & Quirk, M. (2021). The experiences of students with disabilities and their families during the COVID-19 pandemic. *Remedial and Special Education, 42*(5), pp.298-312.

Hailey, V. H., & G. B. (2016). Creating competitive advantage with strategic change. *In Effective Change Manager's Handbook* (pp. 1-7).

Harris, A. (2013). Distributed leadership matters: *Perspectives, practicalities, and potential*. Corwin Press.

Harris, A., & Jones, M. (2020). COVID 19 – school leadership in disruptive times. *School Leadership & Management, 40*(4), 243-247. ttps://doi.org/10.1080/13632434.2020.1768523

Hartshorne, R., Baumgartner, E., Kaplan-Rakowski, R., Mouza, C., & Ferdig, R. E. (2020). Special issue editorial: Preservice and in service professional development during the COVID-19 pandemic. *Journal of Technology and Teacher Education, 28*(2), 137-147. https://www.learntechlib.org/primary/p/216695/

Hennink, M. M., Hutter, I., & Bailey, A. (2020). *Qualitative research methods*. London: SAGE Publications Ltd.

Hoadley, U. (2020). Schools in the time of COVID-19: Impacts of the pandemic on curriculum. *ReSEP Non-Economic Working Paper*. Stellenbosch.

Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. *Educause Review, 27*(1), 1-12. https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning

Hollings, A. M., Massey, K., & Poulakis, M. (2023). The COVID-19 pandemic and professional development: Rapid changes and emergent practices. *Teacher Education Quarterly, 50*(2), 37-62.

Holmes, C. M., & Reid, C. (2017). A comparison study of on-campus and online learning outcomes for a research methods course. *The Journal of Counsellor Preparation and Supervision, 9*(2), 15-27.

Huang, R., Tlili, A., Chang, T., Zhang, X., Nascimbeni, F., & Burgos, D. (2020). Disrupted classes, undisrupted learning during COVID-19 outbreak in China: Application of open educational practices and resources. *Smart Learning Environments, 8*, 1-15. https://doi.org/10.1186/s40561-020-00128-7

Imad, M. (2020). Hope matters. *Inside Higher Ed*. Retrieved from https://www.insidehighered.com/advice/2020/03/17/10-strategies-support-learners-and-help-them-learn-during-coronavirus-crisis

Immordino, K. (2017). *Organizational assessment and improvement in the public sector workbook*. London: CRC Press.

Jabri, M. (2017). *Managing organizational change: Process, Social construction and dialogue*. London: Macmillan International.

Jantjies, M. 2020. "How South Africa Can Address Digital Inequalities in E-Learning". The Conversation, April 29, 2020. Accessed September 12, 2020. https://theconversation.com/how-south-africa-can-address-digital-inequalities-in-e-learning-137086.

Jenkins, H., Purushotma, R., Weigel, M., Clinton, K., & Robison, A. J. (2009). Confronting the challenges of participatory culture: *Media education for the 21st century*. MIT Press.

Jones, M., & Harris, A. (2014). Principals leading successful organisational change. *Journal of Organizational Change Management, 27*(3), 473-485. https://doi.org/10.1108/JOCM-11- 2012-0185

Kaden, U. (2020). COVID-19 School closure-related changes to the professional life of a K-12 teacher. *Education Sciences, 10*, 165. https://doi.org/10.3390/educsci10060165

Kearns, L. R. (2012). Student assessment in online learning: Challenges and effective practices. *Journal of Asynchronous Learning Networks, 16*(3), 1-15.

Khlaif, Z. N., Salha, S., & Kouraichi, B. (2021). Emergency remote learning during COVID-19 crisis: Students' engagement. *Education and Information Technologies, 26*(6), 7033-7055. https://doi.org/10.1007/s10639-021-10604-5

Kim, L. E., & Asbury, K. (2020). 'Like a rug had been pulled from under you': The impact of COVID-19 on teachers in England during the first six weeks of the UK lockdown. *British Journal of Educational Psychology, 90*(4), 1062-1080. https://doi.org/10.1111/bjep.12390

Klapproth, F., Federkeil, L., Heinschke, F., & Jungmann, T. (2020). Teachers' experiences of stress and their coping strategies during COVID-19 induced distance teaching. *Journal of Pedagogical Research, 4*(4), 444-452.

Konig, J., Jager-Biela, J., & Glutsch, N. (2020). Adapting to online teaching during COVID-19 school closure: Teacher education and teacher competence effects among early career teachers in Germany.

Korkmaz, G., & Toraman, C. (2020). Are we ready for the post-COVID-19 educational practice? An investigation into what educators think as to online learning. *International Journal of Technology in Education and Science, 4*(4), 293-309.

Kotter, J. P. (2021). *Leading change* (2nd ed.). Harvard Business Review Press.

Kuhfeld, M., Soland, J., Tarasawa, B., Johnson, A., & Liu, J. (2020). Projecting the potential impact of COVID-19 school closures on academic achievement. *Educational Researcher, 49*(8), 549-565. https://doi.org/10.3102/0013189X20965918

Lauermann, F., & Konig, J. (2016). Teachers' professional competence and wellbeing: Understanding the links between general pedagogical knowledge, self-efficacy, and

burnout. *Learning and Instruction, 45,* 9-19. https://doi.org/10.1016/j.learninstruc.2016.06.006

Leite, H., Hodgkinson, I. R., & Gruber, T. (2020). New development: 'Healing at a distance'—telemedicine and COVID-19. *Public Money & Management*.

Lever, N., Mathis, E., & Mayworm, A. (2017). School mental health is not just for students: Why teacher and school staff wellness matters. *Report on Emotional & Behavioural Disorders in Youth, 17*(1), 6–12.

Lewin, K. (1943). Defining the "*Field at a Given Time". Psychological Review, 50*, 292-310. https://doi.org/10.1037/h0062738

Lewin, K. (1947). Frontiers in group dynamics. *Human Relations, 1*(1), 5-41. https://doi.org/10.1177/001872674700100103

Lewin, K. (1951). *Field theory in social science: Selected theoretical papers*. Harper & Row.

Lippitt, R., Watson, J., & Westley, B. (1958). *The dynamics of planned change*. Harcourt, Brace & World.

Liu, W., Zhang, Q. I., Chen, J., Xiang, R., Song, H., Shu, S., & Liu, Y. (2020). Detection of COVID-19 in children in early January 2020 in Wuhan, China. *New England Journal of Medicine, 382*(14), 1370-1371. https://doi.org/10.1056/NEJMc2003717

Loades, M. E., Chatburn, E., Higson-Sweeney, N., Reynolds, S., Shafran, R., Brigden, A., ... Crawley, E. (2020). Rapid systematic review: The impact of social isolation and loneliness on the mental health of children and adolescents in the context of COVID-19. *Journal of the American Academy of Child & Adolescent Psychiatry, 59*(11), 1218-1239. https://doi.org/10.1016/j.jaac.2020.05.009

Longhurst, R. (2010). Semi-structured interviews and focus groups. In N. Clifford et al. (Eds.), *Key methods in geography* (pp. 117-132). Sage.

McMillan, J. H., & Schumacher, S. (2006). *Research in education: Evidence-based inquiry*. New York: Pearson Education, Inc.

McNeill, P. (1992). *Research Methods*. London: Tavisback Publications Ltd.

Merriam, S. B. (2002). Qualitative research in practice: *Examples for discussion and analysis. San Francisco*, CA: Jossey-Bass Publishers.

Merriam, S. B. (2009). Qualitative Research: *A Guide to design and implementation*. San Francisco: Jessey-Bass.

Moorhouse, B. L. (2020). Adaptations to a face-to-face initial teacher education course 'forced' online due to the COVID-19 pandemic. *Journal of Education for Teaching, 46*(4), 609-611. https://doi.org/10.1080/02607476.2020.1766077

Morgan, D. L. (1996). Focus groups. *Annual Review of Sociology, 22*, 129-152. https://doi.org/10.1146/annurev.soc.22.1.129

Mouton, J. (2001). How to succeed in your master's and doctoral studies: *A South African guide and resource book*. Van Schaik, Pretoria.

Nadler, D. A. (1993). Concepts for the management of organizational change. In C. Mabey & B. Mayon-White (Eds.), *Managing Change* (2nd ed., pp. 85-98). SAGE.

Ngogi, E. M. (2020). *The impact of COVID-19 pandemic on education*: *Navigating forward the pedagogy of blended learni*ng. Department of Education KwaZulu-Natal, South Africa.

Niekerk, E. J. V., & Niekerk, P. D. (2022). Rethinking literacy and numeracy teaching and learning in the time of the Coronavirus pandemic. *South African Journal of Childhood Education, 12*(1), Article 990.

Niemi, H. M., & Kousa, P. (2020). A case study of students' and teachers' perceptions in a Finnish high school during the COVID pandemic. *International Journal of Technology in Education and Science, 4*(4), 352-369.

Nieuwenhuis, J. (2007). Analysing qualitative data. In K. Maree, *First step in research*. Pretoria: van Schaik.

Noori, A. Q., Ghufran, A., & Safi, H. (2024). Adaptive expertise framework: Lessons learned from teaching during the COVID-19 pandemic. *Journal of Research on Technology in Education, 56*(1), 103-119.

OECD, T. A. L. I. S. (2019). Results (Volume I): Teachers and school leaders as lifelong learners, TALIS.

O'Leary, M., & Quinlan, A. M. (2021). The impact of the COVID-19 pandemic on teaching and learning in Irish higher education: *A collaborative autoethnography*. Teaching in higher education, 1-16. https://doi.org/10.1080/13562517.2021.1924451

Ozamiz-Etxebarria, N., Berasategi Santxo, N., Idoiaga Mondragon, N., & Dosil Santamaría, M. (2021). The psychological state of teachers during the COVID-19 crisis: The challenge of returning to face-to-face teaching. *Frontiers in Psychology, 11*, 3861. https://doi.org/10.3389/fpsyg.2020.586146

Patton, M. Q. (2001). *Qualitative evaluation and research methods* (3rd ed.). Thousand Oaks, CA: Sage.

Pressley, T., Ha, C., & Learn, E. (2021). Teacher stress and anxiety during COVID-19: An empirical study. *School Psychology, 36*(5), 367-376.

Pressley, T., Ha, C., & Learn, E. (2022). Teacher stress and burnout during COVID-19: A cross-national analysis. *Educational Research International*, 2022.

Putri, R. S., Purwanto, A., Pramono, R., Asbari, M., Wijayanti, L. M., & Hyun, C. C. (2022). Impact of the COVID-19 pandemic on online home learning: An explorative study of primary schools in Indonesia. *International Journal of Advanced Science and Technology, 29(*5), 5809-5818.

Rajkoomar, M. (2015). The development of a framework for blended learning in the delivery of Library and Information Science curricula at South African universities. (Doctoral dissertation, Durban University of Technology).

Ramrathan, L. N., Ndimande-Hlongwa, N., Mkhize, H., & Smit, J. A. (Eds.). (2020). *Rethinking the humanities curriculum in the time of COVID-19*. Volume #01.

Randall, J., Burnes, B., & Sim, A. (2018). Management Consultancy: *The role of the change agent*. London: Macmillan International.

Rapanta, C., Botturi, L., Goodyear, P., Guàrdia, L., & Koole, M. (2021). Balancing technology, pedagogy and the new normal: Post-pandemic challenges for higher education. *Postdigital Science and Education, 3*(3), 715-742. https://doi.org/10.1007/s42438-021-00249-1

Rasmitadila, R., Aliyyah, R. R., Rachmadtullah, R., Samsudin, A., Syaodih, E., Nurtanto, M., & Tambunan, A. R. S. (2020). The perceptions of primary school teachers of online learning during the COVID-19 pandemic period: A case study in Indonesia. *Journal of Ethnic and Cultural Studies, 7(*2), 90-109.

Ravitch, S. M., & Riggan, M. (2017). Reason & Rigor: How conceptual frameworks guide research (2nd ed.). SAGE Publications.

Reardon, S. F. (2013). The widening income achievement gap. *Educational Leadership, 70*(8), 10-16. http://www.ascd.org/publications/educational-leadership/may13/vol70/num08/The-Widening-Income-Achievement-Gap.aspx

Reimers, F. M., & Schleicher, A. (2020). A framework to guide an education response to the COVID-19 pandemic of 2020. OECD Publishing.

Ritvo, R. A. (2017). The power of unfreeze-refreeze model. *Organizational development practitioner, 49*(2), 16-20.

Robbins, S., & Judge, T. A. (2009). *Organizational behavior: Concepts, controversies, and applications* (13th ed.). Upper Saddle River, NJ: Prentice-Hall.

Robinson, M. (2020). *The multifaceted challenges for South Africa's educators and student teachers during the pandemic*. Ed. Global Leadership.

Rule P., John V. (2011). *Your guide to case study research*. Pretoria: Van Schaik.

Rule, P., & John, V. M. (2015). A necessary dialogue. *International Journal of Qualitative Methods, 14*. https://doi.org/10.1177/1609406915611575

Sandelowski, M., & Barroso, J. (2007). *Handbook for synthesizing qualitative research*. New York: Springer.

Sanche, S., Lin, Y. T., Xu, C., Romero-Severson, E., Hengartner, N., & Ke, R. (2020). High contagiousness and rapid spread of severe acute respiratory syndrome coronavirus 2. *Emerging Infectious Disease, 26(*7), 1470. https://doi.org/10.3201/eid2607.200282

Sangeeta, & Tandon, U. (2021). Factors influencing adoption of online teaching by schoolteachers: A study during COVID-19 pandemic. *Journal of Public Affairs, 21*(4), e2503. https://doi.org/10.1002/pa.2503

Schaeffer, C. E., & Konetes, G. D. (2010). Impact of learner engagement on attrition rates and student success in online learning. *International Journal of Instructional Technology & Distance Learning, 7*(5), 3-9.

Schein, E. H. (2010). *Organizational culture and leadership* (4th ed.). Jossey-Bass.

Schein, E. H. (2021). Kurt Lewin's change theory in the field and in the classroom: Notes toward a model of managed learning. *Reflections: The SoL Journal, 1*(1), 59-74.

Schleicher, A. (2020). The impact of COVID-19 on education: *Insights from education at a glance 2020*. OECD Publishing.

Schuck, R. K., & Lambert, R. (2020). "Am I doing enough?" Special educators' experiences with emergency remote teaching in Spring 2020. Education Sciences, 10(11), 320.

Silverman, D. (2010). *Doing qualitative research* (3rd ed.). London: SAGE Publications Ltd.

Simion, E., Mazilu, C., & Mazilu, C. (2019). Organizational change theories and practices: A case study. *Valahian Journal of Economic Studies, 10*(2), 81-88.

Sonenshein, S. (2010). We're changing - or are we? Untangling the role of progressive, regressive, and stability narratives during strategic change implementation. *Academy of Management Journal, 53*(3), 477-512.

Sohrabi, C., Alsafi, Z., O'Neill, N., Khan, M., Kerwan, A., et al. (2020, February 26). World Health Organization declares global emergency: *A review of the 2019 novel coronavirus (COVID-19)*. International Journal of Surgery, Pages 71-76.

Staker, H., & Horn, M. B. (2012). Classifying K-12 blended learning. Innosight Institute. Retrieved from https://www.christenseninstitute.org/wp-content/uploads/2013/04/Classifying-K-12-blended-learning.pdf

Stelitano, L., Doan, S., Woo, A., Diliberti, M. K., Kaufman, J. H., & Henry, D. (2020). The digital divide and COVID-19: *Teachers' perceptions of inequities in students' internet access and participation in remote learning*. Rand Corporation.

Suddaby, R., & Foster, W. M. (2017). History and organizational change. *Journal of Management, 43*(1), 19-38. https://doi:10.1177/0149206316675031

Talidong, K. J. B., & Toquero, C. M. D. (2020). Philippine teachers' practices to deal with anxiety amid COVID-19. *Journal of Loss and Trauma, 25*(6-7), 573-579. https://doi.org/10.1080/15325024.2020.1759225

Thompson, G., Charteris, J., & Klingner, J. K. (2023). Reflections on teaching during the pandemic: A systematic review. *Journal of Technology and Teacher Education, 31*(1), 61-97.

Tomlinson, C. A. (2017). How to differentiate instruction in academically diverse classrooms (3rd ed.). ASCD.

Trilling, B., & Fadel, C. (2009). *21st century skills: Learning for life in our times*. Jossey-Bass.

Trust, T., & Whalen, J. (2020). Should teachers be trained in emergency remote teaching? Lessons learned from the COVID-19 pandemic. *Journal of Technology and Teacher Education, 28*(2), 189-199.

UNESCO. (2020). COVID-19 and education: From disruption to recovery. https://en.unesco.org/covid19/educationresponse

Van Dyk, H., & White, C. J. (2019). Theory and practice of the quantile ranking of schools in South Africa: A financial management perspective. *South African Journal of Education, 39*(S1), Article #1820, 9 pages. https://doi.org/10.15700/saje.v39ns1a1820

Waddell, D. (2007). *Contemporary management* (1st Australian ed.). McGraw-Hill.

Walsham, G. (1995). The emergence of interpretivism in IS research. *Information Systems Research, 6,* 376-394. http://dx.doi.org/10.1287/isre.6.4.376

Warschauer, M., & Matuchniak, T. (2010). New technology and digital worlds: Analyzing evidence of equity in access, use, and outcomes. *Review of Research in Education, 34*(1), 179-225.

Whitley, R. (1984). The scientific status of management research as a practically oriented social science. *Journal of Management Studies, 21,* 369-390. http://dx.doi.org/10.1111/j.1467-6486.1984.tb00234.x

World Health Organization. (2021). Mental health and COVID-19. http://www.euro.who.int/en/health-Topicshealth-emergencies/coronavirus-covid-19/novel-coronavirus-2019-ncov-technicalguidance/coronavirus-disease-covid-19-outbreak-technical-guidance-Europe/mental-health-and-covid-19

Xu, S., Shen, J., Xu, Y., & Zachariah, P. K. (2016). A theoretical and conceptual framework for organizational change: The case of a Chinese telecommunications company. *International Journal of Management and Applied Science, 2*(3), 92-95.

Yang, G. (2020). How to motivate students to learn online. *Chronicle of Higher Education*.

Yin, R. K. (2018). *Case study research*: *Design and methods (6th ed.).* Los Angeles, CA: Sage.

Zhao, Y. (2020). COVID-19 as a catalyst for educational change. *Prospects, 49*(1), 29-33.

# APPENDIX A

## LETTER TO THE PRINCIPAL

**Dear: Principal**

**Re: Request for Permission to Conduct Research**

My name is Mr. Shaun Deeplal, and I am a master's Student (Educational Psychology) at the University of KwaZulu-Natal, Edgewood Campus. I hereby request your permission to use your institution and staff to conduct research.

**The title of my research:** Teachers experiences while navigating changes in teaching during the coronavirus pandemic in a public school in KwaZulu-Natal.

**The main purpose of this study: To explore teachers' experiences** as they navigated changes in teaching during the coronavirus pandemic and how they were impacted.

I know that confidentiality is particularly important to you. Therefore, a pseudonym will be utilised within this study to protect the identity of the school and its teachers. The research study requires an interview with each participant and a focus group discussion (10 Grade 10 teachers of 2020/2021). All information that is gathered will be used for the research study and will be kept in a safe place at the University of KwaZulu-Natal for five years. Thereafter, the documents containing the research data will be destroyed. Recordings of interviews and focus group discussions will be password protected and deleted after the study is finalised. Moreover, I will meet with each participant for 1-2 hours on the Zoom platform over five days upon the commencement of the data generation process. The data generation process will not interrupt or disadvantage the teaching and learning at your institution. The study is supervised by Dr. V. Jairam, a Doctor in Education at the School of Education, UKZN. Her contact number is 031 2601438. If you have any questions about research participants' rights, you can email hssrec@ukzn.ac.za at UKZN Humanities and Social Sciences Research Ethics Office or call 031 260 3587/4557/8350.

If you require any other information about this study upon its completion, kindly contact the researcher Mr. Shaun Deeplal (219073727) on [redacted] or via email [redacted] or 219073727@stu.ukzn.ac.za

Thank you for your assistance.

Yours Sincerely,

[redacted]

# APPENDIX B

## PERMISSION FROM THE PRINCIPAL


KLOOF HIGH SCHOOL

34 Emolweni Road
Kloof, 3610
KwaZulu-Natal

Tel:031 764 0451
Email: admin@kloofhigh.co.za
P O Box 1036, Kloof 3640


8 December 2022

To Whom it may Concern

I, Robert Holding, Principal of Kloof High School, hereby grant permission to Mr S Deeplal to conduct research in my school.

I understand that participants have willingly agreed to participate in this research study and that they are at liberty to withdraw from the research at any time, should they desire to. I also understand that the name of the school, the name of the participants, and their responses will be kept confidential.

I permit use of the recording devices during the interviews for the data collection process.

Yours sincerely

[redacted]

**MR RB HOLDING**
**PRINCIPAL**

Kwazulu-Natal Department of Education and Culture
Kwazulu-Natal Education Department
KLOOF HIGH SCHOOL
34 Emolweni Road
Kloof, 3610

P.O. Box 1036
Kloof, 3640

OFFICIAL

# APPENDIX C

# UKZN PROTOCOLAPPROVAL

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

25 January 2023

**Rev Shaun Deeplal (219073727)**
**School of Education**
**Edgewood Campus**

Dear Rev Deeplal,

**Protocol reference number: HSSREC/00005150/2022**
**Project title:** Teachers' experiences navigating changes in teaching during the coronavirus pandemic in a public school in KwaZulu-Natal
**Degree:** Masters

## Approval Notification – Expedited Application

This letter serves to notify you that your application received on 14 December 2022 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 25 January 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)**

**/ms**

# APPENDIX D

# INFORMED CONSENT LETTER

University of KwaZulu-Natal

College of Humanities

School of Education

**Dear Prospective Participant**

**Informed Consent Letter**

My name is Shaun Deeplal. I am a master's student at the University of KwaZulu-Natal, School of Education, at Edgewood College. I intend to conduct research aimed at exploring teachers' experiences while navigating changes in teaching during the Coronavirus pandemic.

I hereby request your permission to participate in this research study. Should you agree, your participation in the study will take 1-2 hours in the form of a semi-structured interview session on the Zoom platform. I also request a further 1 -2 hours for your participation in a focus group discussion session also on Zoom. The times and dates for the sessions are negotiable to ensure that you are not distracted from your duties. Please note that:

- You have a choice whether to participate or not in this study. Furthermore, you have a right to stop participating at any time. You will not be expected to provide a reason for your withdrawal.

- Any information that you share cannot be used against you, and the generated data will be used for purposes of this research only.

- When participating in this study, your confidentiality is guaranteed since I will use pseudonyms when reporting findings.

- The generated data will be stored in secure storage and destroyed after five years.

- Your involvement is purely for academic purposes, and there are no financial benefits involved.

If you agree to participate in the interview session, please indicate (by ticking as applicable) whether you agree to the audio recording of the session:

| | | | |
|---|---|---|---|
| WILLING | | NOT WILLING | |

If you agree to participate in the focus group discussion session, please indicate (by ticking as applicable) whether you agree to the audio recording of the session:

| | | | |
|---|---|---|---|
| WILLING | | NOT WILLING | |

If you have any concerns or questions, please feel to contact me at:

E-mail: [redacted]. Cell no. [redacted]

My supervisor is Dr. V. Jairam. She is located at the School of Education, Edgewood Campus of the University of KwaZulu-Natal. Her contact details are as follows:

Dr. V. Jairam

E-mail: Jairam@ukzn.ac.za

Tel: 0312601438

You can also contact the College research office at Tel: 0312608350/4557/3587,

Email: hssrec@ukzn.ac.za

Thank you for your contribution to this research study

**DECLARATION**

I…… (Full name and surname of participant) confirm that I understand the contents of this document and the nature of the research study, and I consent to participate in the research study. I am aware that I am at liberty to withdraw from the study at any time, should I wish to, and a copy of this document is available upon request.

Signature of participant …… Date ……

# APPENDIX E

# INTERVIEW SCHEDULE

**Section A: Bio Data**

| **Topic: Teachers' experiences while navigating changes in teaching during the Coronavirus pandemic in a public School in KwaZulu-Natal.** | |
|---|---|
| Date of interview | |
| Name of participant | |
| Participant's pseudonym | |
| Educational qualifications | |
| Age | |
| Sex | |
| Teaching experience | |
| Grade | |
| Subject/s taught in 2020/2021 | |
| The number of learners in a classroom/online | |

**Section B: Technological Experiences - Online Teaching**

1. When lockdown commenced and you had to move from face-to-face to online teaching, what were your initial thoughts with regard to technology in respect of online teaching?

2. When you realised you had to conduct online lessons, did you initially have the necessary training, equipment, data and connectivity to conduct online lessons?

3. What online platforms did you use and did the School Management Team (SMT), and the Department of Education (DoE) facilitate any training for you on these platforms?

4. What were your initial experiences with the technology when inviting learners initially to the online lessons and did learners stay connected during the entire lesson?

5. Did you require to unlearn traditional teaching methods and gain new perspectives to embrace the shift from face-to-face to online teaching?

6. Did you require any further training in technology as you transitioned to online teaching? Did the School Management Team (SMT) and the Department of Education (DoE) facilitate any training?

7. Did the unplanned/additional expense of data costs impact you during the transition? Elaborate?

8. Did data costs impact the attendance of learners on the online platform?

9. While implementing the change to online teaching, did instructions become more easily communicated and adhered to?

10. Did teaching on the online platform become stable as a means of teaching? Elaborate?

11. Did you accept online teaching as the new medium of instruction and what were the advantages or disadvantages of online teaching?

12. Did you become more skilled with using technology and did these technology skills become reinforced enabling you to be proficient to conduct online teaching?

**Section C: Pedagogical Experiences - Online Teaching**

1. What were your initial thoughts when you moved from face-to-face to online teaching and how did this move impact your teaching methods?

2. Did you have to unlearn some traditional teaching methods and gain new perspectives on teaching methods to align with the shift to online teaching?

3. What different teaching methods did you use and how did this impact your teaching?

4. What changes did you make with regard to group work/discussions and engaging learners during the lessons?

5. How did you implement new teaching strategies during the change phase in order to comply with CAPS and still complete the trimmed curriculum?

6. What were your experiences with the new reality of adapting to change in teaching methods and strategies and did you experience a pedagogical shift while conducting online lessons?

7. Were new teaching habits formed with regards to assessment strategies and what strategies or incentives did you use to ensure students' participation in your class during online lessons??

8. What have you done to mitigate any pedagogical challenges experienced while teaching online and especially methods of instruction and feedback while engaging with learners during the lesson?

9. Did the new teaching methods and other pedagogical issues become cemented in your school?

10. Did you accept the new way of doing things to ensure curriculum delivery and did the SMT support this? Elaborate?

11. How did this new reality of online teaching affect your teaching routines and how did you adapt to the new teaching routines?

12. Did the changes become reinforced and formed new habits with regard to curriculum delivery?

---

**Section D: Social, Physical, Emotional, and Psychological Experiences during COVID-19**

1. How did you gain perspectives on day-to-day activities during the initial changes in teaching and how did this impact you physically, emotionally, and psychologically?

2. What were parents' involvements and interaction with you during online and rotational teaching and how did this impact you?

3. Did you unlearn some old routines while navigating changes and how did a lack of face-to-face contact with the learners impact you while teaching online?

4. Did the shift while navigating changes in teaching impact you emotionally and psychologically and did you experience any anxiety?

5. Did these changes in teaching affect your personal, family, and professional life and how did you cope?

6. While implementing changes in teaching, did you receive counselling and support from the School Management Team (SMT) and Department of Education (DoE)?

7. Were you affected physically and suffered any loss of income during the COVID-19 pandemic?

8. How did you cope when colleagues and learners were infected with the virus and how did this impact your teaching?

9. Did the changes stabilise and did this make teaching easier with regard to engaging learners?

10. Were new habits formed after the changes were reinforced and did this become cemented in the Schools culture?

11. What life lessons did you learn during the pandemic and what did you accept as the new way of doing things?

12. Did these changes in teaching prepare you socially for future changes in teaching? Elaborate?

**Section E – Pedagogical & Social Experiences - Rotational Teaching**

1. What was your initial thoughts when you moved from online teaching to rotational teaching?

2. How was curriculum delivery impacted initially when you moved from online teaching to rotational learning and was the educational system ready to embrace the change?

3. Did you use different teaching strategies when preparing for rotational lessons and were you able to keep abreast of the syllabus according to the CAPS?

4. Did you have to unlearn some new teaching methods and gain new perspectives on teaching methods to embrace the shift to rotational learning?

4. What strategies did you use to motivate class attendance during rotational lessons and how did you manage to interact with learners?

5.Were learners complying with COVID-19 protocols and how did you manage this?

6. What methods of instruction and feedback had to change during rotational teaching?

7. Was the School ready for changes impacting curriculum delivery during rotational learning?

8. What was the impact of learners having to work individually without the sharing of resources because of COVID-19 protocols?

9. What changes occurred in your personal and professional life linked to your teaching experiences during the pandemic?

10. Did the changes become reinforced and formed new habits with regard to curriculum delivery?

# APPENDIX F

# FOCUS GROUP DISCUSSION SCHEDULE

**Section A – Bio Data**

| **Topic: Teachers' experiences while navigating changes in teaching during the Coronavirus pandemic in a public School in KwaZulu-Natal.** | |
|---|---|
| Date of focus group discussion | |
| Name of participant | |
| Participant's pseudonym | |
| Educational qualifications | |
| Age | |
| Sex | |
| Teaching experience | |
| Grade | |
| Subject/s taught in 2020/2021 | |
| The number of learners in the classroom/online | |

**Section B: Technological, Pedagogical, and Social Experiences - Online Teaching**

1. How did the teamwork become impacted during online teaching and were you able to still connect with one another as staff and support each other?

2. Did you share experiences and knowledge with one another with engaging learners during the online phase and how did this impact curriculum delivery?

3. Did concerns arise that the COVID-19 pandemic might lead to a repeat year or academic regression of learners?

4. What support did you receive from the SMT and DoE whilst changing to online teaching?

5. To what extent did the innovations and adaptations become embedded in the school culture after the COVID-19 pandemic?

**Section C: Pedagogical, and Social Experiences - Rotational Teaching**

1. What were the advantages and disadvantages of rotational teaching compared to online teaching and how did they impact student learning and teacher effectiveness?

2. What were your experiences with COVID protocols e.g., social distancing in class? To what extent did learners comply with COVID-19 protocols, and did you have concerns for your safety and well-being as well as that of your learners?

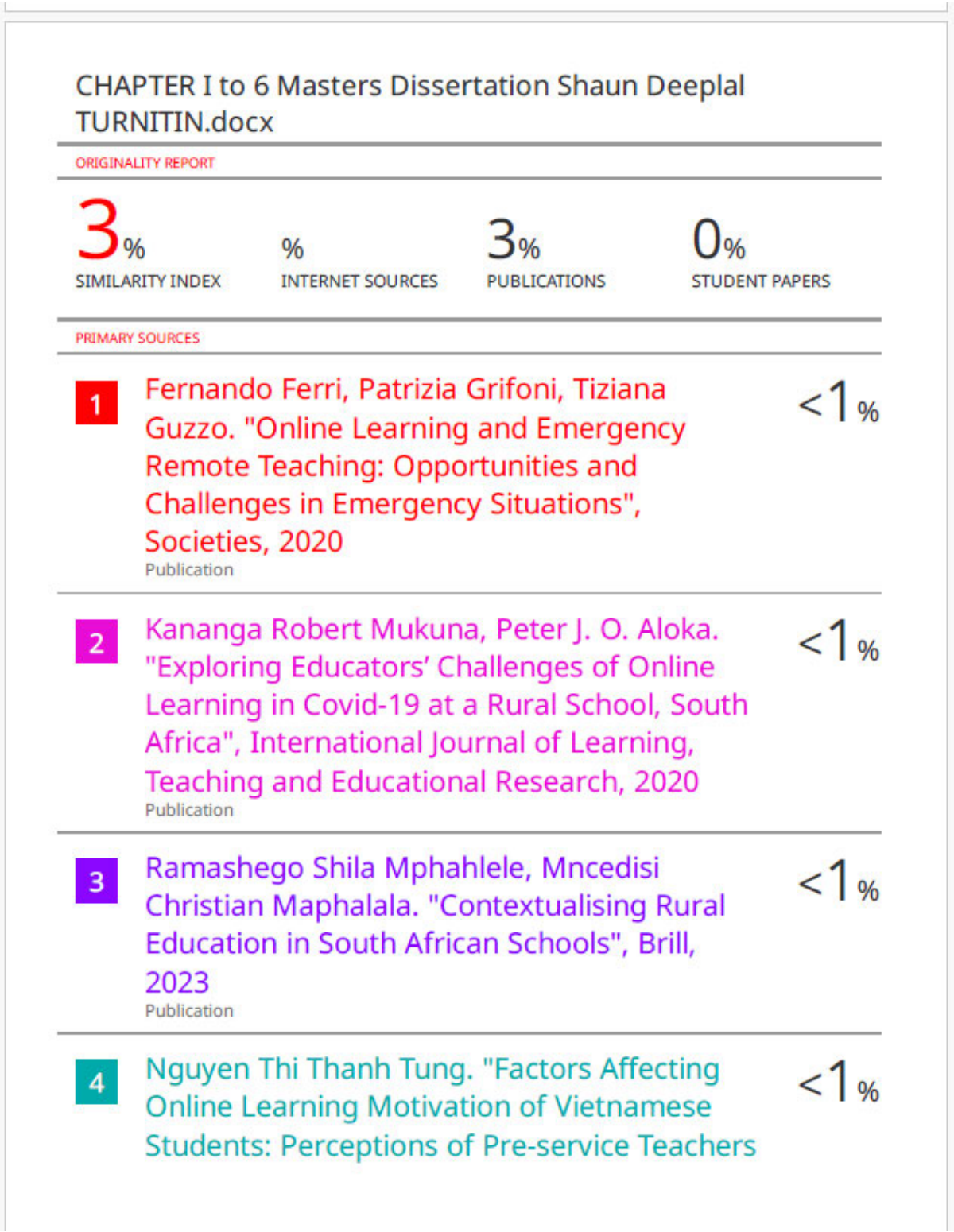
3. What were the effects of the trimmed curriculum on learners' academic progress, skills development, and overall educational experience in the post-COVID-era?

4. What level of guidance and support did you receive from the School Management Team (SMT) or Department of Education (DoE) during the pandemic and were you able to share your personal concerns and receive adequate attention and response?

5. Did the experiences and skills you gained while conducting rotational teaching help prepare you for future changes in teaching methods, technologies, and social dynamics?

# APPENDIX G

## TURNITIN SIMILARITY INDEX



CHAPTER I to 6 Masters Dissertation Shaun Deeplal TURNITIN.docx

ORIGINALITY REPORT

| 3% | % | 3% | 0% |
|---|---|---|---|
| SIMILARITY INDEX | INTERNET SOURCES | PUBLICATIONS | STUDENT PAPERS |

PRIMARY SOURCES

| | | |
|---|---|---|
| 1 | Fernando Ferri, Patrizia Grifoni, Tiziana Guzzo. "Online Learning and Emergency Remote Teaching: Opportunities and Challenges in Emergency Situations", Societies, 2020<br>Publication | <1% |
| 2 | Kananga Robert Mukuna, Peter J. O. Aloka. "Exploring Educators' Challenges of Online Learning in Covid-19 at a Rural School, South Africa", International Journal of Learning, Teaching and Educational Research, 2020<br>Publication | <1% |
| 3 | Ramashego Shila Mphahlele, Mncedisi Christian Maphalala. "Contextualising Rural Education in South African Schools", Brill, 2023<br>Publication | <1% |
| 4 | Nguyen Thi Thanh Tung. "Factors Affecting Online Learning Motivation of Vietnamese Students: Perceptions of Pre-service Teachers | <1% |

# APPENDIX H

# COPYEDITING LETTER

**Merle Werbeloff PhD (Wits)**
FINISH YOUR DISSERTATION
REGISTERED IND PSYCHOLOGIST HPCSA PS0018546
CONSULTING STATISTICIAN
PSYSSA MEMBER
SASA MEMBER
NUFFIC SUPERVISION ACCREDITATION
PHONE: [redacted]
merle@statsauntie.com

14/07/2024

To whom it may concern

This note is to certify that I have proofread the paper by Rev Shaun Deeplal entitled: "Teachers' experiences navigating changes in teaching during the coronavirus pandemic in a public school in KwaZulu-Natal."

I have made corrections to grammar and spelling which I felt necessary.

Thank you.

[redacted]

Merle Werbeloff