

**South African school principals' perspectives on continuing
professional teacher development for knowledge economy**

by

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Faculty of Education

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DEDICATION

I dedicate this thesis to my mother Modikwe Julia Mahlaela, who joined the ancestors in 2014. Her love for education has always been inspiring to her children. Her wish to see her children wearing academic gowns always encouraged me to persevere. Sometimes when I had planned to wake up early to write, I would dream she woke me saying, “Thaka tša gago di a go šia, o a latelwa”, which means “your peers are running and leaving you behind. You are getting late”. Those were the words she said throughout my school years. She was always punctual to wake us for school. Unfortunately, she departed before she could witness the end products of her endeavours. This thesis is also dedicated to my lovely two wives Marike Ngato (Ngwana Matsepe) and Baphelile Martha (Ngwana Mokone) and their children, especially Pulane Brigid (Mashoto) Mahlaela and Andrew Mokhuduge Junior (Kgaugelo) Mahlaela. They always wanted to stand next to me when I pose for the photographer during the university graduation ceremony after finishing my degree. You all deserve the honour and blessings of the Almighty for allowing me to use our precious family time throughout this study.

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To Whom It May Concern:

This letter is to confirm that *South African School Principals' Perspectives on Continuing Professional Teacher Development for Knowledge Economy* by Mphuphuthane Abram Mahlaela was edited by a professional language practitioner. It requires further work by the author in response to my suggested edits. I cannot be held responsible for what the author does from this point onward.

Regards,



Karien Hurter

ABSTRACT

Continuing professional teacher development is a global phenomenon and the focus of all education departments. However, with its dynamic education system, South Africa faces challenges implementing successful teacher development programmes. The national curriculum has changed several times in the democratic era, and teacher development has been affected. The role of school principals in national teacher development policies has also been ever-changing. In the previous Education Labour Relations Council collective agreement, the Integrated Quality Management System [IQMS], principals played a smaller role because the responsibility of staff development fell on the chairperson of the staff development team, who was not necessarily the principal of the school. The recent Collective Agreement, the Quality Management System [QMS], has restored the responsibility to the principal. Therefore, this study examined how South African school principals connect continuing professional teacher development to the knowledge economy. The researcher believes that school principals are responsible for implementing teacher development. The study adopted a qualitative research approach to collect data through semi-structured interviews. A qualitative case study design was used, and the sample comprised 10 school principals. Thematic analysis was used to analyse the collected empirical data.

The findings from the data analysis underscore the significant challenges that South African school principals encounter when attempting to link continuing professional teacher development to the knowledge economy. These challenges, as the study reveals, must be effectively addressed. In response, the study proposes a model for continuing professional teacher development that can facilitate this connection and enhance the economic value of teaching staff.

KEYWORDS: school leadership, continuing professional teacher development, knowledge economy, school context, social learning theory

ABBREVIATIONS AND ACRONYMS

ACT	Australian Country Territory
ADWM	Assistant Director for Workforce Management
AITSL	Australian Institute for Teaching and School Leadership
AR	Appraisal Report
ATP	Annual Teaching Plan
BCME	British Columbia Ministry of Education
CA	Collective Agreement
COTAP	Committee on Professional Development of Teachers
COQ	Certificate of Qualification
CPD	Continuing Professional Development
CPLPAP	Continuing Professional Learning and Program Accreditation Policy
CPTD	Continuing Professional Teacher Development
CSSE	Civil Servant Selection Exam
CTSF	Curriculum for the Ten-Year School Framework
DAS	Developmental Appraisal System
DoDE	Department of Distance Education
DBE	Department of Basic Education
DH	Departmental Head
DoE	Department of Education
DP	Discussion Paper
EATP	Enhanced Arrangements of Training for Promotion
EDB	Education Bureau
EEA	Employment of Educators Act
EF	Evaluation Framework
ELRA	Education Labour Relations Act
ELRC	Education Labour Relations Council
ES	Ethical Standards
ESDP	Education Sector Development Programme
ETIT	Enhanced Training for In-service Teachers
GTC(S)	General Teaching Council for Scotland
HoD	Head of Department
IAE	Institute of Adult Education
IBRD	International Bank for Reconstruction and Development
ICT	Information and Communication Technology
IMC	Incorporated Management Committee
INSET	In-service Education and Training
IPET	Initial Professional Education for Teachers
IQMS	Integrated Quality Management System
KE	Knowledge Economy
KETDM	Knowledge Economy Teacher Development Model
KPSS	Kamu Personeli SecmeStravi
LDoE	Limpopo Department of Education
LNIEI	Local National and International Education Issues
MATEPI	Management Administration Training Education Personnel Institute
MoEC	Ministry of Education and Culture
MoEST	Ministry of Education Science and Technology
MoEVT	Ministry of Education and Vocational Training
MoHE	Ministry of Higher Education
NCERT	National Council of Educational Research and Training
NCTAF	National Commission on Teaching and America's Future
NECTA	National Examination Council of Tanzania

NEPA	National Education Policy Act
NIPF	Need Identification and Prioritisation Form
NPFTED	National Policy Framework for Teacher Education and Development
NTFCPD	National Framework for Continuous Professional Development
OCT	Ontario College for Teachers
ODL	Open and Distance Learning
OECD	Organization for Economic Co-operation and Development
PAM	Personnel Administration Measures
PD	Professional Development
PGM	Principal Graduate Master/Mistress
PGP	Personal Growth Plan
PL	Professional Learning
PLC	Professional Learning Community
PLF	Professional Learning Framework
PLT	Professional Ladder for Teachers
PM	Performance Measurement
PS	Performance Standard
PSM	Primary School Master/Mistress
PSP	Professional Standards for Teachers
PT	Partnership Table
PTE	Professional Teacher Education
PTHC	Primary Teacher Higher Course
PTL	Primary Teacher Lower Course
PTD	Professional Training and Development
PTR	Permanent Teacher Register
QMS	Quality Management System
RPTTPD	Report to the Partnership Table on Teacher Professional Development
RSA	Republic of South Africa
SACE	South African Council for Educators
SASA	South African Schools Act
SDT	Staff Development Team
SGB	School Governing Body
SGM	Senior Graduate Master/Mistress
SHRC	Senior Human Resources Consultant
SIE	State Institute of Education
SLT	Social Learning Theory
SMC	School Management Committee
SMT	School management Team
SP	Standards of Practice
SPSM	Senior Primary School Master/Mistress
SSA	SaryShiksha Abhiyan
TALIS	Teaching and Learning International Survey
TCK	Training on Content Knowledge
TEC	Tanzania Education Corporation
TEDMS	Teacher Education Development and Management Strategies
TETP	Tanzania Education and Training Policy
TF	Task Force
TFPDT	Taskforce on Professional Development of Teachers
TIBS	Technologically Information-based Society
TIE	Tanzania Institute of Education
TLS	Tanzania Library Services
TPNT	Training Programme for Newly joined Teachers
TPRVC	Teachers' Professional Roles, Values and Conduct

TQI	Teacher Quality Institute
TS	Teacher Summit
WSE	Whole School Evaluation
ZINTEC	Zimbabwe Integrated Education Course
ZOU	Zimbabwe Open University

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CHAPTER 1

INTRODUCTION AND OVERVIEW OF THE STUDY

1.1 INTRODUCTION

Continuing professional teacher development (CPTD) is viewed as a significant tool in all countries' education systems because teachers are expected to be competent (Browell, 2000), and learners' learning progress depends on the quality of the teaching staff (Creemers & Kyriakides, 2013; Angus-Cole, 2021). CPTD seeks to give teachers opportunities to reflect on their current teaching practices and evaluate themselves, and with their supervisors, they decide on development opportunities and relevant activities to improve the identified weaknesses. For this to happen, there must be a national policy on teacher professional development (Leithwood & Doris, 2006; Kumar & Azad, 2016). According to OECD [Organisation for Economic Co-operation and Development] (2018), the success, effectiveness and efficiency of all education systems rely on the performance of teachers' work as they are responsible for delivering quality education. Similarly, Malebe, Ochieng and Nyabisi (2023) add that teachers should be encouraged by their supervisors to increase their knowledge and skills through existing professional development programmes so they can be effective and efficient. These researchers emphasise that supervisors should implement internal professional development programmes by identifying what teachers need for instructional improvement. Head teachers should encourage in-service training, guide teachers on performance gaps, organise coaching activities, and promote further studies for career development.

In South Africa, CPTD programmes are embedded in the South African Council for Educators Act, no. 31 of 2000 (Republic of South Africa [RSA], 2000; hereafter referred to as the SACE Act). In Section 2, the SACE Act mandates the council for teachers to (1) establish a register for all practising teachers, (2) promote activities for teachers' professional development, and (3) set and maintain protected professional standards and ethics for teachers.

This study focused on the programmes belonging to the second mandate of the South African Council for Educators (SACE), which led to CPTD. CPTD as a national policy

attached to SACE is implemented in schools as an obligation. Out of the three legs on which SACE stands, one leg deals with the professional development of teachers. Through a literature review, the current study compared the CPTD practices of other developed and developing countries. According to the latest Collective Agreement (CA) of the Education Labour Relations Council (ELRC, 2020), the responsibility for development ventures for teachers falls on school managers. Therefore, principals are the staff on the ground who must ensure teachers participate in professional development activities and to ensure teachers benefit from the activities. Principals are the custodians of professional development of teachers in their schools, and may systematise relevant developmental exertions and encourage teachers to participate to equip themselves and remain reliable persons for the dynamic demands of their profession (Avalos, 2011; Khalifa & Gooden, 2016). Teachers should receive professional development to face not only classroom practice challenges, but also global challenges linked to their professional conduct. It is also an international perspective that principals have the responsibility to ensure teacher development activities are successfully carried out and effectively impact learners' academic performance (Hord, 1988; Holland, 2009; Hickey & Lanahan, 2012; Maarman & Lamont-Mbawuli, 2017).

The knowledge economy is perceived as a crucial aspect of generating new knowledge, sharing knowledge, and technically or technologically using knowledge to effectively change institutions to be globally competitive (Sadiku, Nelantury & Musa, 2017). The study used the knowledge economy as one of the critical demands in the teaching profession because it has some elements that are necessary for elevating the standards in basic teaching knowledge and skills, such as human capital, organisational dynamics, innovation, and technology, which are all bound together by professional learning to constitute CPTD (Marishane, 2020). Improving the quality of education as a human resources enterprise remains an important priority for every country since it contributes to economic growth (Didham & Ofei-Manu, 2015).

In this chapter, the background to the study is introduced to the reader, followed by the rationale of the study, the preliminary literature review, the statement of the problem, the research questions and sub-research questions, the research purpose and objectives,

the research design and methodology, and the limitations and delimitations of the study. The chapter ends by explaining how the chapters of the thesis are organised.

1.2 BACKGROUND OF THE STUDY

Teacher development is seen as the ongoing process of keeping a sense of challenge and adventure in the teaching career and avoiding losing professional essentials (van der Lans, Wim, van de Graft, & van Veen, 2018). Researchers often refer to teacher development as a process of becoming the best teacher one can be (Leithwood & Doris, 2006; van der Lans et al., 2018). Researchers maintain that teacher development should be perceived as a process in which teachers interminably improve their skills, knowledge, and attitudes while working (Zhao, 2010; Drago-Severson, 2012; Qian & Haynes, 2014).

Continuing teacher development is critical and necessary for effective teaching and learning. According to Elmore (2001), continuing teacher development enhances teachers' capabilities, which in turn directly impacts learning. In other words, teacher development is an essential tool that should be maintained in all educational institutions for effective teaching and learning. Marishane (2020) supports this view by arguing that teacher development comprises personal development, social development, and professional development. Given this multifaceted nature of teacher development, this study focused mainly on CPTD within a specific context, namely the knowledge economy, and from a perspective, namely school leadership. Other studies indicate that teacher development through the appraisal process has flaws (Nieuwenhuis, 2007; De Clercq, 2008; Prowse & Prowse, 2009; Mahlaela, 2012). The focus of the study was the contribution of CPTD in the context of the knowledge economy.

The knowledge economy refers to the products and services based on the knowledge-displaying activities in an institution (Powell & Snellman, 2004). These products and services should contribute to the continuity of technological and scientific advances. What these statements imply is that knowledge acquisition during staff development should result in better production and services. In other words, knowledge results in accelerated activities that impact teaching service production, knowledge enrichment, and modification of self-esteem. Development and the knowledge economy are therefore

directly related as they affect each other. When a teacher develops themselves professionally, the assumption is that their knowledge also increases and strengthens.

This study focused on CPTD from the perspective of the school leadership, specifically school principals because school managers work closely with teachers and can influence them directly (Powell & Snellman, 2004). The main intention of teacher development should be developing teachers' knowledge to enable them to adapt in the dynamic knowledge context. Therefore, the proposed study explored in detail the perspectives of principals on teacher development for the knowledge economy.

1.3 RATIONALE FOR THE STUDY

The researcher in this study is an assistant principal with over 10 years of experience in the post. The researcher worked closely with the principal in the previous Integrated Quality Management System (IQMS) as chairperson for the staff development team (SDT). The position was held uncontested for the rest of the IQMS years until the appraisal system was recently changed to quality management system (QMS), and the researcher is currently occupying the position of internal QMS coordinator. Although the position of a school QMS coordinator is not stated in the national policy for QMS implementation, local authorities suggested that schools should put somebody in this position to facilitate the smooth running of the process since most principals are not computer literate. With both the IQMS and the QMS, the researcher has the same job, which is to organise all the processes of staff appraisal and development. The researcher wanted to investigate the perspectives of other principals on the implementation of the CPTD.

Several studies expose the weaknesses in the implementation of IQMS (Thobela & Mtapuri, 2014; Joubert, 2016; Maphosa, Mutekwe, Machingambi, Wadesango & Ndofirepi, 2017; Mestry, Hendricks & Bisschoff, 2019; Tachie & Mancotywa, 2021). A second group of recent studies continues to highlight the challenges of the recent QMS appraisal system (Shongwe, 2023). Both groups of studies suggest that the South African appraisal system still encounters challenges to be successful.

The differences that are still reflected in our schools clearly indicate that teachers are either not actively involved in teacher development processes or teacher development processes are not responding to the context of the knowledge economy as expected. The knowledge economy encourages institutions to move away from manual workers to knowledgeable staff members who possess various technological skills that enable them to cope within global information dynamics. The knowledge economy requires workers who acquire knowledge and skills and are in good positions to use technology to simplify complex situations. Workers should be able to positively use organisational dynamics to enrich human capital, which is the economic value of the workforce (Marishane, 2020).

The researcher believes that principals may be experiencing several challenges when implementing teacher professional development activities in schools, which is why appraisal processes are unsuccessful in establishing a knowledgeable teaching community. Angus-Cole (2021) reveals that some teachers, especially in developing countries, are still less effective and their learners far below the international standards, despite countries conducting CPTD practices. Therefore, this study sought to explore the perspectives of South African school principals about the CPTD for the knowledge economy.

1.4 PRELIMINARY LITERATURE REVIEW

According to Hammond and Wellington (2013), a literature review offers background information on published information in a proposed field of study or about a specific issue. They further indicate that a literature review covers what has already been published about the subject and who published it and explains prevailing theories and methodologies on the issue under investigation. The literature review for the current study is presented in detail in Chapter 3, and focuses on the CPTD, the dynamic role of principals in CPTD, and national policies for CPTD as concepts. The issue of teacher development is a global phenomenon for the professional teaching community and are therefore discussed internationally in countries such as Belgium, Canada, Hong Kong, India, and Tanzania. The discussion concludes by exploring CPTD in South Africa.

The current study focuses on the knowledge economy as the context in which CPTD is studied. Developing and developed countries are directly or indirectly implementing CPTD for the knowledge economy. The knowledge economy in the education sector stands on four pillars, namely human capital, innovation, organisational dynamics, and technology (Marishane, 2020). The engine that connects the four pillars is the learning process. Human capital refers to the human resources (teachers) involved in the whole process of CPTD, and to the economic value of the teaching community because of the knowledge they possess (Marishane, 2020).

Furthermore, the literature review in Chapter 3 shows that regardless of the country's international standing terms of growth, all countries strive to use CPTD to raise the standards of their teaching community. Strengthening the professional teaching community enhances human capital. Due to the dynamic global changes in the profession, alongside the state of international technology, countries use available technology and organisational dynamics of the education sectors to encourage innovation. All the endeavours during CPTD focus on enriching the human capital.

Furthermore, the literature review covers a discussion on the theoretical framework relating to the whole process of teacher development for the knowledge economy. The applicable theoretical framework that underpinned the study was the social learning theory (SLT) because the pillars of the knowledge economy are connected by learning. The theoretical framework is discussed in detail in Chapter 2.

1.5 STATEMENT OF THE PROBLEM

Principals spend most of their time working with teachers, and therefore, they directly influence teachers (Bredeson, 2006; Mouton, Louw & Strydom, 2013). They are in closer physical and psychological contact with teachers than any other person in authority, and therefore, they must support teachers in many ways, including by developing them. However, they are seldom required to express their views on how teachers should be developed, and the kind of knowledge teachers need to possess in the everchanging context in which schools find themselves (Maphosa et al., 2017).

Some researchers maintain that the leadership of school principals in teacher professional development is critical for creating a successful learning community in schools. Principals are influential figures and essential role players in teacher development processes (Mouton et al., 2013; Mashau, Mutshaeni & Kone, 2016; Maarman & Lamont-Mbawuli, 2017; Munje, 2019).

Principals are often blamed when teachers are not performing well enough to enhance learner achievements because principals are regarded as leading figures in teacher development. In other words, they are seen as being responsible for ensuring teacher development processes are linked to the knowledge economy in a way that will demonstrate a paradigm shift in teaching practices and how teachers handle acquired and generated knowledge (Kraft & Gilmour, 2016).

The researcher assumed that the problem is exacerbated by the apparent lack of connection between continuing teacher development strategies and the changing global demands of the knowledge economy to which teacher development should respond (Kennedy, 2016; Liu & Phelps, 2019). The researcher believes that for teachers to be effective, continuing teacher development strategies must align with the demands of the knowledge economy and global changes.

1.6 RESEARCH QUESTION AND SUB-QUESTIONS

The following primary research question guided this study:

- What are South African school principals' perspectives on CPTD for the knowledge economy?

The following secondary research questions also guided the study:

- What are South African school principals' views on contemporary teacher development programmes?
- How do South African school principals connect teacher development to the knowledge economy?
- What challenges do South African school principals face in connecting teacher development to the knowledge economy?

- How can the challenges that South African school principals face in connecting teacher development to the knowledge economy be addressed?
- Which teacher development model can be adopted to connect the CPTD to the knowledge economy?

1.7 RESEARCH PURPOSE AND OBJECTIVES

The purpose of this study was to explore South African school principals' perspectives on CPTD for the knowledge economy. The study had the following objectives:

- To examine South African school principals' views on contemporary CPTD programmes;
- To investigate how South African school principals connect CPTD to the knowledge economy;
- To explore the challenges that South African principals face in connecting CPTD to the knowledge economy;
- To investigate how the challenges South African school principals face in connecting CPTD to the knowledge economy can be addressed; and
- To propose a possible model that can be adopted to connect CPTD to the knowledge economy.

1.8 RESEARCH DESIGN AND METHODOLOGY

The qualitative research methodology was used to collect and analyse empirical data from the sampled school principals to answer the research questions. The qualitative research methodology was used because the approach focuses on activities that occur in natural settings to study those activities in their complexity (Leedy & Ormrod, 2015; Creswell, 2009; Cohen, Manion & Morrison, 2014). The research design and methodology are presented in detail in Chapter 4.

A case study design was used as the researcher wanted to collect detailed and rich information from the participants in different spheres of the population sample in their natural settings. A case study design was suitable as it supplies distinctive instances of real people in natural environments, allowing readers to derive a clear understanding of

the situation being studied (Mouton, 2001; Cohen et al., 2014). A case study design is suitable for understanding more about a situation that is less understood or poorly known and provides preliminary support for some perceptions (Leedy & Ormrod, 2015; Mouton, 2001; Cohen et al., 2014).

The sample of this study comprised 10 secondary school principals in one education district of the Limpopo province. Data were constructed through semi-structured oral interviews, non-participant observations, and documents analysis. The oral interviews were audio-recorded and transcribed. Thematic analysis was adopted to analyse the collected data. Thematic analysis is usually used to search for themes emerging from the data, which Braun and Clarke (2006) explain as statements that capture essential things within the data related to the research objectives. The statements are formed by patterns of responses or meanings within the set of data. Data collection and analysis strategies are discussed in detail in Chapter 4, and the research findings presented in Chapter 5 and discussed in Chapter 6.

1.9 LIMITATIONS AND DELIMITATIONS OF THE STUDY

The limitations and delimitations of this study are explained in detail in Chapter 8. Limitations are based on the research design, data construction techniques, methods for analysing data, and time factor. On the other hand, delimitations highlight the decision on the research focus, research participants, and choice of research methodology.

1.9.1 Limitations

Various constraints inherent to a study that could impact the generalizability of the results are referred to as limitations. These constraints are often outside the researcher's control (Terrell, 2016). Miles and Scott (2017) cite limitations as factors that affect the study that the researcher cannot manipulate; for example, the willingness of participants to participate or to respond timeously or accurately. Simon and Goes (2011) indicate that limitations are significant in research and should be clearly stated to avoid the distortion or misinterpretation of the study's findings.

The limitations that this study had include examples of data construction processes and time factor because most of the schools in the selected district are scattered and in remote rural villages that are difficult to reach. Fortunately, the researcher planned for this challenge and procured a bakkie that could easily reach these areas, even during rain, to visit the participants for interviews.

The second challenge concerned data construction because schools were not performing well academically. Principals were hesitant to participate in the interviews because they thought the researcher wanted to expose them. The researcher planned to overcome this limitation by spending time with the principals and to explain the objectives of the study. This was done, even though it had to be done telephonically in some cases. The explanation of the purpose of the study cleared the path and reduced any fear of participating. The general limitations were mitigated, and the researcher succeeded in collecting the required data as planned, and the number of principals who participated was satisfactory.

1.9.2 Delimitations

Delimitations are boundaries imposed by the researcher to narrow the scope of a study (Terrell, 2016). In other words, the researcher must highlight how the study was manipulated to focus on specific aspects. According to Miles and Scott (2017), delimitations explain what is included in the study, what is not covered, and the reasons for these boundaries. Miles and Scott name examples of delimitations as exclusions because of gender differences; exclusions because of socio-economic background; choice of certain cities, districts, or types of schools; choosing according to years of experience; and exclusion of certain positions (Miles & Scott, 2017). Delimitations explain a study's scope and parameters and prevent the researcher from generalising the results of the study to every situation (Miles & Scott, 2017). Theofanidis and Fountouki (2018) maintain that delimitations act as boundaries of the researcher's work to enable the successful accomplishment of the aims and objectives of the study.

As part of the research focus, this study used three delimitations to achieve the aims and objectives (Theofanidis & Fountouki, 2018). The first delimitation was that the qualitative

research methodology helped the researcher focus on the verbal explanations about the feelings and insights rather than the numerical data. Secondly, the study was delimited to South Africa, and therefore, the results may not generally apply to other countries. Thirdly, the research was conducted in one district of the Limpopo province, and the results may not be applicable to other districts or provinces.

1.10 ORGANISATION OF THE THESIS

The thesis comprises nine chapters arranged in the following sequence:

- Chapter 1 is the introduction and overview of the study. It presents the introduction, background, rationale, and problem statement of the study. The preliminary literature review, research questions, research purpose and objectives, research design and methodology, and limitations, and delimitations, are discussed. The chapter concludes by setting out the organisation of the thesis.
- Chapter 2 looks at the theoretical framework that underpinned the study and how the theoretical framework linked with the study. The SLT underpinned the study, and the historical background of SLT, the assumptions of the theory, and its significance to the study are discussed.
- Chapter 3 presents the review of literature. CPTD, the role of school principals in teacher development, and the knowledge economy are discussed as the three concepts of the study. CPTD practices internationally and in South Africa are discussed, where the role of school principals in the teacher development practices for the knowledge economy is of critical importance.
- Chapter 4 discusses the research approach, design, and methodology. The chapter explains the sampling process, research sites, and selection of participants. The qualitative case study design used in data construction and thematic data analysis are also explained. The chapter also discusses the issues that contributed to the quality of the study.
- Chapter 5 presents the research findings. The collected data, data analysis, and discussion of themes are presented in this chapter. The subthemes emerging from the themes are also discussed, followed by the interpretation of the research

findings. Five themes and their subthemes are discussed; the themes are connected to the secondary research questions.

- Chapter 6 is a discussion of the research findings. The discussion connects the findings with the literature review and the theoretical framework that underpinned the study. It connects the participants' responses with the literature that support them. Examples of the findings that are inconsistent with literature are presented where applicable.
- Chapter 7 presents the proposed model South African school principals can use to connect CPTD to the knowledge economy. The facets of the model are detailed and explained.
- Chapter 8 is a summary of the research finding, limitations, and delimitations. The findings are summarised according to the themes and subthemes that emerged during the data analysis process.
- Chapter 9 gives the research conclusions, recommendations, and recommendations for further studies.

1.11 SUMMARY OF THE CHAPTER

Chapter 1 presented the introduction, background, and rationale of the study. The discussion included the preliminary literature review, problem statement, research questions, research purpose and objectives, research design and methodology, limitations, and delimitations. The chapter also detailed the organisation of the thesis. Chapter 2 describes the Social Learning Theory [SLT] as a theoretical framework that underpins this study.

CHAPTER 2

THEORETICAL FRAMEWORK

2.1 INTRODUCTION

Chapter 1 provided an introduction, background, and overview of the whole study. Through the previous chapter, the researcher provided an orientation on the preliminary literature review on the CPTD, and the role principals play in CPTD in the context of the knowledge economy. The three concepts that the reader was orientated to are of critical significance in this study. The researcher also used the previous chapter to provide a brief overview of the research method and issues related to collecting and analysing data in this study. This chapter details the SLT as the theoretical framework that underpinned the study. The theory's proponents, assumptions, and principles, and the researcher's justification for choosing it to underpin the study are also discussed.

2.2 THEORETICAL FRAMEWORK

Molasso (2006) and Grant and Osanloo (2014) define a theoretical framework as a guideline for the process of the study. Adom, Hussein and Agyem (2018) maintain that a theoretical framework should be an existing theory governing a field of inquiry whose topic relates to the study. Adom et al. explain it as a masterplan that the researcher adopts to formulate their own research studies and assert that it serves as the foundation upon which research is constructed. All these definitions indicate that every study should have a theoretical framework as its foundation. Maree (2021) adds that a theoretical framework assists the readers to locate their study within the existing literature or other similar contexts.

Sinclair (2007) compares a theoretical framework to a map used by travellers that guides readers to travel through the study with focus and understanding. A theoretical framework dictates to the researcher so they stick to the stipulations of their selected theories as they strive to build new knowledge regarding the phenomenon under inquiry (Adom et al., 2018). Therefore, a theoretical framework serves two purposes: Firstly, it guides the researcher not to deviate from the main objective because it underpins the study, and

secondly, it helps readers have the main purpose of the study in mind when going through the report.

However, Brondizio, Leemans and Soleeki (2014) argue that a theoretical framework is a definite theory trying to explain the reasons behind human achievement. These reasons are crucial because when grouped together in a specific theory, they can offer significant guidance in an inquiry. A theoretical framework is a conviction about certain behaviours in life that affect the daily operations of humans. Therefore, a theory is the result of some achievement that was studied in a human combined with the reasons or natural forces that guided the achievement. The current researcher believes that theories are crucial for every study because every human achievement is guided and informed by a theoretical framework. Every achievement relates to a theory of life, and the characteristics of the achievement inform the kind of theory to be quoted. In this inquiry, the theoretical framework served as a masterplan (Grant & Osanloo, 2014; Adom et al., 2018) and guiding path for the study (Sinclair, 2017).

2.3 IMPORTANCE OF A THEORETICAL FRAMEWORK IN RESEARCH

Grant and Osanloo (2014) maintain that a theoretical framework has several benefits to a study. The researcher can define a study in a philosophical, epistemological, methodological, or analytical way. Adom et al. (2018) agree that a theoretical framework functions as an epicentre for research because it is connected to the research problem under investigation and directs the researcher's methods and data analysis techniques.

Similarly, Maxwell (2012) maintains that the significance of a theoretical framework in research is that it deepens the study's relevance and convince funding agencies to support it. Similarly, Adom et al. (2018) assert that it shows readers that the study is not based on the personal inventions and priorities but anchored in a theory established through various acceptable research works. Literature attached the following seven advantages to a theoretical framework:

1. It connects the researcher to the relevant literature (Smyth, 2004). In other words, a theoretical framework should connect what exists in literature to the study's

purpose and objectives. The main activities of the phenomenon under study should relate to a relevant theoretical framework among those existing in literature.

2. A theoretical framework explains the assumptions that guide the research (Miller, 2016). Naturally, every activity leads to some destination, results, or achievement. There are assumptions for every human action, and in research, there are some assumptions that direct the destination of the inquiry. The assumptions of the current inquiry were also guided by a selected theory, which is discussed in Section 2.4.
3. Researchers use a theoretical framework to choose appropriate questions for the study (Miller, 2016). Questions are used as tools for collecting information. Questions in the examination collect information about how far researchers have understood the information they are studying. In research, questions are used to collect the required information to address the research questions. Therefore, even the questions the researcher generate for data construction are guided by the selected theoretical framework.
4. It is used to convince readers that the inquiry is relevant (Maxwell, 2012). Every theory describes assumptions about an activity in life, and when a theoretical framework is chosen, readers relate the assumptions of that theory with their own expectations about the study they are reading. Therefore, a theoretical framework convinces readers that the report is authentic.
5. It provides guidance to the research design (Miller, 2016). Research designs are chosen according to their relevancy to the phenomenon being investigated or explored. This means that when selecting a research design, the researcher should, among other things, consider the assumptions of theories so the selected design and the theory inform each other.
6. It leads the researcher to appropriate data construction methods (Maxwell, 2012). A theory explains assumptions about the outcomes of life activities, and therefore, the researcher uses the theoretical framework to decide on appropriate data gathering techniques to collect relevant information for the study. A researcher is likely to collect useless data if the wrong data construction instrument is used.

7. It predicts the outcomes, interpretation, and analysis of the results based on literature (Miller, 2016). Therefore, the assumptions of a theoretical framework predict the findings because the data analysis and interpretation are guided by the theoretical framework. If the theoretical framework explains the outcomes of an activity as bad, the findings are likely to agree with it.

2.4 THE THEORETICAL FRAMEWORK FOR THE STUDY

The central concept of this research was CPTD, which is the process of developing teachers through programmes in the education department. According to Webster-Wright (2009), during teacher development, valuable and progressive actions are done to the professional. Teachers are professionals, which means they have acquired the trades of the teaching profession, and therefore, during teacher development, something that was unknown is added to the professional. The new knowledge and skills delivered to them in CPTD require them to learn, assimilate, and internalise the information to improve their professional standards. Since the concept of learning featured prominently in the current inquiry, the study adopted the SLT by Albert Bandura (1977, 2004).

2.4.1 The social learning theory

Bandura's SLT is associated with teaching, learning, and teacher development. It links with CPTD because further learning is the significant element during teacher development. Acquiring new knowledge and skills involves learning as an active verb. The historical background and assumptions of SLT, and how it relates with learning and CPTD are discussed in the following subsections.

2.4.1.1 Historical background and assumptions of social learning theory

Albert Bandura first established the SLT in 1977. He was a psychologist who studied learning and how the human mind processes, stores, and uses new information to change behaviour. The SLT concerns the process of learning and acquiring alternative knowledge and skills. It is based on six assumptions.

The first assumption is that individuals learn through observation and that the environment plays a critical role (Bandura, 1977). In other words, learners can acquire new knowledge or skills by merely observing the skill being performed by another person in the same social setting. Bandura calls the person demonstrating the skill or new performance 'a model'. He maintains that new actions or skills can be acquired by observing a model without being formally taught.

The second assumption holds that humans learn through social interaction, but not everything learned changes habits (Bandura, 1977). It means that people learn better when they are with colleagues or friends. Learning, therefore, does not occur when individuals interact with strangers. The assumption also indicates that people do not necessarily change habits because they were exposed to new ways of behaving.

The third assumption is that motivation, rewards, and punishment are important in determining whether a habit will be learned and repeated (Bandura, 1977). When observing a model, observers consider how the actions of a model are reinforced or punished, and therefore, acquiring a behaviour depends on the consequences related to it.

Fourthly, the theory maintains that mediational processes, called cognitive factors, influence behaviour (Bandura, 1977). In other words, there are mental factors that tells whether a habit is acquired or not. Individuals look at the action under observation and dictates the significance of the practice and the action to be taken.

The fifth assumption posits that humans have a self-regulatory perspective that drives their learning processes (Bandura, 1977). This means that everyone has an inborn psychological capability that regulates learning processes and allows them to learn new things. The human mind selects information to be stored for future use, and this depends on the interest of the person about the object, act, or the repetition of a practice in front of the observer (Bandura, 1977).

The last assumption is that learning does not always lead to behavioural change, which means not all behavioural changes can be attributed to learning. Individuals may learn something but continue with their old practices, and others may start behaving in new

ways without learning it anywhere. It is not certain that someone will change their habits because they learned something new.

2.4.1.2 Practical examples of social learning theory

Learning is a practical concept that takes place during daily living, and can be casual, academical, or professional (Byron-Cox, 2022). The following are examples of casual, academical, or professional learning:

- *Casual social learning:* A child watches an older sibling jump across a water tub several times without falling or kicking the tub. As they enjoy the activity, the observer learns the activity and might try to imitate it the following day. Teachers acquire the teaching styles of their colleagues when they notice that their learners are doing well in academic assessments.
- *Academic social learning:* A teacher watches a colleague download information from the internet for lesson preparation. The observer is interested to know how it is done, and the following day, the observer tries on their own to open the website to do the same activity.
- *Professional social learning:* In an in-service training workshop, teachers observe a curriculum advisor using PowerPoint in a presentation on the topic. They notice how easy it is to do it, and that it is better than using chalk and a duster or a marker and white board. They decide to borrow the laptop and the data projector to try it during their break. They succeed and are happy with what they have learned (Byron-Cox, 2022).

All the above examples demonstrate the application of all the assumptions of the SLT. In each case, the observer watches a model demonstrate an action. The observer willingly decides to have interest to learn what the model is doing and acquire the skill. The willingness indicates that the observer is intrinsically motivated and believes that implementing what they observe will lead to improvement. The acquired skill is then repeated several times because it was valued by the observer.

2.4.1.3 *The relationship between social learning theory and learning*

Teachers' professional development is defined as their professional learning and is followed by the application of that knowledge in the classrooms to support pupils' learning (Postholm, 2012). There is an element of learning in the processes of this professional development. According to the SLT, learning best occurs in social contexts through observation, imitation, and modelling (Bandura, 1977). In other words, professional development means the professional learns new skills and knowledge to enhance their professionalism or to move it to an advanced level of the professional standards. It also means that learning occurs when the learner is within a social relationship and not in isolation because the skill is acquired from other people.

Lyons and Berge (2012) maintain that social observation and imitation lead to learning because they are the results of modelled behaviour. According to the assumptions of SLT, human beings learn through observing the good practices of others, which enables individuals to learn by observing, imitating, and acquiring skills from that process. Bandura (1989, 1999, 2004) maintains that observation is crucial for indirect learning.

Postholm (2012) asserts that due to individuals' observing the actions of a modelled behaviour, the observer can either minimise the bad knowledge acquired previously, learn new knowledge and values, or learn how to use the new things demonstrated during modelling. Bandura (1989) called the process of learning through imitating or observing a model 'modelling'. Modelling occurs in four stages, namely attention, retention, motivation, and production (Bandura, 1989).

The attention stage involves paying attention to the behaviours of somebody regarded as a model. During this stage, the critical elements are the learners' (1) interest, (2) readiness, (3) likes and objectives, (4) attractiveness, (5) preceding knowledge, and (6) important usage of the behaviour (Bandura, 1989). It means that for the observer to pay attention to the modelled behaviour, they should develop an interest and be prepared to participate. During the process of paying attention, the observer should realise the purpose of the activity and recall whether the same activity has been seen somewhere

else. The observer may also recall how the action was done in the past and compare it to the present.

The retention stage involves storing the information acquired through observation in the memory (Bandura, 1989). The interests, needs, and purposes of the observed performance are significant cognitive roles that the observer must retain in their memory. An event retained in the memory stays there for when similar events are perceived and can be easily associated with it. Retention is affected by the frequency with which the event is observed. The frequency of observation tells the mind that the event is important and should be stored for future use.

The motivation stage comes when the observed behaviour is converted into performance because the observer is motivated by the behaviour and some reinforcements (Bandura, 1989). This stage means that the observed conduct has been retained in the memory, but it depends on how the observer attached value to the purpose of the action whether they are motivated to imitate or repeat the action. Motivation depends on whether the observed performance was reinforced or punished during observation. If the observer noticed that the model was rewarded for the performance, then the act is valued and can possibly be repeated by the observer to expect the same incentive. On the other hand, if the model was punished for the activity, the observer will not be motivated to repeat it.

The production stage follows when the conduct observed through attention, stored in the memory through retention, and converted into performance through motivation is performed enduringly to produce good performance and results. The production stage is often influenced by self-effectivity, which is termed self-efficacy by Bandura (1989). This stage is crucial as it demonstrates the actual results of social learning or learning by modelling. At this stage, the change of behaviour becomes evident and indicates that a new skill has been acquired. In teaching and learning, the teacher becomes happy when the new teaching style they copied from colleagues impacts learners' academic performance in a positive way.

Figures 2.1 and 2.2 illustrate that learners who observe modelled behaviour will first give attention to it, and then the learners will immediately decide to retain the events of the performance in their memory. The stored practices will then be imitated during motivation,

and this may happen once if the learners are not motivated extrinsically through rewards. The fourth stage happens when the new behaviour continues to be demonstrated and repeated during the production stage. The acquired performance will be repeated or reproduced if the learner is extrinsically motivated (Nabavi, 2012). These stages are significant for the processes of learning as they demonstrate how learners process what they get from their teachers during contact sessions and how the valued information is cognitively manipulated.

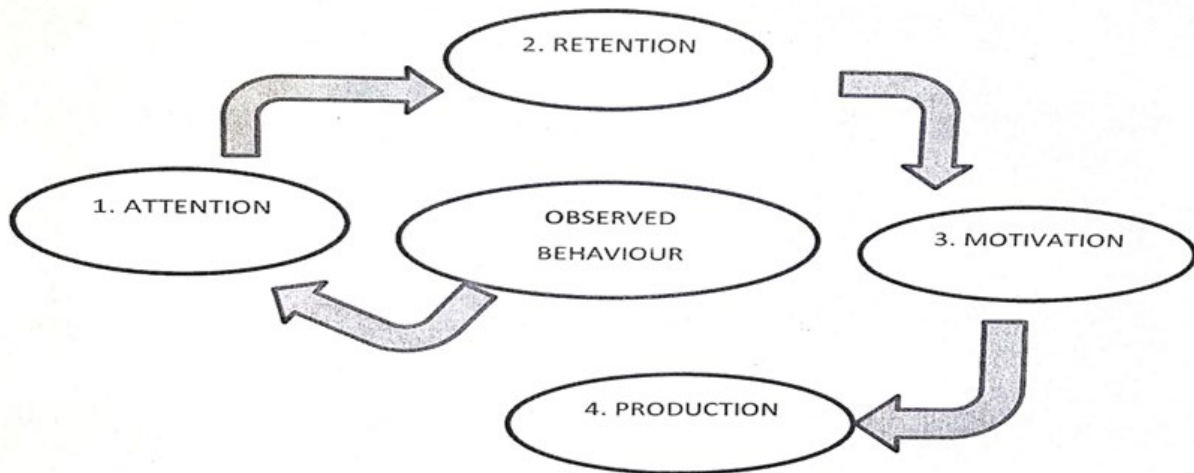


Figure 2.1 Stages of observational learning modelling (adapted from Bandura, 1989)

Similarly, CPTD follows these stages because training workshops involve learning new knowledge and skills. Two main types of motivation affect teachers, and some teachers are intrinsically motivated and value what they acquire for the sake of their profession more than the rewards. Those whose attendance is driven by incentives or what they hope to achieve at the end of the sessions, will unfortunately attach value to the rewards.

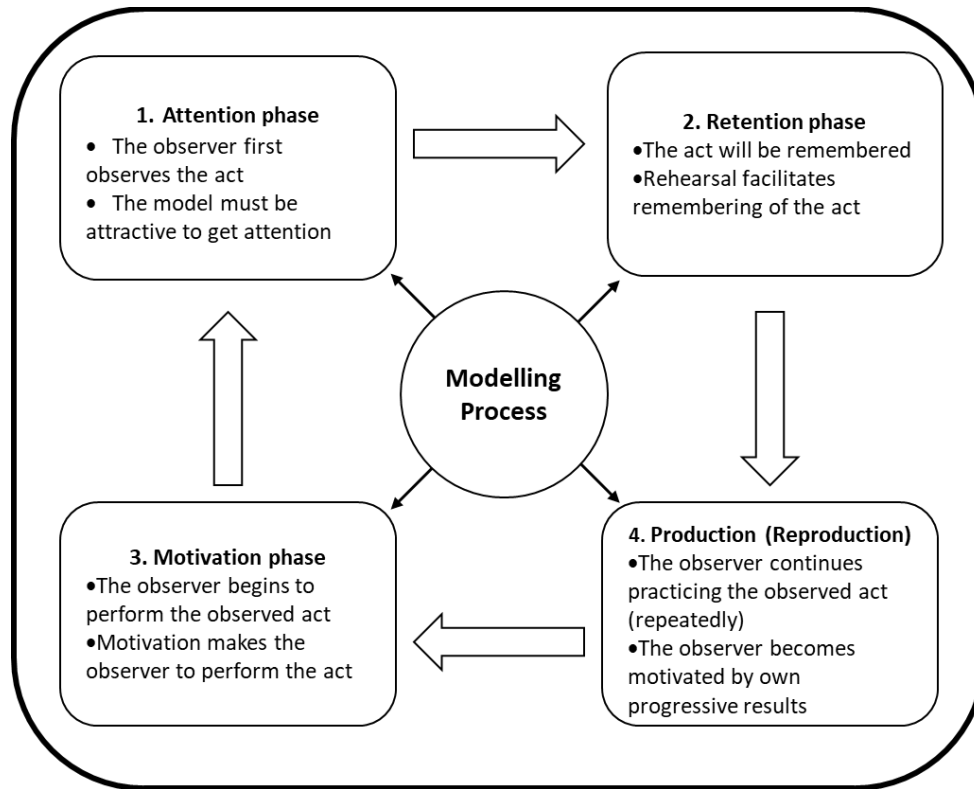


Figure 2.2 The modelling process (adapted from Nabavi, 2012)

Guskey (2000) posits that since the first proposal of SLT by Albert Bandura in 1971, SLT developed into the most dominant theory for learning. It is often called a connector between behavioural and other cognitive learning theories as it comprises the three elements of attention, memory, and motivation (Muro & Jeffrey, 2008).

DeBell (2020) asserts that there are good and bad models. They cite an example about parents who demonstrate drinking beer or swearing at others in front of their children. They are models because they display a certain kind of behaviour that can be learned but the bad behaviour they model makes them bad models. Furthermore, DeBell maintains good models fit in the following criteria:

- i. They are of the same colour, race, language, or tradition, or come from the same place;
- ii. They hold higher positions, like a teacher, nurse, doctor, elder, or parent;
- iii. They demonstrate certain expertise or special knowledge, such as a carpenter, electrician, mechanic, or other trade and is seen doing the job;

- iv. They are seen being rewarded or paid every time they do their job; and
- v. They provide food or nutrition and other valuable things.

SLT was significant for the current study because teacher development involves learning processes as teachers acquire knowledge and skills from other knowledgeable individuals through learning and professional learning.

2.4.1.4 Self-efficacy as a concept of social learning theory

Albert Bandura defines self-efficacy as individuals' beliefs about the control they have over the events that affect their lives. Self-efficacy is influenced by four different variables, namely (1) cognitive elements, which are how people think about the purpose of the activity; (2) motivational elements, which are determinations and realisation of the aims of the events; (3) behavioural elements, which are the perceived efficiencies of the events; and (4) selective elements, which are the preference for the activity and creation of new environments for the activities (Bandura, 1977). Malone (2002) maintains that self-efficacy determines individuals' thinking styles, feelings, and motivational conditions by comparing their required performance and capacity. In other words, self-efficacy is how a person's confidence is affected by their feelings and motivation about a conduct.

According to Bandura (1977), cognitive capabilities and basic skills are reflected by self-efficacy, which includes affective elements such as self-possession, incitement, and eagerness to initiate. Woolfolk, Rosoff and Hoy (1990) argue that teachers with lower enthusiasm are more hopeless about encouragement and believe in old and rigid classroom rules and in external motivation or punishment to enforce learning. This is because they are less confident about their capabilities and the level of their content and pedagogical knowledge.

Researchers (Berman & Mclaughlin, 1978; Guskey, 2000) found that social and contextual effects lead to innovative challenges and that such challenges regulate self-efficacy. In other words, when teachers acquired knowledge, they become innovative because their self-efficacy is positively affected.

Cuban (2009) distinguishes between *positive* self-efficacy, which refers directly to determination, impetus, and gestures of interest on initiative processes in teaching, and *negative* self-efficacy, which is shown by a lack of confidence and motivation, and a negative attitude towards innovation. Negative self-efficacy results in teachers sticking to old and rigid teaching methods despite global changes and the demands of the knowledge economy.

As individuals choose and execute a way of behaving, those around them disperse the results and feedback that inform confidence and future behaviours (Strickland-Davis, Kosloski & Reed, 2020). Over time, individuals perceive success to indicate that their actions yielded the desired outcomes, and their level of self-efficacy is significantly developed. As self-efficacy levels are raised through consecutive successes, the possibility for any negative influence that may be exacerbated by disappointment will be minimised (Bandura, 1977).

Self-efficacy refers to the inner courage to carry out a task and not necessarily to the actual skill to perform it. Self-efficacy differs from self-conception, self-worth, and self-belief, and specifically refers to self-reliance rather than real competence (Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998).

Individuals assess incitement, attitudes, and capability in a variety of contexts and activities, and to a certain degree, these activities affect beliefs in their self-efficacy. There are four primary sources of development that influence the origin of beliefs, namely proficiency, role modelling, social inducement, and determinations (Bandura, 1977). The three concepts of self-efficacy, social learning, and motivation are inseparable because they create CPTD. Teachers must be motivated, develop positive self-efficacy and participate in social learning to be professionally developed. Self-efficacy and motivation relate to each other in behavioural theories.

2.4.1.5 Motivation as a concept of social learning theory

Cherry (2022) explains motivation as the driving force behind our actions. According to Cherry, the components of motivation are activation, persistence, and intensity. Motivation, therefore, causes people to abide by their set objectives. Cherry posits that

motivation is often caused by biological, emotional, social, or cognitive factors, which implies that the person must be active to start an activity and to persist without losing hope because they know they are getting closer to the desired goal. If individuals are motivated to learn because they have attached value to the outcome of that learning, they will not easily lose sight of their goal.

Furthermore, Schunk and DiBenedetto (2020) define motivation as a process that initiates, encourages, and sustains activities that are directed at goal achievement. They explained motivational processes as being personally influenced activities that lead to several outcomes, such as choice about an activity, efforts to carry out a task, energy to persist, and achievement of the outcome. All these outcomes are regulated by environmental factors. Their finding is consistent with one of the assumptions of the SLT, namely that context and surroundings play a significant role during the observation of a model.

According to early research (Rotter, 1954, Rotter, 1982; Hystek & Terhoven, 2015; Thomas & Gupta, 2022), motivation is affected by two variables, namely expectancy and reinforcement value. Expectancy happens when individuals believe there is a likelihood that there will be reinforcement after an activity is accomplished. Reinforcement value is the degree to which individuals value the performance as compared to the outcomes of other activities. Significantly, motivation and self-efficacy affect each other because motivated people have high levels of self-efficacy. The process of learning new skills requires learners to set achievement goals, expect to accomplish the goals, be interested in the learning content, and believe in the environment within which learning occurs.

Perry (2022) posits that motivation is an internal or external force that drives people to perform a task or to stand up and approach something. She posits that since people are pushed by different things, they are grouped into two main types, namely the external or extrinsic types and the internal or intrinsic types. Perry breaks each of the two main types into examples, which were important for the current study. For intrinsic motivation, the examples are learning or competence motivation, attitude motivation, achievement motivation, creative motivation, and physiological motivation. Extrinsic motivation's examples are incentive motivation, fear motivation, power motivation, and social

motivation. All the following examples of intrinsic motivation are applicable in teacher professional development.

- *Learning motivation* is the condition of being driven by the act of learning. In this motivation, learners believe what they are learning is exciting because it has never been done before. Learners are motivated because they want to learn a new skill or improve what is known about the old practice. In CTPD, teachers are motivated by the awareness that they are going to learn new things or improve their skills, and this feeling keeps them going (Perry, 2022).
- *Attitude motivation* makes individuals spread positivity among other people. These people love to be positive and enjoy seeing a positive attitude prevail among members of a group or friends. Professionals are motivated by their positive attitude towards professional development programmes. They want everyone to be positive about professional development (Perry, 2022).
- *Achievement motivation* happens when people are motivated by the feeling of accomplishing a task more than what they will get as a reward. Their greatest satisfaction is reaching the goal. Teachers who are motivated by achievement motivation are interested in seeing themselves completing the course and care less about the rewards that may follow. When they participate in teacher training that fosters excellent teaching techniques, these teachers are motivated because they want to see their learners benefit from the new methods (Perry, 2022).
- *Creative motivation* causes people to be interested in creating new things to solve prevailing challenges. They value the freedom of expressing their opinions and become demotivated if they have an autocratic manager who believes only in their own ideas. Teachers who are motivated by creativity enjoy being given the chance to be innovative. This motivates them to create more new things. When they come with innovative classroom techniques and are applauded by their headmaster or even given chance to explain their creativity to the staff, they feel motivated and are likely to carry on with their innovation (Perry, 2022; Thomas & Gupta, 2022).
- *Physiological motivation* is when people are satisfied by the satisfaction of biological needs like food. These needs are not directly associated with the task to be accomplished. Individuals will continue to work if they get food and water, not if

they get them as rewards. Teachers who are motivated by this will continue to participate in a variety of exertions because they continue to be remunerated as teachers. They are not motivated by anything extra they get after accomplishing a task. Unfortunately, there are still teachers who say they will just do this as long as they are teachers and earn a salary. Physiological motivation is not a good motivation because it does not encourage people to do more than they have to (Hystek & Terhoven, 2015; Perry, 2022).

The following examples of extrinsic motivation are crucial as they explain the external forces that cause people to continue their involvement in certain acts. The applicability of these examples in teacher development and the SLT are presented below:

- *Incentive motivation* is concerned with the rewards that people are promised after completing a task. These people are interested in their reward and not with the task itself. Teachers who are motivated by incentives are interested in rewards and care less about what they cognitively acquire during the activity (Perry, 2022).
- *Fear motivation* makes people to do something only because they fear what may happen if it is not done. It is fear that drives them to work or be involved in an assignment. Teachers who are motivated by fear attend professional development activities only because they feel they are forced to and want to avoid the bad outcome if they do not do it (Perry, 2022).
- *Power motivation* is when people do an activity because they want to get power to control others. They want to finish the task because it will make them a leader or manager, and they want to have the power of being in control. These types of teachers only learn new skills because it puts them in a leadership position and gives them power. They value the anticipated power more than the acquired skill. Some take leadership courses not because they want more knowledge and skills but because there is a promise that they will get a promotion (Perry, 2022).
- *Social motivation* is being eager to be accepted into a certain social group. They choose an activity not because they enjoy it but because it is a requirement to be accepted into a group. These types of teachers only participate in CPTD activities

because they want to be friends with those attending the courses, and they do not value the course itself (Perry, 2022).

Motivated learners and teachers together form a strong combination of workforce which persuades interminable objectives and co-own the results. Institutions which establish and affirm motivation enjoy the benefits which are discussed hereunder.

2.4.1.6 Benefits of motivated learners and teachers

Chen (2022) sets forth several benefits of motivated working force. (1) Motivated teachers focus on their core duty, are pro-active and propelled to achieve their short and long-term goals. Such teachers inspire their learners to achieve qualitative outputs. (2) There is increased creativity and innovation among teachers and learners resulting in the minimisation of risks as innovative solutions are often created to explore new ideas. (3) There is an improved organisational culture and climate as teachers do their work with passion, unity, collaboration, and are enthusiastic. A positive and conducive teaching and learning environment is thus created. (4) Employee wellbeing is enhanced. Teachers enjoy a sense of satisfaction as there are lesser conflicts among them. Their positive mood impacts learner performance, and parents are also satisfied with the atmosphere of their school. (5) The employee retention is improved. No one will enjoy working in a tense environment where employees are selfish and have nothing to share. Organisations are encouraged to understand the benefits of employee motivation so they can create environments that foster motivation allowing the stakeholders to use their full potentials in all activities they engage in.

Motivation is thus a significant concept of SLT because it describes the forces that drive different individuals to participate and learn new habits and skills. Individuals who are intrinsically motivated are more valuable than those who are extrinsically motivated by external. Extrinsic motivation should accompany teacher development processes, but they should not be valued more than the courses themselves. Extrinsic motivation poses a danger to professional development if teachers value the rewards more than the knowledge they gain in the workshops and in-service training exercises.

2.4.2 The relationship between social learning theory and professional teacher development

SLT is increasingly cited as an essential element of sustainable human resource management tools because it promotes desirable behavioural change (Muro & Jeffrey, 2008; Lieberman & Pointer Mace, 2010). The current researcher used this theory to underpin the study because CPTD is a human resource management tool used to capacitate the teaching community.

Traditionally, CPTD programmes comprise fixed step-by-step processes that follow a specific procedure of formal meetings and workshops. It is widely established that the current mode of providing professional development must be radically changed (Lieberman & Pointer Mace, 2010). Hunzicker (2011) asserts that the primitive workshops are depreciating in the changing, demanding society. Therefore, teacher development activities should shift from rigid, strict procedures to social participatory meetings. Teachers should build relationships with one another, form their own Professional Learning Communities (PLCs), and receive motivation and support from their school authorities.

Wilson and Berne (1991) posit that professional teacher learning is a combination of various possibilities developing from obligatory to voluntary, and from strictly structured to loosely structured. The focus shifts from only listening and speaking less in workshops, passively participating in popular courses, and attending workshops for formality, to voluntary self-development.

There is an awareness that teachers want to be at the centre of their professional development (Lieberman & Wood, 2002). Lave and Wenger (1991) state that there is a connection between the professional development of teachers and self-efficacy because professional development integrates cognitive and social aspects. Therefore, professional development cannot be separated from voluntary learning by observing the behaviours of others, which is the central aspect of SLT.

SLT assumes that people acquire knowledge by interacting with one another in a social context. When people observe the conduct of others, they can acquire them. After

watching other people's actions, people assimilate and imitate those actions, especially if they observed that the experiences were positive or rewarded. Borko (2004) argues that professional development theories must comprise cognitive and social aspects of learning. In other words, there should be a combination of social participation and a sound cognizance in the modelling process.

According to Horsburgh and Ippolito (2018), role modelling or imitative learning has triggered a vast number of research studies that posit that people choose their role models in fields of interest and become their followers. It is the responsibility of models to make their practices as clear and attractive to the observers as possible. This suggests that role models should enable observers to understand unfamiliar vocabulary to sustain and improve attendance in similar settings.

Samsudin, Shamsudin and Arif (2017) reveal the didactical benefits of using the SLT. They found that the theory significantly improves teaching efficiency when used as a basis for CPTD processes. These researchers also maintain that when teachers are given opportunities to observe good teachers in practice, they develop an interest in mimicking the operations. However, they caution that the model should be practised in the same context as those of the observers because this will likely raise the observers' self-efficacy before they even implement the acquired skills. Strickland-Davis et al. (2020) maintain that SLT explicitly increases self-efficacy in professional development practices because through social learning, participants can share pedagogical challenges, new skills, initiatives, and co-operation to reach common solutions when working together in social contexts. These findings also suggest that teachers can benefit from learning in a social context where they share ideas and other valuable information.

2.4.3 Significance of social learning theory for professional teacher development

Globally, learning in professional communities and networking for learning have been receiving attention. Teachers are increasingly becoming part of these communities, and it is evident that there are meaningful changes in local knowledge because teachers get opportunities to explore various solutions to problems (Katza & Earl, 2006; Meijs, Prinson

& De Laat, 2016). PLCs and educational networking are both social learning situations, and therefore, learning in social contexts is beneficial as it deepens teachers' skills and yields instructional improvements (Darling-Hammond, Chung-Wei, Andree, Richardson & Orphanos, 2009).

The core components of SLT are observational learning and the mental modelling of behaviours (Woolfolk et al., 1990). In other words, teachers can re-construct new behaviours from modelling and implement them in their classrooms. The two terms, observational learning, and mental modelling supplement each other during social learning.

Observational learning is explained by DeBell (2020) as the type of conscious or unconscious learning during which a learner acquires a skill by watching how it is done by others. Those who perform the activity may not even be aware that somebody is learning from what they are doing. Lortie (2002) maintains that at the beginning of their careers, teachers observe and mimic the practices of other teachers, including their lecturers, and apply these in their classrooms, which is consistent with the SLT. During their career learning, student teachers are given opportunities to visit local schools for a period to observe what professional teachers are doing in the classroom. The observation instruments they use to record what they observe guide them through the process. It is obvious that the lecturers and those who plan curricula for student teachers believe the SLT is important. The SLT continues to be crucial for CPTD. Further research (Rowlands, Thwaites & Jared, 2011; Watson & Evans, 2012) indicates that observational learning impacts teacher development because teachers develop themselves by observing how their colleagues are doing things better than they do (DeBell, 2020).

Mental modelling, on the other hand, regards those who are performing the activity and are watched by others as models. When the observers are interested in what is being done and begin to acquire the behaviour, the acquired skill is called modelled behaviour (Watson & Evans, 2012). The importance of a mental model is revealed when teachers are provided with a model teacher during CTPD. The observing teachers watch the model with interest, and mentally compare what the model does with what they practically do. The model's demonstrated success in the classroom motivates the observers to continue

watching and to internalise the demonstrated performance. Rowlands et al. (2011) maintain that how teachers copy and reproduce practices is influenced by their level of belief that they will accomplish the goal. Therefore, teachers also learn from good models, and fortunately, most of the teachers are intrinsically motivated by learning, creativity, and achievement.

During CTPD, curriculum advisors model teaching as they demonstrate certain skills to the teachers on how to present particular topics so learners can understand the basics. Teachers acquire those skills and enjoy mimicking them in their classrooms to the benefit of their learners. It takes both intrinsic and extrinsic motivation in these teachers to participate in such training workshops. Those who are intrinsically motivated will be attentive and will energetically go back, implement, and evaluate the effectiveness of the newly acquired skills.

Woolfolk et al. (1990) show that teachers' self-efficacy is affected by positive teaching behaviours and learners' academic achievement, which indicates that teachers with low self-efficacy levels are more desperate, cannot motivate learners, apply strict classroom codes of conduct, rely entirely on extrinsic motivation, and use negative punishments to force learners to study. Woolfolk et al. maintain that teachers should foster intrinsic motivation in their learners rather than promise them material things because when learners are convinced of the value of being educated, their interest in becoming professionals pushes them forward.

Wake (2011) maintains that the SLT contains an appropriate way to offer teachers pedagogical knowledge using psychological principles and alternative methods to improve performances. Teachers are already professionals because they were trained to teach, and the CPTD increases their knowledge and offers them opportunities to acquire alternative teaching methods to enhance their career. They learn new ways of doing things and become better teachers.

The SLT is also relevant for teacher development because during modelling, teachers observe largely normal teaching by experienced co-workers. Then they go and reproduce what they observed, and they realise that the alternative methods represent good practice and a well-established teaching situation (Wake, 2011). Through the steps of learning

new things during CTPD, teachers acquire new skills and begin to see the significance of the new ways of doing things when they apply them.

Teachers learn during CTPD because they are externally or internally motivated, and they benefit from the training and increase their self-efficacy levels. Self-efficacy relates to self-confidence, which gives teachers the courage to prepare lessons and present them to their learners using a variety of pedagogical skills to include learners who need a specialised approach. Most of teachers' new skills are acquired from colleagues, workshops, or PLCs, which are all social groups. Teachers' continuing participation in these groups supports the assumptions of the SLT. Therefore, SLT plays a significant role in teacher development, which is why it was used to underpin the current study.

The assumptions of the SLT were crucial for the current study because the aim of the study was to examine school principals' perspectives on CPTD for the knowledge economy. It is only through professional learning that the importance of teacher development programmes can be realised.

2.5 SUMMARY OF THE CHAPTER

This chapter presented the theoretical framework underpinning the study and showed how it relates to the research questions. The researcher adopted Bandura's SLT. The history, assumptions, concepts, and significance of this theoretical framework to the whole study were explained. Chapter 3 focuses on the review of the literature, which discusses CPTD on international level and in South Africa. The focus is on two categories, the category of developed and that of developing countries. The knowledge economy and its advantages to CPTD are also detailed.

CHAPTER 3

LITERATURE REVIEW

3.1 INTRODUCTION

Chapter 2 outlined the theoretical framework that underpinned the study and explained how the theoretical framework links with CTPD. The concepts of the framework provided a base for the literature review and data construction and analysis. Chapter 3 expounds on the review of literature related to CPTD and the knowledge economy. The reader will also be orientated on the role of school managers in CPTD. The study aimed to explore the three concepts, of CPTD, school principals' roles in teacher development, and the knowledge economy, which is the context in which teacher development is viewed.

According to Hammond and Wellington (2013), a literature review is important as it gives an overview of literature published about a specific topic. They further indicate that a literature review covers what has been published, who published it, and explains existing theories and methodologies about the topic. The current study depended on what has been published about the topic under investigation and used it to select the theoretical theory and methodology for this research. Punch and Oancea (2014) attest that a literature review crucial for the following reasons:

- It provides a context for the research, and therefore, guides the research as relevant material is obtained;
- It justifies the research by showing the researcher whether the study is based on something that exists in literature;
- It allows the researcher to learn from previous theories on the subject and increases their knowledge on the subject; and
- It shows that the research will add understanding and more knowledge to the field of study.

Furthermore, Mouton (2001) contends that literature review should satisfy the following criteria:

- It should cover key aspects of the researched material associated with the topic under investigation;
- Sources should be cited in an unbiased manner; in other words, both sources that agree and disagree on the topic should be fairly treated and cited;
- The sources cited must be as recent as possible because citing only old sources shows that the researcher did not consult the latest research on the topic and is likely to repeat research that has been done;
- Sources must be relevant to the topic because irrelevant sources will take the research off track and result in an untrustworthy report; and
- Sources should be well organised and arranged in a logical manner to demonstrate how previous research built a foundation for the current study.

Maree (2021) adds that a literature review should be structured to provide a conceptual frame to explain the rationale behind the sampling and choice of research methodology. In other words, the reader should not speculate about what the researcher is leading to or wishes to achieve as objectives. It is against this background that the current researcher conducted a literature review about the concepts that built the title of this study, which are CPTD, the role of principals in teacher development, and the knowledge economy.

De Vos (2001) recommends that the researcher should store the full details of all the cited sources to eventually compose the reference list quickly and accurately. Therefore, the research problem should be placed in theoretical perspective, alternative theories should be considered to get a good understanding of the problem, and the central concepts should be identified and followed. In other words, the research problem, questions, and objectives should be the focus when conducting a literature review.

This chapter first focuses on a general overview of CPTD, and then on the role of principals in CPTD. Next, the connection between the knowledge economy and CPTD is discussed, and lastly, an overview of CPTD on an international level and in South Africa is given. All this information forms a critical basis for data construction, data analysis and interpretation, and the research recommendations.

3.2 GENERAL OVERVIEW OF PROFESSIONAL TEACHER DEVELOPMENT

According to Sayed and Bulgrin (2020), many countries' education systems share common challenges with regards to quality CPTD. Global education systems have a common interest in developing teachers so they can produce learners who can compete with their peers around the world. This means that all countries regard CPTD as a significant mechanism to raise teaching standards because quality teachers make quality learners.

Singh, Patel and Mishra (2019) maintain that education is vital for the development and future of any nation, and that the effectiveness of an education system is equal to the quality of its teachers. They argue that the whole education system depends exclusively on the quality of its teachers. Furthermore, the superiority of teachers is grounded on the quality of the teacher education. This means that developed countries put more focus on teacher training curricula and training because better teachers mean better quality education. The effectiveness of an education system is seen in its learners, who are the end products of the teaching community.

Kumar and Azad (2016) hold that CPTD is a precondition to empower teachers and is an endless process beginning with initial teacher preparation and proceeds throughout teachers' professional career. Therefore, there is a worldwide awareness of the need for the CPTD, and CPTD should be a lifelong process throughout the teaching career.

There are ongoing global changes and challenges in the education sector, teachers must be equipped with the skills to adapt to these global dynamics. The adaptation should help them understand the changes and adapt without resistance, help them believe they can raise their standards to develop a positive attitude towards the changes, and give them an acceptable level of self-efficacy to accommodate growth and development within the changes (Kumar & Azad, 2016; Mishra and Koehler, 2006).

3.2.1 The concept of professional teacher development

Teaching is a profession. A profession is a trade or an occupation in which workers, who are professionals, do their work according to knowledge and expertise because of the

training (Beaton, 2022; Susskind & Susskind, 2015; 2018). Like in the field of medicine where people entrust their lives to a doctor because they believe in his medical expertise, parents also entrust the lives of their children in teachers assuming that they were trained to guide the young minds. The Susskinds (2015 & 2018) maintain that professionals need to continuously update their knowledge to enable them to maintain the fashionable position they hold in society. Unfortunately, the knowledge that professionals obtain during training can not remain the same even after several years. Life is not stagnant; it relies on technological changes to which all human beings should adapt. According to Nichols (2017), professionals should improve their knowledge and skills to avoid the situation explained as 'the death of expertise' whereby professionals lose their skills.

Various definitions of CTPD emerge from the literature. Angus-Cole (2021) defines it as an ongoing process in which teachers repeatedly reflect on their practices, learn new things, and take action to further their capabilities for better operational styles that produce effective learning processes. There are three significant action verbs in this definition, namely reflection, learning, and action. The results of CPTD are a positive learning process (Sedova, Sedlacek & Svaricek 2016; Hunzicker, 2010; Angus-Cole, 2021).

The Organization for Economic Co-operation and Development (OECD, 2009) defines CPTD as mechanisms used to develop individuals' cognizance, comprehension, proficiency, and other attributes that teachers need. In other words, it is important that all teachers increase their expertise to adapt their pedagogic command and expertise to cope with global changes. It is through continuity of training that teachers acquire new teaching skills that are applied globally and in advanced classrooms.

Furthermore, CPTD was previously viewed as traditional institutional development comprising fixed step-by-step processes following a specific procedure of formal meetings and workshops aiming at improving the professional practices of the teaching community (Lieberman & Pointer Mace, 2010). The definition uses formal meetings and workshops as significant activities to accomplish CPTD. Although recent professional development may not follow fixed step-by-step procedures, the aim is still consistently to improve professional practices.

According to the Tanzanian Education Policy, CPTD means the use of planned in-service training and retraining to regularly expose teachers to new methodologies and approaches to develop their teaching effectiveness (Ministry of Education and Culture, 1995; Ministry of Education and Vocational Training, 2008). The crucial elements in this definition are regular exposure, in-service training and retraining, and the development of teaching effectiveness. Directly or indirectly, the significance of CPTD is to improve the teaching effectiveness.

On the other hand, Mishra and Koehler (2006) posit that CPTD is teaching practice development that comprises three areas of development, namely technological skills, pedagogical knowledge, and subject-specific content knowledge. The implication of this definition is that CPTD should target the development of subject content knowledge, methodological perfection of teaching subject content, and technological skills of content presentation. Teachers who have developed the three areas of development are likely to be effective teachers.

Lastly, Guskey (2002) defines CPTD as a range of systemic attempts to induce positive changes in teaching practices, job-related attitudes, and credence towards their profession, and to enhance the learning outcomes of learners. Schwille and Dembele (2007) add that CPTD is a career-long development process that includes policies and procedures whose purpose is to help teachers acquire and broaden their proficiency and commitment so they can effectively perform their teaching duties. The element of effectiveness in teaching also features in this definition. The word 'career-long' is equal to 'continuing', which depicts that teachers are recurrent learners in their profession.

3.2.2 The theory behind professional teacher development

CPTD uses a variety of terms interchangeably, and in many instances, confusingly. Although the terms fall under the umbrella of CPTD, they refer to different activities. Some of these terms are defined here:

- *Continuing professional development (CPD)* deals with improving professional skills and teaching practice.

- *Professional teacher education* is involved when individuals engage in learning about teaching experiences and develop knowledge of content and skills, and the practice of teaching as a profession.
- *In-service education and training (INSET)* develops the operational expertise of teachers and improve techniques of preparation and the teaching of the syllabus.
- *PLCs* encourages teaching practitioners to come together and share ideas, experiences, better practices, and content interpretation. This develops a mutual relationship of support and sharing of resources, physically or on a technological network.
- *Organisational action research* is a type of professional development in which an individual or group of teachers identify a problem in their teaching environment and conduct research to find out how the problem started and how it can be minimised or addressed.
- *Mentoring*, which is often confused with coaching, establishes a supportive relationship in which a newly appointed teacher who is less experienced is assigned with an experienced colleague to provide guidance and orientation.
- *Coaching* is a more structured professional development than mentoring as it assigns a responsibility to a senior or experienced colleague to encourage an identified colleague to review or develop some specific skills or to improve an area in which a change of practice is recommended by the authorities (Asghar & Ahman, 2014; Angus-Cole, 2021).

CPTD can use any of the above development activities if the aim remains to produce an effective teacher and to sustain efficient learning environments in classrooms. Teachers are produced by professional teacher education before they are recruited and appointed to implement what they learned. CPTD continues when newly appointed teachers are immediately assigned experienced teachers for mentoring and orientation or coaching to correct some less acceptable behaviours. Serving teachers are taken for INSET to orientate them on new work-related issues while some more skills are shared when they participate in PLCs. When teaching and learning challenges are experienced, teachers can join hands and conduct action research to investigate the problem and address it. This means that CPTD is a collaboration of activities.

There are three practical theories behind CPTD in literature. The first is the impact teachers have on learners (Creemers & Kyriakides, 2013). Teachers work directly with learners to explain abstract content to them and to prepare them for examinations, which they should pass. Education authorities, parents, and the entire community put their trust in teachers because of the professional understanding they have. The impact that teachers have on learners reveal the level of knowledge and expertise they have in teaching the learners. CPTD is vital to sustain the teaching effectiveness.

The second theory is that teachers are lifelong learners (Coe, Rauch, Kime & Singleton, 2020). Teachers became professionals because of learning, but unfortunately, some of them stop learning. They learn the deeper content of their major subjects and various techniques of imparting content to the learners. Teaching is not stagnant as teaching content is everchanging as the authors of the content continue to align it with the global changes to make it authentic. Teachers who are stagnant and reluctant to continue learning will continue to teach old content while their colleagues are busy with real-life situations in their classrooms.

The third theory is that frequent self-reflection makes professional development an integral process in the teaching profession (Jasper, 2003; Driscoll, 2007). Teachers should engage in self-reflection as a fundamental aspect of professional development (Angus-Cole, 2021).

The three theories form a significant literature base for CPTD that allowed the current researcher to approach data construction with a rich background and methodological assumptions.

3.2.3 Significance of continuing professional teacher development

When discussing the significance of teacher development, it is important to begin with the misconceptions that teachers have regarding the development programmes existing in the national education systems.

3.2.3.1 *Misconceptions about continuing professional teacher development*

Several misconceptions exist about the benefits of CPTD that may cloud the benefits that teachers get from development activities. Hattie (2012) reveal that some teachers think that because of their years of teaching experience, they have accumulated enough knowledge and skills and that there is no need for them to participate in development activities. They forget that it is important for every teacher to keep adapting their teaching practices to new educational contexts as global advancements impact old teaching methodologies. Technological inventions are also forcing teachers to learn new methods of teaching, such as when some pandemics force education to continue remotely and online.

The second misconception discovered by Angus-Cole (2021) is that teacher development activities have little impact and just take up a lot of time. According to Angus-Cole, some teachers regard professional development as an extra activity instead of a professional co-curricular activity. Cordingley et al. (2015) maintain that if teacher development is integrated into daily teaching activities, the results will significantly pay off.

The third misconception is that opportunities for teacher development are once-off training activities and are necessary at certain stages of the teaching career (Cordingley et al., 2015). This is misleading since teacher development involves several ongoing development opportunities wherein teachers benefit by acquiring knowledge and enhancing their pedagogical skills. When a teacher continues to meet with other colleagues in workshops and meetings, they share new skills and transfer advanced methodological techniques among themselves.

The fourth and dangerous misconception is that when teachers are developed from their levels to the upper knowledge levels, the system might lose them to other sectors (Worth & van den Brande, 2020). It is wrongfully perceived that when teachers are well developed and equipped with multi-skills by the education system as an investment, the system risks losing these skilled professionals to other sectors who remunerate better. Worth and van den Brande hold that teachers, whether skilled or not, are retained by motivation and job satisfaction.

Lastly, most teachers fear to engage in teacher development as they think it is expensive (Angus-Cole, 2021). This is just a shallow misconception considering that teachers can develop themselves by participating in PLCs, joining local reading groups, or engaging with a nearby colleague to acquire more skills through team teaching or co-teaching. Teacher development is encouraged by teachers' intrinsic motivation. Eagerness to gain more knowledge is a significant driver for teacher development.

According to a study by Clausen, Jones, and Rich (2008), appraised employees, instead of realising opportunities for promotion, better work and increased compensation possibilities, an anxiety was created. Employees viewed appraisal and development processes as bundles of tricks the management people use to highlight all the bad things done by employees all the year. The purpose of appraisal for development was also viewed as a way of dealing with some employees to make them 'voluntarily' leave the job.

3.2.3.2 *Benefits of continuing professional teacher development*

CPTD exists in all the education systems in developed and developing countries. The education department is the mother of all professions and all countries depend on it for its knowledge economy. People from developing countries often flock to developed countries to earn advanced qualifications and become better skilled because of their education systems. An education system is developed when other countries can copy better practices into their own systems. The following are several perceived benefits of CPTD in the literature:

- Benefits that teachers experience when they become confident in their professional duties when implementing the acquired knowledge and skills. This also results in increased motivation as they have more control of their pedagogy, which ultimately results in job satisfaction (Worth & van den Brande, 2020).
- Improved effectiveness and learner outcomes resulting from knowledgeable teachers who learned from professional development processes. Hattie (2012) posits that teacher development focuses on the improvement of learners' academic achievement. Improving teacher effectiveness through professional development is directly proportional to improved learner outcomes.

- Benefits for the school itself when it is served by effective teachers who are continuously developing their skills to adapt to new changes and to teach authenticity (Worth & van den Brande, 2020). The school becomes famous and more learners flock to it as parents prefer their children be taught by effective teachers who are up to date through continuous development.
- The education system rises to an advanced level when the national academic results improve (Cordingley et al., 2015). National results are generated by schools where effective teachers are serving with confidence and pride because professional development keeps them abreast. The good reputation of schools positively impacts that of the national education department.

3.2.3.3 *Characteristics of continuing professional teacher development*

Darling-Hammond, Hyler and Gardner (2017) postulate that an effective CPTD programme is structured to cause developments in the pedagogical methods of teachers to improve the learning outcomes of learners. Various forms of CPTD exist as countries shape their plans according to their national needs of the knowledge economy. Mishra and Koehler (2006), Kumar and Azad (2016), and Singh et al. (2019) agree that the heart of teacher development is continuing development of teachers for effectiveness, profitable learners, and the elevation of schools' reputation (Worth & van den Brande, 2020). The discussion recaps the significant elements that are nationally recognised for any teacher development strategy. Whether it is an individual school leadership or a national education system, there are seven elements that should be incorporated into professional development strategies. The learning opportunities of a professional development plan should (1) be supportive to integrate teachers' learning needs, (2) job related, (3) instructionally focused, (4) collaborative, (5) provide expert support, (6) support active learning, and (7) be ongoing (Hunzicker, 2010, 2011; Lieberman & Pointer Mace, 2010).

When planning on a development activity, the first thing to consider is the learning needs of the teachers who are going to implement the programme related to their teaching job. The activity should focus on improving instructional skills through expert support and collaboration with various groups of expert presenters. The activities should be planned

to encourage and support active learning so teachers are motivated to go on. The processes should be stable or ongoing so teachers realise their lifelong learning commitment.

Figure 3.1 depicts the typical cycle of CPTD in a school, and includes initial teacher training, recruitment and appointment, mentoring and orientation, appraisal and development, PLCs, INSET and coaching, organisational action research, and appraisal and development in continuum. The steps in Figure 3.1 are discussed in detail in the following subsections.

3.2.3.3.1 Initial professional teacher training

All teachers earn their professional status when they attend professional teacher training courses in institutions of further learning. CPTD starts in those institutions when non-teaching persons are offered training to become professionals. The initial teacher training curriculum equips them with the basic knowledge and didactics to prepare them to be appointed in any school according to their specialisation subjects. The teachers obtain certificates or degrees and are registered with professional bodies where they get licences for teaching as per the legislation of the national Department of Education (DoE).

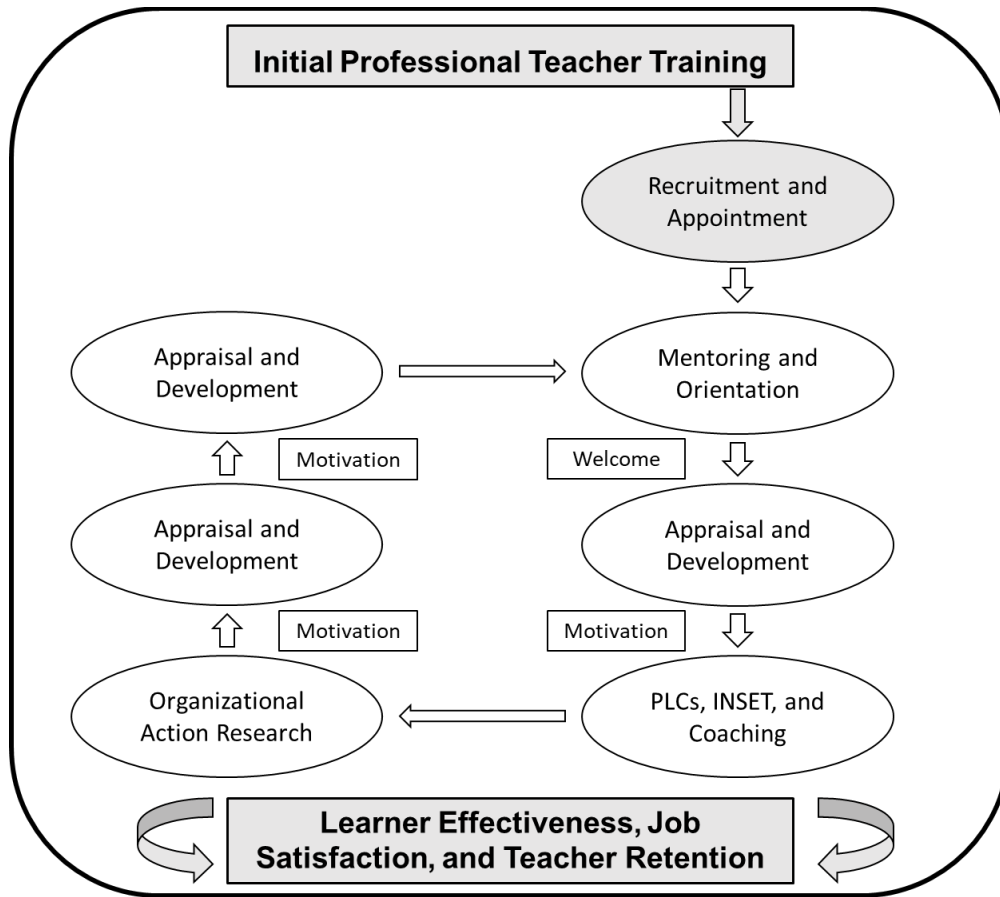


Figure 3.1 Typical life cycle of CPTD

In South Africa, teacher training was previously, on one hand, done in colleges of education, where teachers obtained only teachers' diplomas. Those diplomas were the Junior Primary Teachers Diploma, allowing the holder to teach in the foundation phase, grades R to 3. The second one as Senior Primary Teachers Diploma for grades 4 to 9, while the third one Secondary Teachers Diploma permits the holder to offer tuition in grades 10 to 12. All the three diplomas are awarded the status of relative education qualification value [REQV] 13. Teachers' qualifications were terminated by the department before the year 2000, and teachers could only obtain them at universities. On the other hand, universities offer REQV 14 onwards, and students get professional degrees, such as Bachelor of Education [BED] either in the foundation phase, intermediate phase or a combined senior and secondary phases specialisation (RSA, 1998).

3.2.3.3.2 *Recruitment and appointment*

Principals from different institutions recruit teachers in accordance with the existing vacancies and curricula needs of their schools. Successful candidates are appointed into the education system and welcomed by experienced teachers. Principals who abuse their powers of recruiting often lead their schools to failure when they recruit wrongly qualified teachers. In Australia, for example, a principal identifies and describes a vacancy according to the internal subject allocation of the school and makes a recommendation to the Assistant Director for Workforce Management for the conversion of the vacancy to a permanent post. After approval, the principal recruits a teacher and sends the documentation to the Senior Human Resources Consultant for a permanent appointment and inclusion into the Permanent Teachers Register (Australian Institute for Teaching and School Leadership [AITSL], 2019). Similarly, in South Africa, the school manager identifies a vacancy according to the post establishment, advertises the post, and conducts the interviews with the help of an appointed interviewing panel. The school governing body is mandated by the South African Schools Act, no. 84 of 1996 (RSA, 1996b) to make recommendations to the District Director and the Head of Department (HoD) for the appointment. The appointment is effected only if the candidate carries a registration certificate from SACE (RSA, 2000).

3.2.3.3.3 *Mentoring and orientation*

According to Bowman (2014), mentoring helps new teachers and makes the profession attractive by motivating them to develop their potential. Every school should have a policy of allocating mentors to new teachers to allow them to connect their experience from training institutions to the real world of work. Mentoring and orientation shows new teachers the difference between the theory they learned in the training institution and the reality of what they have been trained for. The mentoring process orientates them about the classrooms allocated to them, the organisational culture and unique operations of the school, and the supply of the necessary learning and teaching materials. Other administrative duties given to teachers are also explained at this stage. The process should also focus on all the applicable policies and legislation, including the CPTD policy,

which uses the staff appraisal procedures of QMS as a point of departure. The School Management Team is pivotal in welcoming teachers and providing a conducive and auspicious environment. The mentoring and orientation phase should involve, as a matter of obligation, some motivational speeches so the teachers feel welcomed and can happily proceed to the next phase. This step is important because mistakes made by the management at this stage can demotivate the new teacher from the start. Vesely, Saklofske and Leschied (2013) maintain that through mentoring, teachers develop confidence and are retained in the teaching profession because of the support they receive from fellow teachers who work closely with them and regard them as valued colleagues. This means mentors should collaborate with mentees to make them feel welcomed. Bowman (2014) postulates that during mentoring, the emphasis should be on organisational goals and advice on professional development, and mentors should also be role models for mentees.

3.2.3.3.4 Appraisal and development

Performance appraisal is the collection of methods and processes organisations use to assess the performance levels of their workers and to give them feedback for improvement. The process is normally used for the purposes of development, and it fortifies the relationship between employers and employees (van Dijk, 2015). Under normal circumstances, all teachers should receive advocacy and be orientated on the existing appraisal policy before it starts. Hayes (2023) defines performance appraisal as continuous review of the job performance of employees and their overall contribution to the institution. Hayes holds that the terms annual review, employee appraisal, performance review or evaluation process are used interchangeably to refer to performance appraisal. The purpose of appraisal is to evaluate the recent skills of the employee, together with their achievements, growth, and deficiencies so far. Hayes maintains that appraisal processes should be conducted at regular intervals, either annual, mid-year, or quarterly according to collective agreements.

Appraisal processes should not be punitive or witch-hunting procedures used to torment junior teachers to feel the presence of their seniors. This mistake can destroy schools' morale, and poor teachers will feel as if they have landed in a wrong profession. During

appraisal, the senior and the junior teachers should assist each other to identify pedagogical strengths and weaknesses. The junior should be encouraged and applauded on their strengths and be motivated to engage in development activities to elevate the identified weak performance standards. The standards can be raised through PLC membership, INSET, and coaching. A conducive teaching and learning environment also contributes towards a successful appraisal and development programme.

3.2.3.3.5 PLCs, INSET, and coaching

The appraisal process is used to pinpoint teachers' strengths and weaknesses. Teachers should be motivated with incentives for their demonstrated strengths so they are recharged to continue with the development of the weak areas. According to the SACE Act (RSA, 2000), teachers should initiate the first group of activities stipulated for professional development. In other words, after identifying the weaknesses through performance appraisal, teachers should take the initial steps to choose activities they will follow to raise their standards. Activities that teachers can use to develop themselves include participating PLCs and INSET. In PLCs, teachers meet with other colleagues and share good practices and interpretations of challenging content material and new ways of teaching. Hargreaves and Fullan (1992) define CPTD as a process that effects changes in comprehension, capabilities, mindset, and behaviour. They add that teachers must create their own knowledge and attitude to enable them to implement the new developments acquired to improve their practice.

Altun (2011) defines INSET as a series of planned professional support activities that aim to develop hands-on experience and performance. Altun argues that the activities' knowledge and skills should be directly applicable to the daily job of the employee. On the other hand, Altun, Yigit, Ozman, and Alev (2007) assert that INSET is connected to teacher development in schools because its purpose is to help teachers increase their command of their daily work and to improve their personal and professional expertise to enhance learning opportunities of all learners. Coaching is when a senior worker is assigned to work closely with a junior worker to help them correct or improve an identified weak point or a less acceptable behaviour (Angus-Cole, 2021). Coaching is part of development because after the process is completed, the coached employee has

developed new, better, and acceptable ways of doing things. Wang (2017) argues that in coaching, teachers are first evaluated and then advised on what is not working and showed what to change and how to change it to make things better.

3.2.3.3.6 Organisational action research

Teachers can collaboratively identify an instructional problem, use action research to investigate it, and understand its causes and how it can be addressed for the benefit of the school. The problem may arise from a lack of proper pedagogical skills or content knowledge in some teachers. Appraisal and development can be used as part of the action research to identify the weaknesses and then conduct developmental activities to address it. Action research is a perpetual activity as educational challenges will continue to exist because there are changes in the system and teachers need to work as team members to solve them. Organisational dynamics also trigger a need for action research to examine how teachers are affected and how the condition can be improved. Teachers should work together in action research for the collection of the necessary data, evaluation and interpretation of the data, and formulation of strategies to address whatever flaws the study has identified. The purpose of action research is to solve an internal problem through the intervention strategies of the inhabitants themselves, with or without a minimal external assistance. Lincoln, Lynham and Guba (2011) and Leavy (2017) explain action research as an internal study conducted by inmates of an organisation to address their organisational challenges. Action research involves the identification of a problem in the school. Teachers collaborate to examine the cause and possible solution, then draw an action plan to work on it. Participation in all the steps contributes toward the development of skills and is part of professional development. Teachers develop research and problem-solving skills in the process.

3.2.3.3.7 Motivation

Motivation binds all the activities of the CPTD cycle. Chen (2022) defines employee motivation as an internal force that drives workers to be enthusiastic and committed towards their work. Such workers are constantly engaged with energy and passion, and they carry out their roles willingly even with minimal supervision. Motivated workers go

extra hours beyond their basic responsibilities, are not afraid to innovate, strive for excellence, and are continuous readers and researchers to get more information and apply it relevantly to improve production. When employees work with motivation, the school enjoys learner effectiveness and workers retention, while teachers enjoy job satisfaction.

3.2.3.3.8 Learner effectiveness, job satisfaction, and teacher retention

The purpose of teacher development is learner effectiveness (Creemers & Kyriakides, 2013). Teachers can facilitate learner effectiveness when they are satisfied with their job. Happy teachers are productive because they are always motivated. Roelen, Koopmans and Groothoff (2008) list seven factors that affect job satisfaction, namely task variation, co-workers, working dynamics, teaching load, allowance, learning opportunities, and environmental relationships. Out of the seven factors, working dynamics, teaching load, and learning opportunities are significant for this research. All components of the typical cycle of CPTD, as illustrated in Figure 3.1, are held to each other by motivation. Jalagat (2016) and Burkhauser et al. (2012) maintain that when employees are given a chance to make their own choices, they become motivated to perform well in tasks and sustain and complete the jobs allocated to them, which leads to high job satisfaction. On the other hand, Latham (2012) emphasises that it is because of motivation that a person who is given opportunity to choose how they want to accomplish their tasks will be energetic to finish tasks they are supposed to carry out. Teacher retention is significant as it reserves knowledge, skills and experience that were collected by the organisation. The capacitated teachers should be used to induct, orientate, and coach the new personnel (Nias, Southworth & Yeomans, 1989; Tripp, 1993).

3.2.3.4 Learning and professional teacher development

In their definition of CPTD, Darling-Hammond et al. (2017) set forth that it is a professional learning wherein teachers learn sophisticated teaching strategies that are necessary to develop students' competencies to succeed in the current century. They add that students should be assisted to develop skills to (1) master the content, (2) think critically, (3) solve problems, (4) communicate and collaborate effectively, and (5) work individually and in a

team. They discovered that several teacher development plans fail to equip teachers with abilities to successfully develop these five student skills because most strategies do not incorporate an element of learning. Professional teachers think that they are educated and do not need to be exposed to further learning while they teach learners.

Kooy and van Veen (2012) state that teacher professional development involves learning new strategies to improve on the traditional way of content presentation and to use new innovative techniques that bring authenticity into classrooms. This means teacher must be prepared to learn to access new teaching proficiencies. On the other hand, Tait (2022) distinguishes between CPTD and professional learning. The former is defined as a range of structured activities that teachers participate in to enhance their content cognizance, teaching techniques, and competencies in their work. Tait cites examples of professional training and development (PTD) as seminars, workshops, meetings, conferences, and formal training activities. He posits that usually such activities are organised by schools, professional organisations, circuits, districts, provincial departments, or even at national level. There is thorough planning of a curriculum for such activities and trainers are often guided by learning outcomes. They focus on three main elements, which are to acquire new content knowledge, to learn specified techniques, and to gain new teaching techniques for practical usage in the classrooms.

The latter is broad and moves beyond the formal, organised training schedules of PTD to encompass ongoing reflection and informal learning done by the teachers themselves (Tait, 2022). The difference is that professional learning allows teachers to use different contexts during their learning processes and to grow professionally in a self-directed manner, paced by the owner. During professional learning, teachers introspect their own teaching methods, collude with other local or adjacent teachers, conduct action researches to explore new approaches, and continue with self-independent study (Tait, 2022). According to the General Teaching Council for Scotland (2021), professional learning is used by teachers to continuously activate their cognitive skills and professional apprehension. This ensures their teaching methods are updated. The importance of professional learning is to allow teachers to further their skills and improve the academic status of the school.

Although the two terms, PTD and professional learning [PL], are defined differently, this study combined them into one concept, which is CPTD. The combination is supported by the South African teacher development programmes that allow teachers to review their own daily practices during the teacher appraisal processes, identify elements contributing to their weakness on their own, and make a priority list to develop them. Teachers also participate in PTD activities organised by the state and other professional organisations to acquire the necessary skills following the formal curricula. The current researcher believed that all schools under the DoE in South Africa are using the two concepts together in their CPTD.

3.3 THE ROLE OF SCHOOL PRINCIPALS IN PROFESSIONAL TEACHER DEVELOPMENT

School principals are described as instructional leaders and teacher-teachers in early research (Hord, 1988). Since then, principals' role shifted to that of directors, overseers, and participators in teachers' professional development (Holland, 2009). This denotes that the role of school principals has ever been dynamic and not stagnant or rigid.

Principals are essential for CPTD in all schools. Hickey and Lanahan (2012) predicate that teachers often join the profession with little understanding or experience. They come without knowledge of the various characteristics and unique needs of children in the practical places and classroom contexts. Therefore, principals and management team members are responsible for ensuring that new teachers are orientated, guided, coached, and developed so they settle in and bear fruit in their profession (Ryan, 2006).

School managers are well positioned to positively influence CPTD in their schools. Bredeson, 2006) maintain that principals are supposed to use professional development activities to effect learner effectiveness. The researchers identify four areas where principals are responsible for teacher learning and development. Firstly, as instructional leaders, principals are simultaneously seen as leaders and continuous learners. Secondly, they are creators of conducive professional learning environments. Thirdly, they are designers and deliverers of the learning content (for teachers). Fourthly, they

must assess the development outcomes. Principals are vital in schools as all teachers depend on them for orientation in real teaching and learning situations (Bredeson, 2006).

According to Leithwood (2006), school principals have a direct influence on teachers, and can therefore influence teaching staff to operate in a manner that creates a good picture of the school or shows the dysfunctionality of the school. Bredeson (2006) postulates that school principals' leadership in CPTD is essential for the creation of functional learning communities in schools. They are important figures and essential role players in teacher development processes (Nias, Southworth & Yeomans, 1989; Mouton et al., 2013; Mashau et al., 2016; Maarman & Lamont-Mbawuli, 2017).

For this reason, principals should lead CPTD programmes. It is also affirmed that when schools are not performing well in terms of academic achievement, the principal is the first person to be blamed. This is because their leadership and managerial skills encourages teachers to use teacher development activities to raise teaching standards. As a parent and a teacher, the researcher often witnesses parents taking their children out of one school into another school in the same village, and when the parents are asked why, the parents blame the teachers and they blame the principals because they do not make their teachers work. The researcher interprets this as meaning that parents expect principals to make their teachers to work, which suggest the following: (1) A good school is one in which teachers 'work', and (2) a good school is one in which the principal make their teachers 'work'. Making a teacher work means that the principals must continuously evaluate their work to identify where challenges can be addressed, monitoring teachers' participation in CPTD is crucial to accomplish this.

Han and Yin (2016) propound that the function of principals in schools is to maintain the functionality of the school. According to these researchers, principals must (1) motivate the teachers to cope through the curriculum changes; (2) lead staff members to shape an organisational culture in which they are able to do their best work; (3) to identify teachers' professional development needs and support them by facilitating INSET activities and supply the necessary material; and (4) encourage creativity in teachers by facilitating suitable training activities that meet their needs. Therefore, principals are accountable for the functionality or dysfunctionality of schools. Furthermore, McKay (2018) holds that

principals are faced with challenging responsibilities such as increased workloads, accountability sessions, pressure to improve learners' academic performance, challenges in staffing decisions, and to convince teachers to develop themselves and improve learners' results. McKay emphasises that principals have the autonomy in staff recruitment and professional on-duty development. According to the guidelines in the Victorian Government Schools Agreement of 2017, a key role of school principals is to increase the knowledge base of serving teachers in their respective schools with regards to of student learning and issues of quality teacher practice (The Victorian Government, 2021).

The objective of CPTD is to develop teachers for schools' effectiveness and functionality. One of the significant features of a functional school is the effectiveness of the academic performance of the learners. Teachers are obviously to blame when learners do not achieve academically. Logically, the teachers are responsible for simplifying the abstract learning content for the learners because of their professionalism. To indicate understanding of the content, learners obtain high percentages during external or internal examinations.

3.4 THE KNOWLEDGE ECONOMY AND PROFESSIONAL TEACHER DEVELOPMENT

In this inquiry, CPTD and the leadership of principals were studied in the context of the knowledge economy. Early researchers maintain that teachers must be educated (Hord, 1988) and that teacher education should be done professionally by principals (Holland, 2009). Tomlinson (1997) argue that teachers need ongoing and constant development in new technology for pedagogic improvement. The aspect of the knowledge economy connects with the generation of new knowledge, skills, and attitude resulting from the exposure of individuals to new orientation courses. Mahlangu (2014) argues that teachers cannot be trained only once; in other words, teachers must receive continuous training to orient them to new global changes. This orientation, termed teacher development, should be done in line with the demands of the knowledge economy.

3.4.1 The concept of knowledge economy

It is important to first discuss in detail the background of the knowledge economy before discussing how it relates to education. The concept of 'knowledge economy' was coined by Peter Drucker in 1966. He designated the difference between manual and knowledgeable workers: Manual workers are rigid, traditional, and not innovative, while knowledgeable workers have several skills to produce valuable results. Knowledgeable workers do not always wait for their supervisor to come with new ideas to instruct them. Peter Drucker used the term knowledge economy to describe a promotion from common accustomed economies to economies in which the generation, sharing, and use of knowledge are indispensable (Tocan, 2012). This implies that manual workers are no longer valuable in growing economies. Manual workers not only lack proper knowledge and skills but also remain with their old knowledge without improvement. Knowledge workers, on the other hand, are those who seek to improve their knowledge about the operation of a company against the needs of dynamic global changes.

Sadiku et al. (2017) define knowledge economy as the provision of products using activities that are knowledge based, accord to an advanced production pace, and are technologically advanced. According to Sadiku et al., technical and scientific advances are the two concepts that underpin the knowledge economy. They maintain that global governments believe that to sustain a competitive status in the international economy, they must reinforce their knowledge bases. This suggests that the knowledge economy involves the use of knowledge to enhance the effectiveness of institutions. The effectiveness is accelerated by technical knowledge and scientific skills. The implication is that when workers are not knowledgeable, production is poor and the produced goods is not good quality. Institutions should therefore put strategies in place to uninterruptedly allow their employees to equip themselves with the necessary proficiency and expertise so their products are always globally substantial.

The knowledge economy is also explained as the manufacturing of goods and services using competences and proficiency that lead to advanced progress in technology and science as well as increased production. An essential factor of the knowledge economy is greatly relying on cognitive skills rather than physical efforts or traditional inputs. This

means that the knowledge economy is displayed by a paradigm shift from the level of low cognisance to a higher level of advanced knowledge, resulting in lifelong learning. The significance of knowledgeable competences is accelerated production, intensified activities, use of technology, creation of knowledge through use of human intelligence, problem-solving skills, and ability to use research and innovation to discover and use new knowledge.

Other researchers (Carter, 2008; Pettinger, 2017) define the knowledge economy as a process of relating new knowledge to technical change. This definition suggests that it is the fabrication of new understanding because of technology when combining common comprehension or cultural literacy and implicit knowledge based on the experiences of innovators. In an economically progressive society, the accumulation of new knowledge to compete in the technological world is important. These researchers hold that common knowledge and implicit collaboration, where technical knowledge, such as competent use of technology, leads to innovation. This innovation is referred to as tacit knowledge.

These definitions show that there is a need for a knowledge-based workforce that is driven by innovations based on new local and global technological changes. The knowledge economy thus forms an integral part of the success of institutions as it involves the endless acquiring of knowledge and technological skills.

3.4.2 Characteristics of the knowledge economy

Karisson, Borje and Stough (2009) argue that a detailed picture of the knowledge economy includes the creative production of knowledge (including researches and education), the use of knowledge and dissemination, and the economic importance of the development and sharing of knowledge in social contexts. In other words, the knowledge economy has three important elements. Information is understood as knowledge. There should be a place where knowledge is created and produced, where knowledge is used, and where the usage of that knowledge impacts economic growth and sharing of knowledge within the institution. The three legs of knowledge economy as depicted by Karisson et al. (2009) can be explained as follows:

- *Knowledge production* means that the institution should have a sector where research is conducted and new knowledge is continuously discovered and produced for the improvement of products.
- *Knowledge usage* refers to the interpretation of the produced knowledge against the vision and mission of the institution with the purpose of enhancing the practices and performance and to raise the current standards.
- *Economic growth* is the result of the two initial steps and covers the implementation of the suggestions on how the new knowledge can be used to improve the standards. At this step, the created knowledge is shared and used to improve the performance standards of an organisation.

Figure 3.2 illustrates knowledge economy according to Karisson et al. (2009). Significantly, the influence of knowledge economy should be evident in the improvement of the general economy.

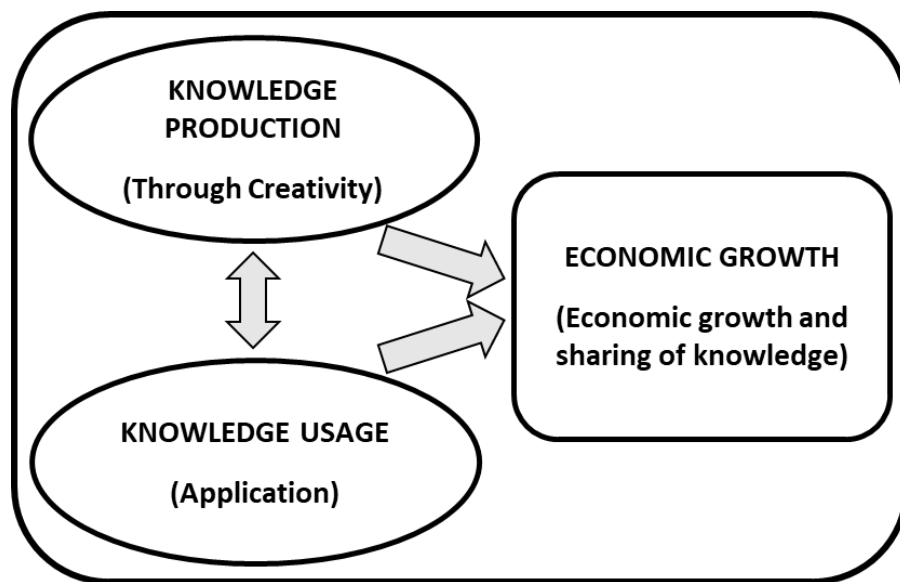


Figure 3.2 Important elements of the knowledge economy (adapted from Karisson et al., 2009)

The International Bank for Reconstruction and Development (IBRD, 2007) introduced four pillars of the knowledge economy. The foundational pillar is called economic and institutional regime, the second is education and skilled workers, the third is information

infrastructure, and the last pillar is innovation system. These pillars are shown in Figure 3.3.

The last three pillars rest on the basic pillar, which is economic and institutional regime. The activities of every institution offer opportunities for the successful usage of new perception together with the existing understanding in an institution. This pillar also determines the economic strength of institutions. The second pillar of education and skilled workers consists of workers who endlessly improve and benefit their knowledge and skills for the effective creation and use of knowledge. The third pillar involves information and communications technology (ICT) that is used by skilled workers to facilitate, disseminate, and effectively process information and knowledge. The fourth pillar of information infrastructure includes universities, research centres, and other organisations that sustain the knowledge revolution. This pillar obliges institutions to remain attached to institutions of higher learning so they get advanced support of recent information.

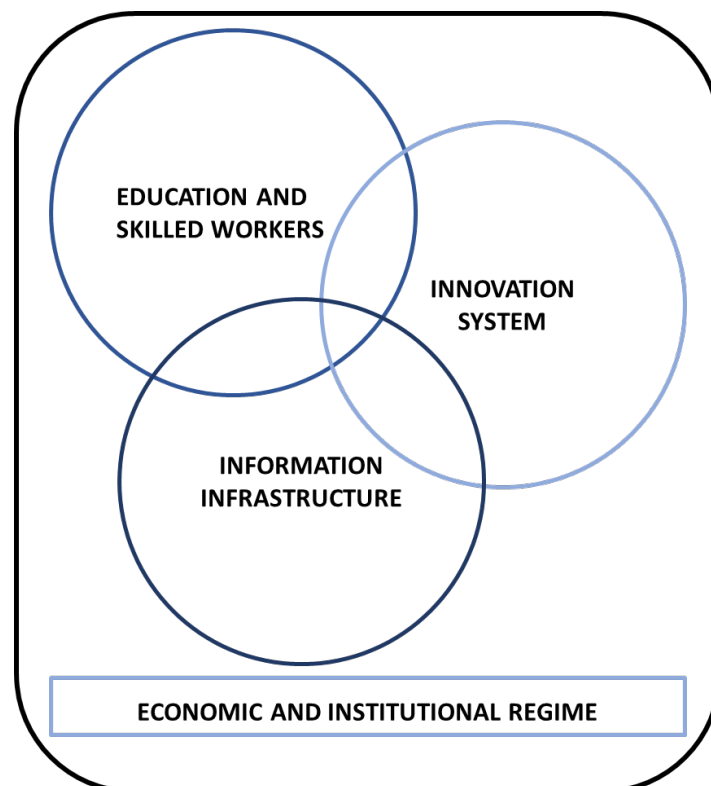


Figure 3.3 The four pillars of the knowledge economy (IBRD, 2007)

All the above characteristics of the knowledge economy have three common crucial elements, namely education, ICT, and innovation. These elements are fundamental to the implementation of the knowledge economy in both public and private sectors. The three elements are also applicable in the education sector. In education, the structure of the knowledge economy means that institutions must sustain their economic knowledge value, ensure they encourage their workers to use available universities and colleges to source information to equip themselves so they remain skilled workers, and become innovative in their practices. Innovation means they have opportunities to invent new ways of doing things for the institution. The next sections focus on the knowledge economy in the context of education and CPTD.

3.4.3 Knowledge economy in education

The knowledge economy is significant in education and teacher development. Education systems must have technically informed workers who can drive the system for global competition (Karisson et al., 2009). Teachers obtain their qualifications through teacher training, follow courses, and become professionals. Teacher training courses are designed to suit the needs a particular country, and contain the courses and modules necessary equip teaching staff with the necessary technical and scientific skills. They also equip them with content comprehension and pedagogic proficiency so they can drive education structured to the acceptable standards of the country. Qualified teachers need more knowledge that can help them continue to function well in the context of the knowledge economy, and therefore, they must constantly improve their skills to respond to the global changes that affect all the people, including learners. Learners in the 19th century are not the same as learners in the 21st century because of the economic and technological changes that global improvements enforce.

Literature (Powell & Snellman, 2004; Feng & Xiao, 2009) shows that the human brain should recurrently be fed with codified or book knowledge to remain functional and productive. The knowledge economy can also be explained as the ceaseless feeding of the human brain with codified knowledge to keep the mind alert. This is one of the reasons countries encourage their teaching staff to keep on reading and seeking new information.

Wallin and von Krogh (2010) discovered that in the education sector, open innovation is an important driver of the knowledge economy. They explain the knowledge economy process in terms of five phases or processes through which (1) innovation process steps are defined, (2) relevant innovation knowledge is identified, (3) appropriate integrations mechanisms are chosen, (4) effective governance mechanisms are created, and (5) incentives and controls are balanced. The researchers maintain that these steps are cyclical and have an element of knowledge in the centre. Figure 3.4 shows the five phases.

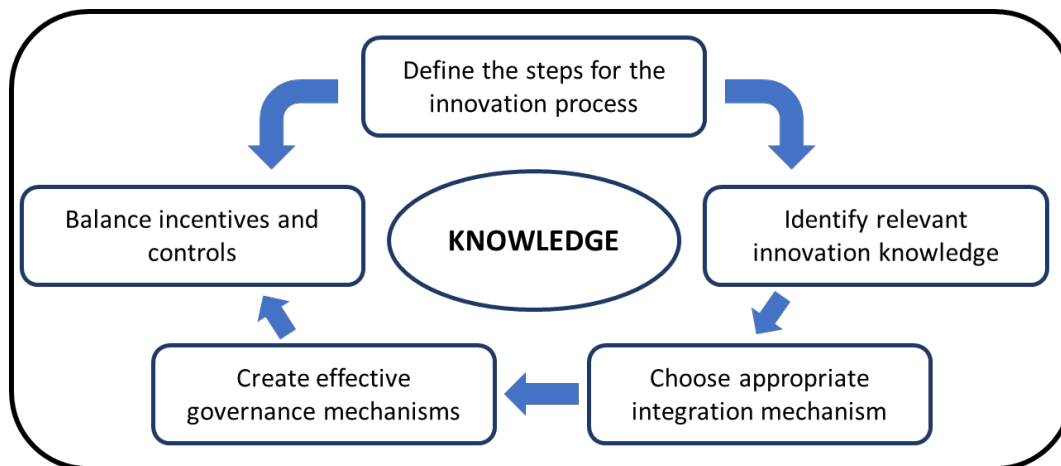


Figure 3.4 Innovation process steps (adapted from Wallin & von Krogh, 2010)

The structure illustrated in Figure 3.4 suggests that the knowledge economy in education can be driven successfully as follows:

- *Define the steps for the innovation process:* The organisation management should clarify the planned steps to be followed when designing new ways of doing things in the organisation. There should be preferable direction and not a random type of exercise. If there is no direction, workers might come with irrelevant inventions that might negatively impact the mission of the organisation.
- *Identify the relevant innovation knowledge:* Collaboratively, there should be a choice of relevant knowledge among the list of created options. Even if they are all relevant, some might be prioritised according to the knowledge of the institution.
- *Choose appropriate integration mechanism:* The chosen knowledge should be integrated with the existing one. The best mechanism should be chosen to

integrate them so the old methods are not totally thrown away while they are still relevant. There should be a mechanism to build on the existing knowledge.

- *Create effective governance and implementation mechanism:* The implementation process of the created knowledge should be managed effectively. All the management elements should be implemented during this phase. Implementation should be planned, organised, well guided, and controlled to ensure there is no fruitless expenditure.
- *Balance incentives and controls:* Workers should be rewarded for their participation in the exercise of implementing new knowledge. For new ideas to be beneficial to the institution, workers put their energy into the process and that should be recognised and incentivised. However, not every effort will be incentivised, and there should also be control mechanisms in place for any deviation that prevent the success of the institution. Such deviations should be speedily controlled, and individuals be coached and brought back on track (Wallin & von Krogh, 2010).

All the activities centre on *knowledge* because the fundamental purpose of the development processes is to generate knowledge and to implement it. New mechanisms (innovation) should be created, followed by the integration of created understanding into the system to establish government mechanisms that will be effective for the whole system.

The current researcher believes that an important element, which is also recommended by the SLT, is to give incentives to those who supported the system through their innovation. The state should create suitable conveniences for CPTD to ensure individuals can participate in the creation of knowledge. The constructed knowledge can be distributed to others in a social learning process to improve the system.

3.4.4 Continuing professional teacher development for knowledge economy

Powell and Snellman (2004) maintain that the global economic order is continuously developing. This change is characterised by improvement from total reliance on cultural materials for evolvment and maturation to more dependence on mental skills. This

evolvment represents what is known as the knowledge economy, or the knowledge-based economy or learning economy. According to these researchers, workers should continuously be empowered because the progress of organisations relies entirely on the percentage of skills they possess and how they apply their practical skills.

Marishane (2020) define the knowledge economy as an economic situation in which a variety of activities that are responsible for production, distribution, and use of expertise contribute as a collective to the economic status of an organisation. According to Marishane, the knowledge economy in education is supported by four pillars, namely innovation, human capital, technology, and organisational dynamics. Organisational learning connects the pillars to offer a concrete support to knowledge economy. This is an enduring learning process that takes place through the support of organisations' human resources management (Marishane, 2020). The four pillars suggested by Marishane (2020) are shown in Figure 3.5.

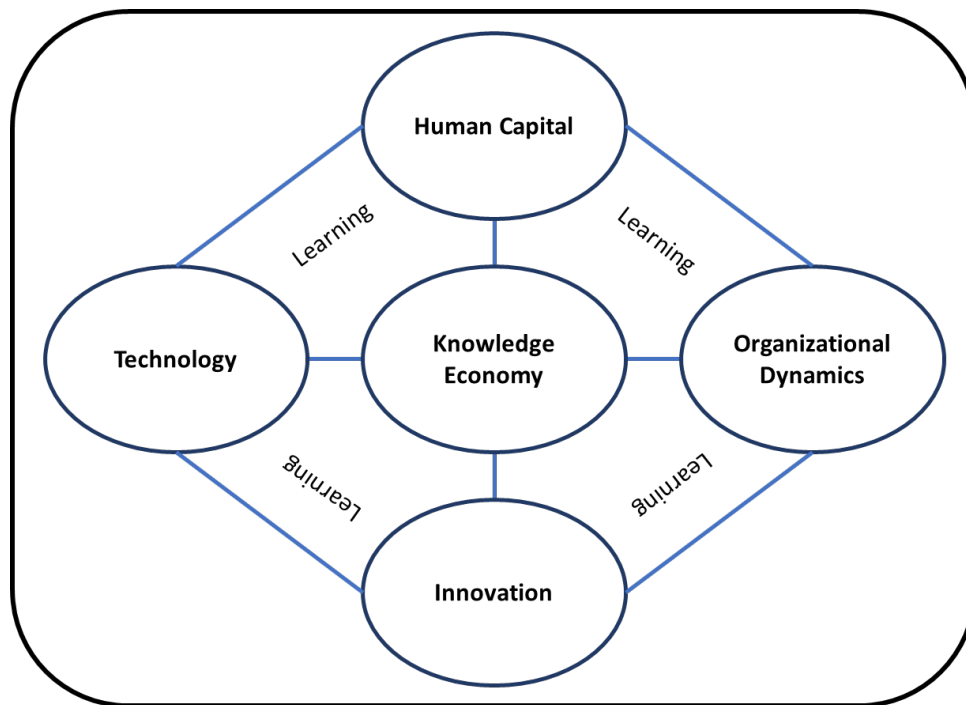


Figure 3.5 CPTD for the knowledge economy (adapted from Marishane, 2020)

The four pillars, as connected by the professional learning processes, are believed to sustain professional development in institutions and to establish a strong, capable knowledge economy. They allow new knowledge and skills to be created through

innovation that is acquired and circulated among the workers. An effective use of technology simplifies the establishment of an economically advanced human capital. The four pillars can be explained as follows:

- *Human capital*: Tabarrok (2012) and Kenton (2016) define human capital as the value that our skills, talent, and workforce contribute to the economy. They posit that for workers to have accelerated production, they must have human capital, which refers to the skills and attributes that enable them to perform their duties perfectly and as required. It depends on the organisation how to expose workers to knowledge, skills, and experience to enrich their human capital. The significance of human capital in any organisation is the possession of specific competencies for the effectiveness of that organisation.
- *Organisational dynamics*: This is defined as the explanation of how resources are successively used, distributed, and strengthened in organisations, impacting employees' work practices, human relationships, and learning processes (Burke, Lake & Paine, 2008; Burke, 2012). Similarly, Muhanna (2006) calls it organisational context, and cite examples such as organisational size, resources, and the competitive status of the organisation. Organisational dynamics refer to the inter connection of the various components in an organisation. Workers need to quickly adapt when the organisational context changes. These changes require school principals to use their knowledge of both the organisational culture and source of power to re-arrange human resources to address the existing challenges.
- *Innovation*: It is a different or new way of doing something (Redding, Twyman & Murphy, 2013). Redding et al. (2013) argue that innovation in education refers to solving problematic issues in new and simple ways. They distinguish between inventions and innovation by maintaining that technology devices are invented for a simple purposes, but when one takes the same technological device that was invented for something different and use it for a specific purpose or a specific context, it becomes innovation. Redding et al. hold that innovation can be either methodological or technological, but the two can be applied at the same time depending on what the innovator wants to solve. Innovation can be explained as

the production of new conceptions and propositions for doing normal activities and operations to enhance organisations' daily practices. Furthermore, innovation in education is defined as solutions that deviate from standard practice to achieve better learning outcomes using normal time and resources. This means innovation does not always involve the use of special technological devices (Redding et al., 2013).

- *Technology*: This includes newly invented tools and devices that enable organisations to easily obtain information from various sources and to manipulate it efficiently. The use of technology is often replaced by the use of ICT devices. According to the World Bank (2022), ICT usage in education crucially provides teachers, students, and the whole learning process with innovative support. In simple terms, technology use simplifies work and makes it possible to bring authentic things into the classroom for teachers.

3.4.5 Summary of views on the knowledge economy and education

It is important to summarise a few authors' views on the knowledge economy and education. Table 3.1 illustrates these views, how they interrelate, their importance and how they should work together for an effective education system and CPTD.

Table 3.1 Summary of views on importance of knowledge economy pillars

Definitions of the knowledge economy	Pillars of the knowledge economy
Shift from dependence on physical resources for economic growth to dependence on intellectual capabilities (Powell & Snellman, 2004).	Knowledge production + Knowledge usage = Economic knowledge growth (Karisson et al., 2009)
Continuous feeding of the human brain with codified knowledge to keep the mind alert (Feng & Xiao, 2009; Sadiku et al., 2017).	Education and skilled workers + Information infrastructure + Innovation system = Economic and institutional regime (IBRD, 2007)
Using organisational learning, such as innovation, human capital, technology, and organisational dynamics, to enhance economic and educational growth in organisations (Marishane, 2020).	Organisational dynamics + Innovation + Human capital + Technology = Knowledge economy (Marishane, 2020)
The process of creating effective governance mechanisms by defining innovation steps, identifying innovation knowledge, choosing	ICT + Open innovation + Education + Knowledge management + Creativity = Knowledge economy

Definitions of the knowledge economy	Pillars of the knowledge economy
appropriate integration mechanisms, and balancing incentives and controls (Wallin & von Krogh, 2010).	(White, Gunasekakaran & Ariguzo, 2012)

Information technology, often called infrastructure, and innovation, also referred to as creativity or knowledge production, form the crucial pillars in most of the definitions and understanding of knowledge economy. All these terms are applicable in education and CPTD and should be considered when designing strategies and practices for CPTD in countries around the world.

3.5 INTERNATIONAL PRACTICES OF PROFESSIONAL TEACHER DEVELOPMENT

The Teaching and Learning International Survey (OECD, 2009) defines CPTD as various undertakings aimed at developing the teaching strategies of individual teachers and improving their teaching standards. The crucial word in the definition is ‘expertise’, which refers to the level of mastery of the job as a teacher. Teachers are obliged to perform to required standards in their daily duties (Browell, 2000). It is generally believed that a critical step to improve learner achievement is to improve teacher competence and dispositions (King & Newman, 2001). This understanding makes it important for all education systems to create measures to involve teachers in activities of professional development. Effective teacher development processes are often seen in the academic performance of learners as the end products of teaching.

According to Sayed and Bulgrin (2020), many countries’ education systems share common challenges with quality CPTD. Global education systems have a common interest in developing their teachers so they can produce profitable learners who can compete with their peers around the world. As already indicated, the OECD (2009) defines CPD as a group of programmes that improve the competence and other characteristics of teachers. It means that it is vital that teachers repeatedly improve their proficiency and adapt their pedagogic methods and expertise so they can cope with global changes.

Singh et al. (2019) maintain that education is a precondition to the upliftment of any country, and that the competence of teachers always portray their education system as an attractive picture when compared with others globally. They argue that all education systems rely wholly on the proficiency of teachers, but also that quality teacher education produces competent teachers. Kumar and Azad (2016) hold that CPTD is the foundation for the empowerment of teachers and is an endless project that starts with the initial teacher training curriculum and remains valid for the entire teaching career. This implies that there is a worldwide awareness that teachers must engage in the improvement of their capabilities.

Conforming to the current researcher's understanding, there are several global changes and challenges that require education systems to strive to equip their teaching staff to enable them to adapt to the global dynamics. These adaptations should help them (1) understand the changes and not resist them, (2) have a positive attitude towards the changes, and (3) have an acceptable level of self-efficacy to grow with the changes.

The following sections focus on few countries to establish this interest in staff appraisal and development processes. In other words, the phenomenon of CPTD affects every section of the world. Teacher development programmes are fundamental tools to reinforce the teaching community, not only for the teachers themselves but also for the knowledge economy of the country. Precisely for this reason, this research inquiry explored the teacher development practices of developed and developing countries. The developed countries looked at in the following section are Belgium, Canada, and Hong Kong, and the developing countries looked at in Section 3.7 are India, Tanzania, and South Africa. The discussion in both groups of countries cover (1) how they conduct teacher development practices, (2) the responsibilities of principals in those practices, and (3) the contribution of teacher development practices to the knowledge economy.

3.6 PROFESSIONAL TEACHER DEVELOPMENT IN DEVELOPED COUNTRIES

The world is becoming a global society where education is taken seriously. In each country, education and development are crucial factors of economic development. According to Cobb (1999), the training of new teachers, including the continuous skills

development of working teachers, remains fundamental for the improvement of the education projects. Cobb (1999) indicates that several countries prioritise the quality of the teaching staff as prerequisite and crucial for their teacher curricula because proficient teachers possess not only pedagogical strategies but also subject content comprehension and positive attitudes required for efficiency in teaching.

It was cited earlier that the social mission of teacher training education and on-duty professional development is understood broadly by developed countries, such as Hong Kong, Australia, Canada, Belgium, France, Germany, and New Zealand. In those developed countries, the significance of well-trained teachers is understood as indispensable for the preparation of learners to be competent in technology and the knowledge economy (National Commission on Teaching and America's Future, 1996). In other words, developed nations regard teacher development as a significant tool in their education systems to retain knowledgeable teachers. They believe and trust that when teachers are well trained and skilled, they positively impact students' learning. This discussion focused on professional development practices in Belgium, Canada, Hong Kong, and Australia.

3.6.1 Professional teacher development practices in Belgium

There was a period of stagnation in Belgium between 1890 and 1958, and the First World War led to economic decline that which made Belgium suffer. Schools were previously controlled by the churches, and teachers could only teach in schools with state diplomas before 1990. However, the government issued a law that provided for the separation of schools from churches from 1990 onwards (Mutlu, 2016; Yatsenko, 2020). The Belgium education department retook the control of all schools, including teacher training and CTPD.

3.6.1.1 Professional training and development practices

In 1914, the Belgium Government adopted a law on compulsory primary and secondary education. There was a struggle between the government and the church about the church's influence on education issues until 1960. During that time, only teachers at the

upper secondary level were respected, had elite social status, and were earning high wages (OECD, 2002).

According to Eurydice (2011), there are several options for CPTD. Firstly, individual teachers can submit their development needs to their schools, and the school, under the management of the principal, then have to write an INSET training plan and submit it to the government for approval. Once the plan is approved, the school can use their budget to get a training agency of their choice for on-duty development practices. Secondly, free training opportunities are offered by the government, including pedagogical counselling services. Thirdly, secondary school teachers have options for experience placement for a period of at least five working days offered in a relevant institution, day care centre, or any social institution. However, this option must strictly follow the framework of the approved training plan. Fourthly, there is an opportunity for teachers and lecturers to follow an entrepreneurship education development programme. Finally, there is an online development programme that schools can use for a variety of advertised in-service training projects (Eurydice, 2011).

3.6.1.2 The role of principals in professional training and development

In Belgium, teachers must pass the Civil Servant Selection Exam, called the Kamu Personeli SecmeStnavi, to be appointed (Eurypedia, 2011). Mutlu (2016) reveals that all permanent and temporary teachers undergo professional development as an obligation, and the responsibility to oblige these teachers lies with the principals (Eurypedia, 2011; Mutlu, 2016). This implies that principals should ensure all employed teachers pass the Kamu Personeli SecmeStnavi test because it is an indication of the individual teacher's professionalism. Principals should also ensure that after being appointed, teachers are subjected to CPTD. Teachers should submit their training needs, as point of departure, and principals should use these needs to develop an INSET plan that is submitted to the government for approval. Principals are not supposed to implement any development activity before obtaining approval from the government.

3.6.1.3 Contribution of professional training and development practices to the knowledge economy

It is fascinating to note that for every training activity that management and teaching staff do for professional development, they get incentives for participation. Incentives are given if there is proof that an activity is useful for professional development. The monetary incentives cover the registration fees for courses and transportation for attendance (Eurypedia, 2011). A significant element of the incentives is that the activities teachers engage in for teacher development must be relevant and beneficial for teacher development. Teachers are also exempted from their teaching duties for the days they attend the INSET (Mutlu, 2016). Therefore, there are two things that serve as motivation: The first is leave of absence with full pay, and the second is money for tuition and transport expenses.

Furthermore, according to the Belgium evaluation framework, to indicate the seriousness of development practices, permanent or temporary teachers can be dismissed from work if they receive low final marks in two consecutive evaluations or three low final marks during their teaching career (Eurypedia, 2011; Mutlu, 2016). The country uses these standards to control and avoid fruitless expenditure or the misuse of the development opportunities and resources.

3.6.2 Professional teacher development practices in Canada

CPTD takes place in almost all Canadian provinces, although the practices differ. The general interpretation is that CPTD received attention immediately after the government of Canada took over the control of education from the Catholic church (Morgan, 2016).

3.6.2.1 Professional training and development practices

In Canada, teachers are appointed to teach in schools after they obtained teaching qualification certified by the Minister of Education. Only the Minister of Education can give permission to teachers to teach based on a Certificate of Qualification. The Certificate of Qualification is obtained after completing a teaching qualification with any tertiary

institution in the country. After they are appointed, teachers must attend teacher development activities planned by the ministry.

CPTD practices in Canada focus on three critical elements, namely improvement of content knowledge for the job, which encourages teachers to acquire and improve their subject content knowledge; activities for staff development, which emanate from staff appraisal processes; and opportunities for professional development, which encourages teachers to willingly improve their professional qualifications using their own monies (Morgan, 2016).

Although there are no national frameworks on professional standards for teacher professionalism, the country takes teacher professionalism seriously. They believe that quality in teaching and learner achievement depends entirely on CPTD. The appraisal process has two aims: Firstly, to identify and address performance concerns, and secondly, to support professional development processes (Morgan, 2016; Shaker, 2014).

3.6.2.2 The role of principals in professional training and development

In August 2004, the Canadian government released a paper for public discussion titled “Teacher Excellence—Unlocking Student Potential Through Continuing Professional Development” (RPTTPD, 2007).

The paper showed the government’s desire to review the broad topic of teacher professionalism. The government’s wanted to develop a positive relationship with teachers, who are respected and called professionals. The aim was also to make teachers focus on student achievement. The fundamental focus of the paper was (1) pre-service education for teachers, (2) appraisal of teachers, and (3) CPTD for working teachers. Principals were given responsibility to lead and control the implementation of the three aims (Report to the Partnership Table on Teacher Professional Development [RPTTPD], 2007).

The state established the Working Table on Teacher Development. Its responsibility was to conduct a study on how the professionalism of teachers can be established and reinforced. The Working Table divided their work into two phases: The first phase received

deliberations to the partnership table for recommendations, and the second phase implemented the recommendations. The overseeing responsibility was also given to principals to supervise whether professionalism is established and strengthened according to the recommendations of the Working Table (RPTTPD, 2007).

In 2006, the Working Table concluded their recommendations. The deliberations indicated that, firstly, the largest variable impacting student learning is the quality of the working teachers; secondly, that the government allocates enough funds for the development and delivery of professional learning activities to Canadian schools; and thirdly, that teacher federations and teachers also make investments using their monies to get additional qualification courses. In all these instances, principals were responsible for the receiving and distribution of reports to the relevant places for processing (RPTTPD, 2007).

3.6.2.3 Contribution of professional training and development practices to the knowledge economy

The topic of effective CPTD programmes for knowledgeable teachers and endless learning was of great interest to the Working Table. The group also received a presentation from the Ontario College for Teachers on the Professional Learning Framework, which helped the group understand the relationship of professional development to the ethics of teaching and the standards of teaching in the profession (RPTTPD, 2007). The Working Table then made the following recommendations (RPTTPD, 2007):

- Training on content knowledge for the job is necessary and should be done by the employer or another agency appointed by the employer;
- CPTD activities should not necessarily be chosen by the teacher, and instead, they should be regulated by job requirements, community priorities, and systemic needs; and
- There must be opportunities for learning activities chosen by teachers for individual development investigation.

The Working Table added critical elements that must shape the development processes. The group suggested that CPTD must be (1) logical, (2) relevant for adult learning, (3) career-minded, (4) feasible, and (5) have a track record (RPTTPD, 2007).

3.6.3 Professional teacher development practices in Hong Kong

Participation in teacher professional activities in Hong Kong was voluntary before 2015, and teachers could choose to attend development activities that relate directly to their job interests. There was no official requirement for teachers to participate in CPTD. In 2009, the only recommendation by the Committee on Professional Development of Teachers and Principals was that teachers should undertake 150 CPD hours over three years. They also recommended that schools should advise their teachers to indicate several CPTD courses they wish to attend per academic year (Education Bureau [EDB], 2020). An advisory committee called the Committee on Professional Development of Teachers and Principals was established for sustaining the professionalism of teachers and principals in Hong Kong. The committee was responsible for advising the education sector on policies and all matters connected to CPTD at different operational stages of teachers and principals (EDB, 2020).

3.6.3.1 Professional training and development practices

In 2017, a task force on CPTD was appointed by the EDB. It is mandated, among other mandates, to study the establishment of a professional ladder for teachers. After extensive consultation with stakeholders and research, the task force finished and submitted their report in 2019. The report made 18 recommendations that were all accepted by the government for implementation (EDB, 2020). The first recommendation was that a professional ladder must be created for teachers to enhance their professional growth and raise their professional status. Secondly, the Committee on Professional Development of Teachers and Principals, EDB, and school principals should lead its implementation on multiple levels. Thirdly, the arrangements of training for promotion should be enhanced. Fourthly, an all-graduate teaching force policy should be fully implemented in schools. The policy stated that only graduates or people with bachelor's

degrees should be appointed in schools to foster a culture of professional development and enhance teachers' professional roles and duties (EDB, 2020).

The professional ladder for teachers was established to promote the professional growth and status of teacher. It uses what is called the T-Standards to portray how teachers and principals should pursue their goals. Teachers follow the Professional Standards for Teachers and principals the Professional Standards for Principals. Teachers and principals are required to perform according to the stated performance standards portrayed by the T-Standards (EDB, 2020).

3.6.3.1.1 The professional ladder for teachers

There are three categories of training for teachers to raise their standards, and the status of the teacher dictates which category should be chosen. The first category is meant for newly appointed teachers and is called the Training Programme for Newly joined Teachers. This category assists new appointees to comprehend their teaching responsibilities, show them professional ethics and comporment, and continue to inform them about the dynamics in education legislation and regulations that apply to the profession. The second category is for teachers already in the system, called Enhanced Training for In-service Teachers, and exposes serving teachers to the CPTD policy. The policy encourages teachers to complete 150 hours in training within a three-year cycle, with at least 30 hours being devoted to training in the two categories of professional training. One of the categories is called 'teachers' professional roles, values and conduct' and the other is 'local, national, and international education issues'. The third category is called 'enhanced arrangements of training for promotion'. In Hong Kong, not everybody can be appointed in a promotional post. Teachers who wish to be promoted should take 90 hours of training to be promoted to a higher rank of either a graduate master, called Senior Graduate Master/Mistress, or school master/mistress, called a Primary School Master/Mistress. In order to be eligible for these promotions, teachers have to add with 40 hours of management training on top of the 90 hours (EDB, 2020).

The eighteenth recommendation deals with teacher professional development as it states that recommendation schemes should be established at a several levels for the

recognition of teachers who performed at excellent levels. This recommendation encouraged that at school level there should be the title 'expert teacher' to recognise well performing teachers' contributions to learning effectiveness. According to the task force, this will develop PLCs (EDB, 2019).

3.6.3.1.2 School-based continuing professional teacher development plan

Hong Kong advises schools and other educational institutions that when they plan for local CPD programmes, they should consider the requirements of the professional ladder for teachers and refer to the T-Standards as stipulated. Schools should set workable development plans that cater for the needs of teachers at various stages of their professional growth. Teachers should be guided to meet the respective CPD requirements and schools must recurrently review the participation of teachers and report their progress to the school management committee or incorporated management committee. One of these committees is responsible for reporting to the EDB (EDB, 2020).

Special attention should be given to the new appointees. Schools should ensure that they understand their training requirements and not taken by surprise, they must provide them with space to attend those training requirements and assist them to endlessly reflect on what they have learned. Training arrangements for promotion should also be brought to their attention in that early stage of their appointment (EDB, 2020).

3.6.3.2 The role of principals in professional training and development

The responsibility of principals starts during the recruitment of teaching staff according to Circular 6 of 2020 from the EDB. The 'All-graduate Teaching Force' policy should be implemented. The principal should appoint only teachers with bachelor's degrees to enhance professional roles and functions of teachers (EDB, 2020). The task force recommended that principals should devise school-based teacher CPD plans. All the plans should refer to the professional ladder for teachers. Principals should establish a school management committee or incorporated management committee to fulfil the training requirements of teachers (EDB, 2020). Principals should organise tangible CPD plans with their teachers to consider their different training needs during various stages

of their career, and they should regularly guide teachers to achieve their unique CPTD requirements. Teachers' progress in CPTD programmes should also be regularly reviewed and the activities and progress be reported to the school management committee or incorporated management committee (EDB, 2020). It is clear that principals have an important responsibility in CPTD in Hong Kong because they have the task of leading the process and are accountable to report to the EDB about the progress of development plans.

3.6.3.3 Contribution of professional training and development practices to the knowledge economy

Lam (2015) holds that the latest trend in CPTD in Hong Kong encourages teachers to design their own CPTD training plans. Designing individual plans means that individual teachers can pinpoint their training priorities and design plans to address those needs. The vision of the EDB is concerned with raising the standards of teaching, which will positively impact student achievement (Lam, 2015; EDB, 2020). Raising the standards indicate that teachers should equip themselves with understanding and the proficiency to perform at advanced professional teaching standards. Improved performance standards are characterised by quality teaching performance, improved content knowledge, and variable skills of classroom practice. Teachers are measured not only through their evaluation scores but also through the academic achievement of their learners.

3.6.4 Professional teacher development practices in Australia

Australia, as a developed country, has an international educational environment. Australian universities provide transnational students that rank high with educational achievements as the country is among the top five OECD countries (Mukan, Yaremko, Kozlovskiy, Ortyнкиy & Isayeva, 2019).

The Australian Education Directorate defines CPTD as a programme comprising various dedicated training activities, structured education, and distinctive learning aimed at helping teachers and administration staff improve their competence, expertise, perception, and command of their profession. The Education Directorate attests that

professional development is a component of teacher development and the process works according to the strengths and identified needs of individual teachers. The purpose is to create higher capabilities and enhanced understanding in the profession (Mukan et al., 2019; Teacher Quality Institute, 2022).

3.6.4.1 Professional training and development practices

Teachers follow various categories of professional training based on their teaching specialty. Appointed and serving teachers are exposed to the Professional Learning Framework that comprise professional learning. Previously, professional development was done through face-to-face meetings with individual teachers in their workplaces. The trainers used activities chosen and required by employers or associations of professional bodies or as assistance to an individual who wants to obtain a further degree. Previously, development activities offered by other countries were discouraged (Teacher Quality Institute, 2022).

The Directorate of Education in the Australian DoE issued the Continuing Professional Learning and Program Accreditation Policy [CPLPAP] with the objectives to establish a baseline for CPTD for Australian teachers, and regulate the registration of CPTD activities, including the recognition of accredited professional development providers and to check whether their plans are creditable for teachers' development (Australian Institute for Teaching and School Leadership [AITSL], 2019).

The directorate also introduced seven performance standards for teachers, which are grouped into three domains. The first domain, called professional knowledge, comprise two performance standards that require teachers to (1) know their learners and how they learn, and (2) know the allocated subject and its attributes. The second domain comprise three performance standards that require teachers to (3) perform lesson planning and present it effectively, (4) create conducive and favourable teaching environments, and (5) assess classroom learning and report about progress. The third domain three has two standards that require (6) proper engagement in CPTD and (7) professional collaboration with colleagues and other stakeholders. The descriptor of performance levels ranges from the lower one, called graduate, to proficient as the second level or the third, called highly

accomplished, and the fourth level, known as the lead level. The fourth level means that the teacher is a leader in that aspect and can lead and teach others. The DoE works in conjunction with the AITSL, which directly deals with teachers and their school leaders on matters of support (AITSL, 2011; Teacher Quality Institute, 2022).

Australian teachers are supposed to perform their teaching duties according to the existing performance standards. Each performance standard is explained in finer detail by focus areas that guide teachers on what to do to do well in the performance standard. When teachers experience challenges in their performance, the identified issues are prioritised for continuing development. The following is a list of professional development topics teachers can choose for development activities:

- *Furthering education and knowledge in teacher's subject area.* This means learning new scientific theories or learning how to teach subject-area content and concepts more effectively.
- *Training or mentoring in specialised teaching techniques that can be used in various subjects or learning areas.* This is learning how to use various teaching techniques based on student learning needs, interests, or learning abilities.
- *Earning certification in a chosen educational approach or field of study.* Certificates can be obtained from universities or other accredited institutions.
- *Developing technical, quantitative, and analytical skills that can be used to analyse student-performance data.* The skills can be used to interpret the performance of learners and to design activities that can be used as intervention.
- *Learning new technological skills, such as how to use interactive whiteboards.* These are various technological ways that can improve teaching effectiveness and improve academic performance.
- *Improving fundamental teaching techniques.* These skills refer to basic classroom management to involve learners during classroom activities, so the teacher does not remain the centre of attention.
- *Working with colleagues,* which is professional learning like participating in PLCs to develop teaching skills together.

- *Developing specialised skills to better teach students with learning disabilities or students learning foreign languages.*
- *Acquiring leadership skills.* This is for teachers who want to become leaders in various fields in the education arena or in fields where they think they are proficient.
- *Pairing new and beginning teachers with more experienced mentor teachers.* The mentor teachers are responsible for modelling effective teaching strategies to expose less experienced teachers to new ideas and skills and provide constructive feedback and professional guidance.
- *Learning how to conduct action research in school academic activities to gain a better understanding of what is working or not working.* Action researcher investigates learning and teaching challenges in schools and then use the findings to develop strategies to improve the situation for effectiveness.
- *Earning additional formal certifications, such as the National Board for Professional Teaching Standards certification.* Teachers who perform better through the performance standards might opt to work to get further certificates that are awarded together with incentives for good performance.
- *Attending graduate school to earn an advanced degree, such as a master's degree or doctorate in education, educational leadership, or a specialised field of education.* The teacher can opt to be given opportunity to learn for an advanced degree from a chosen institution of higher learner accredited by the education directorate (AITSL, 2011, 2019; Teacher Quality Institute, 2022).

Besides the identified challenges in the performance standards, the above-mentioned fields are used as optional choices when teachers want to add more items to the development list.

3.6.4.2 The role of principals in professional training and development

According to the AITSL (2011), principals' role is to incorporate and recognise the capacity of education to enhance the lives of learners and other members of society in the present and future. The AITSL calls principals leading educational professionals whose responsibility is to inspire learners and the rest of the teaching personnel to

interminably strive to augment their impact on others. They should network with a variety of people to produce the best possible outcomes in school environments. School managers must use their skills to establish and maintain sound interpersonal relationships in their institutions and the surrounding community. The institute further encourages them to use uncertain and complex contexts at work to create innovative solutions that support quality outcomes for all in their institution (AITSL, 2011, 2019; Mukan et al., 2019). In other words, the Australian DoE encourages principals or school leadership to lead their institutions to achieve their educational objectives. One of the objectives is to lead and facilitate CPTD activities so that through their leadership skills, the necessary activities are effectively and efficiently carried out. The seven performance standards for teachers contained in the Professional Learning Framework are implemented by the teachers with principals as supervisors. It is the principals who must facilitate appraisal programmes and help individual teachers pinpoint, prioritise, and record their CPTD needs after assessing their performance. According to the APSPLP [Australian Professional Standard for Principals and the Leadership Profiles], principals are called the leading educational professionals in their institutions. Their responsibility is to inspire learners, teachers, and the community to enhance learning so that children can become successful learners and creative individuals. Successful learners are created only when the school leadership fosters successful teaching and teacher development (Australian Government, 2019).

3.6.4.3 Contribution of professional training and development practices to the knowledge economy

The Continuing Professional Learning and Program Accreditation Policy aims to boost teaching and other administration staff to improve proficiency, competence, knowledge, and apprehension. The Professional Learning Framework and professional learning in Australia use the domain of professional knowledge to increase content knowledge in teachers and increase their pedagogical skills to teach. The professional practice domain leads to the planning and implementation of daily educational contact sessions. Furthermore, Professional Engagement encourages serving teachers to engage with other professionals to continue professional learning (AITSL, 2011; Mukan et al., 2019).

Certain focus areas require teachers to be able to integrate ICT into learning and teaching sessions with effective teaching strategies to bring relevancy and authenticity to the content and to make it meaningful. Teachers must also be able to use ICT safely, responsibly, and ethically. Teachers who perform up to the lead level, which is the highest descriptor level of the performance standards, demonstrate high expertise in the domain or the focus area, and therefore, they can collaborate with others to share their strategies and expertise within PLCs. To elevate the teaching profession, the Australian government decided to demonstrate recognition of the value of the teaching profession by awarding them MOA [Medals of the Order of Australia]. Members of the public are encouraged to play an active role in nominating teachers for the awards. The decision motivated teachers to work hard and to participate in professional development so their effectiveness and efficiency in classrooms is recognised even by the public.

3.7 PROFESSIONAL TEACHER DEVELOPMENT PRACTICES IN DEVELOPING COUNTRIES

It is propounded in literature that a lot of teachers do not have the required proficiency to teach confidently and effectively, and therefore, CPTD programs are important tools used by governments to raise standards. Similarly, the evaluation of CPTD programmes indicates that they yield varying results (Popova, Evans, Breeding & Arancibia, 2022). This implies that CPTD is a fundamental tool used internationally to enhance the skills of the teaching community. Many countries strive to develop their teaching force, but it is important to look at whether CPTD focus on the knowledge economy as a vital contribution to countries' development and global skills competitiveness.

The following sections look at a few developing countries (India, Tanzania, Zimbabwe, and South Africa) to review how PTD is conducted, how school leadership is involved in the process, and how these practices contribute to knowledge economy.

3.7.1 Professional teacher development practices in India

In 1961, the National Council of Educational Research and Training [NCERT] was established in India. This Council was responsible for conducting research on how

training and the improvement of school education can be implemented. In addition, the State Institute of Education was also established in 1964 to specify how CPTD programmes can be implemented in the best possible way. In July 2011, The NCERT published some norms and standards for the employment of teachers. The document emphasised that the minimum requirement for teacher appointment in primary schools should be 'at least a teachers' Diploma', while 'at least a Bachelor degree in Education is required for appointment in upper primary and all elementary schools (Government of India, 1986; Government of India, 2005).

3.7.1.1 Professional training and development practices

In 1975, the National Council of Teachers of English recommended the Curriculum for the Ten-Year School Framework [CTSFF] that comprised continuous training courses that were classified into short- and long-term orientation courses for teachers to associate themselves with changes in various subject areas, including other school-based training activities (Government of India, 1986). According to the NCERT, teacher training programmes were expected to cover several aspects of teacher professional development, including (1) attitude change, (2) changing focus from teaching to learning, (3) using materials available locally to create teaching and learning materials and using them effectively, (4) teaching necessities, and (5) other available strategies for classroom management. These aspects establish the significance of quality contributions for teaching staff and not just a mere teacher development strategy. To facilitate achievement of the above aspects, the teacher training curriculum was designed to provide trainee teachers with possibilities to engage in self-study, self-reflection, and interactions with colleagues on classroom issues, on one hand. On the other hand, to establish a course curriculum that can support pre-service and in-service teachers to enable them to acquire the required competence related to pedagogical content knowledge. The knowledge was to be acquired through practical hand-on learning and collaborating with colleagues. The fundamental aim was to encourage lifelong learning in professional development programmes (Government of India, 2012).

In the 1990s, the in-service training [INSET] shifted to introduce the SarvShiksha Abhiyan programmes, which emerged from a few experimentations in the implementation of CPTD

strategies. Yadav (2012) found that the recommendations of SarvShiksha Abhiyan were not fully implemented in some states, which was a challenge. Therefore, the SarvShiksha Abhiyan programme adopted a new approach for CPTD by introducing several interventions to strengthen the capacity and competence of teachers in pedagogics and content knowledge (Singh et al., 2019). During the professional teacher development processes, three outcomes were to be achieved. Firstly, teachers were supposed to acquire deep subject knowledge. Secondly, teachers should develop skills to use the acquired knowledge in the classroom to generate effectiveness. The third outcome was to develop skills to engage learners, understand their ways of learning and inspire them to be actively involved in learning.

3.7.1.2 The role of principals in professional training and development

Since 1990, India has engaged teachers in several policies for CPTD. Recent research by Sing et al. (2019) reveal that the government of India had to set up committees to establish control measures and uniformity of standards of course content, presentation methods, and assessment in INSET activities for teachers. They recommend that the government should use the leadership of principals to encourage participation through adequate funding to cover tuition for training and materials (Government of India, 2012). Singh et al. (2019) further recommend that CPTD can be harnessed through the successful monitoring and the development of training materials, comprehensive training of teachers, assessment services, staff appraisal, and psychologically boosting teachers' behaviour for better teaching-learning processes. Principals are the central figures to ensure all the professional development activities are administered without fail. Principals were also instructed that, in addition to the professional credentials and the Teacher Eligibility Test used for the recruitment of teachers, they should also assess the teachers' attributes and competencies in effective pedagogical skills in the subjects they are supposed to teach (Singh et al. (2019).

3.7.1.3 Contribution of professional training and development practices to the knowledge economy

The fundamental purpose of CPTD programmes in India is to increase the in-service knowledge of the teaching staff. India introduced CPTD with the two crucial objectives of strengthening teachers' capacity and competence in (1) pedagogical skills and (2) content subject matter. These two elements are indispensable for effectiveness and efficiency in teaching. The country also put in place committees to regulate INSET to ensure required standards, relevant training material, funding, and monitoring, and psychologically support for the teachers are used. According to Hore (2022), teacher development activities should result in the best-in-class pedagogical practices from which learners should benefit to help them cope in the everchanging complex world. It is the responsibility of all educational institutions to implement existing policies on teacher development so teachers can be supported to reach their full professional potential. The Indian government emphasised that teachers should be able to use every knowledge they acquire through professional development programmes effectively in classrooms. The government wanted to aspire to instil their teachers to achieve that outcome (Government of India, 2012).

3.7.2 Professional teacher development practices in Tanzania

Previously there was no standalone national policy for CPTD in Tanzania as there is in other countries. There were CPTD policy statements that were incorporated into the national policy for education, known as the Tanzania Education and Training Policy. The policy did not have explanations for the implementation of successful teacher CPTD programmes, and only stipulated that the professional development of teachers is compulsory for all teachers (Komba & Nkumbi, 2008).

Mgaiwa (2018), a researcher from Tanzania, defines CPD as a process in which teaching professionals reflect on their job competences with the purpose of maintaining and keeping the competences up to date and to further develop their competencies. He further contends that the purpose of CPTD is to allow practising teachers to compare other

teaching methods with their own, and to adapt their practices to enhance their teaching skills.

In Tanzania, there are several sectors that are responsible for education issues. These sectors collaborate to maintain stability in the education department because all education sections work together. These sectors are the Education Sector Development Programme, the Tanzania Institute of Education [TIE], the National Examination Council of Tanzania [NECT], the library services [TLS], the Institute of Adult Education [IAE], and the Management Administration Training Education Personnel Institute [MATEPI] (Ministry of Education and Culture, 1995; Mgaiwa, 2018).

3.7.2.1 Professional training and development practices

The Education and Training Policy of Tanzania (Ministry of Education and Culture, 1995) predicate that CPTD contributes greatly to quality and efficiency in education. The policy proposes that teachers should be allowed to regularly access new teaching methods and didactical strategies for teaching and to adapt to the context. The policy maintains that the common plans of training personnel for teaching effectiveness must be developed and implemented as soon as practicable. Section 5 in the training policy stipulates that “in-service training and retraining shall be compulsory in order to ensure teacher quality and professionalism” (Ministry of Education and Vocational Training, 2008).

In 1997, the Education Sector Development Programme was introduced that facilitated episodic CPTD across Tanzania. The episodic development left teachers without proper training and development for 10 years (Komba & Mwakabenga, 2019). Between 2007 and 2013, the Teacher Education Development and Management Strategies were established to facilitate CPTD (Ministry of Education Science and Technology, 2017).

The Tanzanian framework for teacher professional development is underpinned by six principles that are crucial for teacher development programmes, and for this study. The principles are that (1) teachers must have equal access to appropriate CPD; (2) teachers must get clear career pathways and only support in CPD activities that contribute to their teaching growth; (3) CPD for teachers must contribute directly to improved and enhanced teacher quality; (4) teacher quality and professional development must be aligned to

student achievement; (5) new teachers must be orientated into the teaching profession and CPD through induction programmes; and (6) all professional development programmes offered by educational providers must be assessed for quality. It was planned that CPD programmes for teachers be implemented in clusters and district levels, that CPD be categorised, and that the roles of stakeholders be allocated for accountability (Ministry of Education Science and Technology, 2017).

3.7.2.2 The role of principals in professional training and development

To guide stakeholders to establish and meaningfully implement CPTD activities, the Teacher Education Development and Management Strategies contains strategic plans (Ministry of Education and Vocational Training, 2007). The Teacher Education Development and Management Strategies were created because (1) the former policy documents were silent on how CPTD can be conducted; (2) the documents were ambiguous about who should lead the CPTD implementations (teachers, principals, or external companies); (3) CPTD programmes were characterised by lack of accountability for poor performance; and (4) schools failed to manipulate CPTD policies to fit teachers' working contexts (Ministry of Education and Vocational Training, 2008; Komba & Mwakabenga, 2019). To bring an element of accountability to the teacher development system, the strategic plan proposes that the School Management Team, led by the principal, should lead CPTD practices (Ministry of Education Science and Technology, 2017).

3.7.2.3 Contribution of professional training and development practices to the knowledge economy

Komba and Mwakabenga (2019) discovered the following five challenges that Tanzania had successfully implementing CPTD policies:

- Limited knowledge of CPTD;
- Outdated approaches predominated CPTD because people still thought that the only ways to conduct teacher development were through workshops, conferences, and seminars;

- Organising CPTD activities was ineffective because of issues like policies and strategic plans and professional development timetables;
- An insufficient budget for CPTD activities; and
- Insufficient preparation of new teachers for CPTD (Ministry of Education Science and Technology, 2017).

These challenges obliged the Tanzanian Ministry of Education to introduce a national framework for CPTD for on-duty teachers. The purpose of the framework was to establish a structured strategy for CPTD to improve the quality of education in the country (Ministry of Education Science and Technology, 2017). CPTD practices in Tanzania target one crucial element, which is the improvement of the country's education system and learner effectiveness. The only way this can be improved is by raising the standards of the teaching staff. The purpose of CPTD, according to the Tanzanian Education Policy, is to conduct in-service training and retraining to ensure quality and professionalism.

3.7.3 Professional teacher development practices in Zimbabwe

In Zimbabwe, missionaries were responsible for the training of teachers between 1928 and 1960s. From 1928 to 1963, students had to complete a two-year course to qualify as a teacher, and they could attend the Primary Teacher Lower course or the Primary Teacher Higher course. These courses were done at various training centres and comprised several attendances in a school within the mission centre to do teaching practice lessons for the rest of the training period. Between 1965 and 1976, Zimbabwe introduced more training colleges for teachers, adding to the existing mission centres and new teacher training models. The University of Rhodesia was given responsibility to develop new teacher training courses (Tarusikirwa, 2016).

According to Siyakhwazi (2014), several teacher training models emerged because of the involvement of the government, and there were many areas of specialisation. Previously, there were three models: Grades 1 and 2 for female teachers only; Grades 3 to 7; secondary school (Siyakhwazi & Siyakhwazi, 2012). All the models involved three years training where the first two years were spent at a college, and the third year was spent in

schools for practical. This practical part was called teacher development and initiated by an approach called open and distance learning (Siyakwazi, 2014).

3.7.3.1 Professional training and development practices

The government's intervention in the training of teachers created a wide range of specialisation models that led to a need for CPTD (Tarusikirwa, 2016). After Zimbabwe's independence in 1980, the Zimbabwe Integrated Education Course model was introduced. This model was meant for CPTD and comprised modules, vacation sessions, and seminars. The Ministry of Higher Education introduced a Department of Distance Education that was given responsibility for the teacher development programme (Siyakwazi, 2014; Tarusikirwa, 2016).

As early as the 2000s, the Zimbabwe Ministry of Education encouraged CPTD, and the responsibility for this fell on Zimbabwe Open University because of its open and distance learning model. Teachers were to be steadily developed while they teach in primary and secondary schools. They had to attend tutorials over the weekend with modules such as (1) co-teaching, (2) discussions, (3) face-to-face meetings with experienced tutors, and (4) using structured modules from experts. The advantage of this model was that teachers were continuously accessing tuition using technology gadgets and other online mechanisms (Tarusikirwa, 2016).

The Zimbabwe Open University open and distance learning model of teacher development became popular and effective because, firstly, it covers many teachers at a time. Secondly, it is a flexible and affordable programme, which means that most of teachers' development need can be addressed affordably and conveniently. Thirdly, teachers learn while they earn because the programmes do not take teachers out of their classrooms and salaries while they are being developed. Therefore, neither learners nor teachers are inconvenienced by the CPTD as it happens outside contact sessions time.

3.7.3.2 The role of principals in professional training and development

According to Mukeredzi (2016), a preconditional aspect of pedagogic conduct resulting from CPTD is teachers' critical introspection and self-assessment on their work and

learning from their experiences. Mukeredzi found that school management is also fundamental in teacher development, and she maintains that school management teams accord to development because they provide continuous assistance and direction to teachers. Their feedback and directions are essential for both teaching and learning in classrooms. Mukeredzi argues that since the primary function of schools is student learning, school management should exercise effective supervision to ensure quality educational opportunities for all learners. Mukeredzi recommends that effective teacher professional development depends on the following five principles:

- Schools' structures should provide time and opportunities for CPTD through mentoring policies, conducting school self-evaluation, supervising all structures, and securing subject meetings;
- Schools should support all structures that continuously cause teachers to meet to promote CPTD;
- Subject-specialisation gatherings and associations should be encouraged as they promote engagement with colleagues to discuss issues and observe one another's practices;
- CPTD programmes should consider learners' needs and be classroom-centred, guided by the knowledge gaps, and should centre on learner assessment so teaching and learning can be optimised; and
- Depending on the context of each community, strong teacher-parent relations should be established for teacher professional development because parent-teacher linkages promote student academic achievement (Mukeredzi, 2013, 2016).

3.7.3.3 Contribution of professional training and development practices to the knowledge economy

Zimbabwe, like other countries around the world, sees CPTD as a crucial aspect that should not be ignored. The significance of teacher development always weighs heavier than other commitments of education departments. Zimbabwe emphasises critical and self-reflection in all teachers to enable them to take professional development seriously.

Teachers in Zimbabwe are motivated to do professional development because they learn while they earn. There are subject-specialisation gatherings that bring teachers together to promote professional development. Schools conduct supervision, mentoring, and moral support for teachers so professional development remains a sustainable programme. During the subject-specialisation gatherings, teachers share various methodologies and subject offering techniques to strengthen their skills. The government of Zimbabwe believes these practices effectively contribute to the economic value of their teaching force.

3.7.4 Professional teacher development practices in South Africa

The education system in South African changed significantly after the new democratic government was put in place in 1994. Professional development practices are regulated by legislation such as the Policy for National Education in the National Education Policy Act, No. 27 of 1996 (RSA, 1996a; hereafter referred to as the NEPA), the Employment of Educators Act, No. 76 of 1998 (RSA, 1998; hereafter referred to as the EEA), the SACE Act (RSA, 2000), and the Education Labour Relations Act, No. 146 of 1993 (RSA, 1993), which was later changed to the Labour Relations Act, No. 66 of 1995 (RSA, 1995).

3.7.4.1 Professional training and development practices

South Africa is a constitutional country and most of the national activities are controlled by parliament legislation. The legislative framework that governs teacher development starts from the appointment of teachers and move to professional development practices. All these steps are controlled nationally, as discussed in the following subsections.

3.7.4.1.1 Appointment of teachers

In South Africa, teachers are appointed according to the stipulations of the EEA (RSA, 1998). The EEA offers guidelines for the appointment of teachers into available teaching posts in institutions. For the purposes of appointing teachers, the EEA is read together with NEPA (RSA, 1996), which stipulates the minimum qualifications teachers should possess. The SACE Act (RSA, 2000) obliges all teachers to register with the SACE and have a certificate before they are appointed to work in schools. Teachers who are

appointed in terms of the above pieces of legislation are regarded as professionals because of the qualifications and standards they carry (RSA, 1996a). According to the legislation, teachers must engage in teacher development processes approved by the DoE and the applicable CAs of the ELRC. There is also a provision for individuals from other unsuccessful professions to join the teaching profession. Universities are offering a one-year certificate through which one can become a qualified teacher after completion. The certificate is known as the postgraduate certificate in education.

3.7.4.1.2 Professional development of teachers

According to the EEA (RSA, 1998), the national education minister should determine and publish the norms and standards and service conditions for teachers. One of the conditions of service is explained as a system for teacher appraisal that facilitate CPTD. The NEPA (RSA, 1996a) stipulates that the responsibility of the development of teachers can also be given to external service providers if their programmes are approved by the DoE.

Chapter C of the EEA (RSA, 1998) explains the appraisal system for teachers. The manual for teacher appraisal maintains that the appraisal process should have (1) a reflective practice that serves the interests of the learners; (2) self-appraisal or self-analysis, which is teachers' introspection; (3) peer appraisal, which is appraisal by a colleague to review the self-appraisal in order to point out areas for development; (4) collaboration, during which teachers teaching the same grade or learning area work together and are assisted by the special services of support in the department to problem-solve; and (5) interaction within panels to build social partnerships so members can collectively support the appraisee to identify needs, agree on objectives, select CPTD activities, and implement the activities timeously.

The developmental appraisal process must have a development team, called the SDT, for every institution as stipulated in the EEA (RSA, 1998). The function of this team is the initiation, co-ordination, and monitoring of appraisal processes according to the management plan of the school. The composition of the SDT should be the principal and elected staff members. During the appraisal process, the panel must comprise a peer,

who is a colleague of the appraisee in their learning area; a union representative; one teacher appointed to a senior position, such as an HoD, the deputy principal or principal; and a member from outside support, such as a subject advisor, subject expert from another institution, district, or circuit manager (RSA, 1998).

In other words, all South African public schools are obliged by legislation to facilitate appraisal processes by following the stipulations of the legislation pertaining to such processes. Schools must create SDTs to regulate and control the rest of the process. The processes must be run by panels who are constituted in accordance with legislation. A critical aim of these appraisal processes is to identify professional developmental needs, select professional developmental activities, and implement those activities within timeframes.

3.7.4.1.3 Appraisal process according to the Employment of Educators Act

The appraisal process is done by the appraisal panel, which uses an appraisal instrument known to the appraisee. The appraisee uses the same instrument to do self-appraisal before the appraisal by the panel. The instrument has 13 criteria for Post-level 1 teachers, 15 criteria for HoDs on Post-level 2, and 23 criteria for deputy principals and principals. The self-appraisal is discussed and compared with the peer appraisal to identify areas that need development or improvement. The developmental plan of the appraised teacher is recorded in a personal growth plan. This form has a record of planned activities to be followed for development in the identified areas. The EEA (RSA, 1998) stipulates that each educator must keep an appraisal file in each institution that contains personal details, the Need Identification and Prioritisation Form to record needs and prioritisation, the growth plan form, the personal growth plan, the report on appraisal, and a discussion paper. All these records must demonstrate the teacher's professional growth and how they commit to be lifelong learners.

Step-by-step, the teacher appraisal process requires individual teachers to start by using the common appraisal instrument to conduct a self-appraisal, which is followed by the peer appraisal by a colleague, preferably in the subject or learning area. The peer identifies areas for development and the findings are discussed with the appraisee to

compare the peer appraisal and self-appraisal. The identified areas for development are recorded on the personal growth plan and activities are put in place to develop the areas before the appraisee is evaluated by the panel. The EEA (RSA, 1998) requires the records for each teacher that the school keeps regarding the appraisal process to show that the teacher is committed to professional growth and lifelong learning.

3.7.4.1.4 The role of Education Labour Relations Council in the continuing professional teacher development process

The ELRC was established in terms of the Labour Relations Act (RSA, 1995), which replaced the Education Labour Relations Act (RSA, 1993). In terms of Section 4 of the Constitution of the ELRC, the following objectives of the council apply:

- Maintenance and promotion of workers peace in education;
- Prevention and resolution of labour disagreements in education;
- Promotion of collective bargaining related to all matters of interest; and
- Make conclusions and enforcement of the implementation of CAs (ELRC, 1995).

3.7.4.1.5 The Education Labour Relations Council Collective Agreement number 3 of 2003

All the labour challenges in the implementation of the Developmental Appraisal System were referred to the ELRC. The legislated responsibilities were implemented after the Council signed CA no. 3 of 2003 (ELRC, 2003a). The agreement's objective was to establish an instrument for use during the process of observing teachers in practice. During the whole school evaluation (WSE), the CA provided a guideline on lesson observation, which caused some grievances among teachers. It clarified that the focus areas of lesson observation must be four and that each focus area must pose a question. The answer to the question should be rated on a scale of 1 to 4, where 1 is unacceptable and 4 is outstanding performance (ELRC, 2003a). Before 2003, the Developmental Appraisal System and the WSE were separate programmes used in schools. The Developmental Appraisal System was used for teacher appraisal, and the WSE's purpose was to assess the performance of the whole school in general.

3.7.4.1.6 *The Education Labour Relations Council Collective Agreement number 8 of 2003*

Further disputes that emanated during the implementation of the Developmental Appraisal System continued to be referred to the ELRC for CAs. The CAs promote peace and resolve disputes. Section 1 of CA no. 8 of 2003 (ELRC, 2003b) aimed to align the different management programmes into one system that integrates several systems in one. An integrated management system, known as IQMS, was created and incorporated developmental appraisal, performance measurement, and WSE. The parties to the Council agreed that the IQMS should be adopted for institution-based teachers, and a document for IQMS was attached to the agreement. The document consisted of four sections: Section A contains information on the IQMS; Section B consists of an implementation plan in the form of a flow diagram; Section C comprises the evaluation document used for performance measurement, developmental appraisal, and WSE; and Section D contains forms (as annexures) for the performance measurement process. The forms are used for the collection of information pertaining to the teacher's performance for the purpose of salary grading (ELRC, 2003b).

According to this agreement (ELRC, 2003b), developmental appraisal was used for individual teachers' appraisal in an open, consistent, and transparent manner. The process should also identify teachers' strong and weak areas so programmes for individual development can be created. Performance measurement's purpose is to assess individual teachers to affirm their appointments and continuous service, for salary and grade progression, and for rewards and incentives. Furthermore, WSE serves to conduct processes of evaluation about the overall proficiency of the whole school as far as the external support it receives from the education system is concerned. Among the criteria that the WSE uses for evaluation, there is one criterion that checks on the quality of teaching and learning in the school. CA no. 8 managed to decrease the criteria for junior teachers from 13 to 7; the HoD criteria changed from 15 to 10; and those of the deputy principal and principal changed from 23 to 12. The criteria were renamed to performance standards, so criteria became the indicators that explain the statements of the performance standards.

3.7.4.1.7 The Education Labour Relations Council Collective Agreement number 2 of 2009

The parties to the Council agreed that issues relating to teacher appraisal would find expression during the discussions in the upcoming Teacher Development Summit. They agreed that the ELRC will finalise issues relating to teacher appraisal considering the discussion and recommendations emanating from the Teacher Development Summit. A working group should be established by the ELRC before the commencement of the Summit, and members are supposed to meet immediately to expedite the finalisation of this matter. This working group must conclude their work and make recommendations to the ELRC within three months from the time of the Teacher Development Summit (ELRC, 2009). This agreement shows that there was a continued dispute in terms of the previous agreements. The disputed sections of the agreement were just recognised by the Council and the agreement was that there should be a Teacher Development Summit that should discuss those challenges and make some recommendations to the ELRC.

3.7.4.1.8 Declaration of the Teacher Development Summit (2 July 2009)

The Teacher Development Summit (Section 2) stated that the quality of teachers has a strong influence on the perfection of learning and education. The members of the Summit propounded that the country should raise the quality of the teacher education curriculum and development in the national education system. The Summit also postulated that there should be equity and consistence in the provision of CPTD as a central prerequisite for social justice and quality education. The purpose of CPTD should be to sustain a commendable improvement in the quality of teaching and learning in the classroom (ELRC, 2009).

The Summit recommended in paragraph 3 that there should be a new reinforced national plan for teacher development that will integrate and define clear positions and allocations, including inventive and collective relationships among the key stakeholders, to improve CPTD. In terms of paragraph 3.2. of the Summit, (1) there should be a transparent policy for both appraisal and development that teachers and other role players can understand; (2) when appraising teachers for developmental purposes, the process should be

delinked from appraising for remuneration and salaries; and (3) the IQMS should be rebranded and streamlined to identify and respond directly to CPTD. The result of these presumptions is that issues relating to curriculum development and competence to enhance the quality of teaching and learning will also be improved (RSA, 2009a, 2009b).

According to the suggestions of the Summit, IQMS implementation met some challenges. The Council deemed it fit for a summit to sit and debate on the issues and come with suggestions and recommendations to the ELRC. It became clear that there were challenges regarding the way the DoE's CPTD policies were being implemented. A critical challenge was the processes of teacher appraisal and development activities. The recommendations of the Summit were sent to the ELRC for a final decision and agreement (ELRC, 2009).

In terms of Section 4 of the EEA (RSA, 1998), salaries and service conditions in respect of different ranks and grades of teachers must be determined by the national minister. In Chapter C, the personnel administrative measures and issues related to the employment of teachers are stipulated. Paragraph 2.1 of Section 4 describes the aim of developmental appraisal as follows:

“2.1. Developmental appraisal aims to facilitate the personal and professional development of teachers to improve the quality of teaching practice and education management.

2.2. It is based on the fundamental principle of lifelong learning and development. This statement implies that one has to prioritise areas for development and growth throughout one's career in Education.” (RSA, 1998)

Section 2 of the SACE Act postulates the three objectives of the Act as (1) provision for teacher registrations, (2) promotion of CPTD, and (3) maintaining and protecting the ethics and professional standards for teachers (RSA, 2000). The CPTD programmes in South Africa are based on the second objective of the SACE Act. SACE has a greater responsibility to promote professional development of teachers by recruiting companies that can create acceptable and endorsed activities relevant to teacher development.

The Employment of Educators Act (RSA, 1998) facilitates the employment of teachers in the country and predicates that the developmental appraisal should have a SDT for every institution. The function, composition, and operation of SDTs and teacher appraisals are discussed in detail in Section 3.7.4.1.6. However, there were some challenges in the implementation of the Developmental Appraisal System, and it was referred to the ELRC. The ELRC's mandate is promoting workers' peace, preventing and resolving worker disagreements, and enforcing CAs, and therefore had to resolve the matter through CA no. 3 of 2003 (ELRC, 2003a). The agreement established a new instrument for WSE and the Developmental Appraisal System. The CA provided a guideline on lesson observation that caused some grievances among teachers.

It is noted that in 2003, the Developmental Appraisal System and the WSE were separate programmes used in schools. The Developmental Appraisal System was used for teacher appraisal and the WSE was used to evaluate the performance of the whole school in general. Further disputes that emanated during the implementation of Developmental Appraisal System continued to be referred to the ELRC for CAs (ELRC, 2003a). The agreement in Section 1 of CA no. 8 of 2003 (ELRC, 2003b) proposes that all the three systems should be aligned and implemented as one IQMS, comprising the developmental appraisal, performance measurement, and WSE. The parties to the Council agreed that the IQMS should be adopted for institution-based teachers. A document for IQMS was then attached to the agreement (ELRC, 2003b). This agreement puts the responsibility of CPTD implementation on SDTs. The role of the principal changed from heading the team to that of an ordinary member. CA no. 8 of 2003 indicates that the chairperson of the SDT should lead and run the CPTD processes in the school. Every document of the appraisal processes of teachers should be signed by the chairperson of the SDT (who might not be the principal). The process should start with the developmental appraisal to appraise teachers transparently and identify teachers' strengths and weaknesses to compile a programme for CPTD (ELRC, 2003b).

The ELRC received several challenges about the implementation of IQMS, and therefore, it deemed it fit to suggest an education summit to sit and debate on the issues and come with suggestions and recommendations to the ELRC. A critical challenge was the

teacher appraisal and development processes. The recommendations of the Summit were sent to the ELRC for a final decision and agreement. The recommendations were taken as CA no. 2 of 2010 (ELRC, 2010).

The Summit suggested that IQMS had to be rebranded and streamlined in such a way that (1) the policy is clear and understandable on issues of teacher appraisal and teacher development, (2) remuneration issues are delinked from teacher appraisal for development, and (3) there is an improvement on the mechanisms of identifying and dealing with teacher development issues. The agreement for a rebranded form of staff appraisal was signed three years later for full implementation in 2022. The improved agreement is CA no. 2 of 2014 (ELRC, 2014).

According to QMS, the central purpose should be development in all quarters of the year. QMS is implemented in two appraisal stages, namely the mid-year appraisal (from January to June), and the annual appraisal (from July to December). Changes that were made to IQMS and incorporated into the new QMS policy reduced performance standards for Post-level 1 teachers from seven to five, for Post-level 2 teachers (HoDs) from 10 to 6, and for Post-level 3 teachers and principals from 12 to 7. Principals, deputy principals, and heads of sections should sign and submit annual work plans to the circuit office. The work plans are created because of their managerial responsibilities in the school.

Each teacher should do the self-appraisal before being appraised by the panel during lesson observation and the conclusion of other performance standards of the instrument (ELRC, 2014). During the teacher appraisal process in all the performance standards, the appraisee is scored by making a cross on the relevant box of the rating, where 1 is *unacceptable* and 4 is *outstanding performance* (ELRC, 2014). The appraisal panel consists of only the immediate supervisor of the appraisee, such as the principal or the HoD, and is referred to as Departmental Head in the appraisal. The involvement of a resource person is only an option if the supervisor needs extra expertise in the learning area in question.

Three years later, the Council signed the final CA no. 2 of 2020. The agreement provides a standardised structure for the evaluation of teachers' performance. The parties to the ELRC agreed that QMS for institution-based teachers should be adopted and

implemented. The QMS was to be implemented by principals from 1 January 2021 and for all other school-based teachers from 1 January 2022. The parties agreed that training for principals should commence from October 2020. Training for the school-based teachers was to be done between January and December of 2021. The full implementation of the QMS instrument was envisaged to commence from January 2022. According to QMS, the central purpose is development in all quarters of the year.

The policy emphasises that teachers and supervisors should have opportunities to discuss issues pertaining to the entire appraisal process in what is called a pre-appraisal meeting. The discussion is done for the following reasons:

- To ensure the instrument is understood among themselves before being implemented;
- To discuss and agree on possible contextual factors that may have a negative impact during the evaluation of the teacher during lesson observation;
- To discuss what is expected of the teacher during the lesson observation; and
- To agree on the necessary documentation to be prepared as evidence for the appraisal process.

There should also be a post-appraisal discussion to share information that was gathered during the observation and to sign documents (ELRC, 2014).

During the implementation of QMS, the management team, comprising the principal, their assistant where applicable, and HoDs, carry the responsibility of the progress of the entire appraisal process in the school. The School Management Team should plan, implement, and manage the QMS processes. They should consider the training requirements for all staff members during the QMS implementation. Above all, the School Management Team members are mandated by the Collective Agreement no.2 of 2020 to manage and lead QMS in a uniform, consistent, and effective manner (ELRC, 2020).

3.7.4.2 The role of the principal in professional training and development

The Personnel Administrative Measures document in Section 4.2 of the EEA (RSA, 1998) stipulates the principal should (1) develop the staff (both new and old) through training

programmes, give them directions, and help them develop and achieve the educational mission as far as the needs of the school are concerned; (2) collaborate with all staff members to agree on all the issues and requirements of CPTD as embodied in the QMS and other pieces of legislation and to regularly review their teaching practices to improve all the education structures of the school; and (3) maintain, organise, and compile all evaluation documents of appraisal processes conducted in the school and confirm that they are properly signed before submission. The principal is given the responsibility of implementing the staff development programmes according to the agreed-upon processes. The responsibility also involves ensuring the records of such development activities are kept for reference by other authorities and ensuring the vision and mission of the school are achieved through the teaching duties of the teachers.

3.7.4.2.1 The dynamic role of the principal in South African continuing professional teacher development

Chapter C of the Personnel Administrative Measures in the EEA (RSA, 1998), Section 2, subsection 2.4, indicates that in each institution there should be an elected SDT consisting of the head of the institution, in other words, the principal, and few staff members. The SDT is responsible for the initiation, co-ordination, and monitoring of the appraisal process. CA no. 8 of 2003 (ELRC, 2003b) also emphasises that the SDT and not principals are responsible for running the CPTD processes. According to CA no. 8, the principal together with the SDT is also given the responsibility to lead the appraisal processes in the school and to confirm and corroborate that appraisal documents are properly and efficiently organised. These paragraphs imply that the role of the principal in the SDT changes to that of an ordinary member. CA no. 8 indicates that the institution must elect and put in place an SDT whose responsibility it is to run IQMS activities. The chairperson of the SDT, who may not be the principal, has the responsibility to ensure the smooth running of the IQMS. The chairperson signs all the appraisal documents of the teachers and ensures the necessary documents are handed to the principal, whose role is only to submit them to the district office. The principal must just moderate the scores of the teachers and ensure the records are a true reflection of and accurate in terms of calculation of scores.

CAs no. 2 of 2014 and no. 2 of 2020 (ELRC, 2014, 2020), which introduced the QMS, gave principals the sole responsibility of the teacher appraisal and development processes in the school. This CA made a correction on the role of principals in the previous policies. In other words, CPTD is presently the responsibility of principals as educational leaders and managers. According to CA no. 2 of 2020 (ELRC, 2020), principals must do the following:

- Ensure every appraisal record and its accompanying evidence are true and authentic;
- Verify appraisal processes in the school;
- Confirm that the appraisal process is implemented uniformly and effectively;
- Supply each teacher with the appraisal instrument and any material related to the appraisal process;
- Ensure every teacher is appraised accurately, consistently, and fairly using same approved appraisal instrument;
- Be responsible for the advocacy process in which all teachers are orientated about the performance appraisal before its commencement;
- Ensure all teachers get clarity on areas of concern in a workshop for appraisal;
- Verify that all the documents pertaining to the appraisal of all teachers are signed and stamped;
- Bring any discrepancy in the documents to the attention of the supervisors for correction before sending them to the circuit or district;
- Ensure all signed documents are delivered to the circuit or district offices within the stipulated date;
- Create a management plan for the school and ensure teacher appraisal is in the plan; and
- Amicably resolve, as far as possible, all grievances that arise in the school regarding appraisal.

3.7.4.3 Contribution of professional training and development practices to the knowledge economy

In Section 2, the 2009 Teacher Development Summit propounds that when teachers are proficient, they directly impact how learners acquire their learning content in their classrooms. Quality teaching and learning opportunities contribute to a quality education system. Therefore, it is a vital prerequisite for the national education system to be restructured to raise the standards of teacher education and how they are continuously developed in their workplaces. The Summit also stated that it is of pivotal advantage for CPTD programmes to be provided on an equitable basis because it is a central requirement for quality education. According to the Summit, CPTD programmes should be aimed at the development of the teaching staff and be geared towards achieving improved levels of best education in the classrooms (ELRC, 2009).

In 2006, the DoE (2006) released the National Policy Framework for Teacher Education and Development meant for CPTD. This framework made three presumptions, and the third presumption crucially proposes the improvement of teacher training in terms of two complimentary categories, namely initial teachers training and sustainable and endless development of teaching staff (CPTD). The Summit examined the condition of each of the categories and made recommendations to the Ministry of Education for policy restructuring to address any issues that might emanate. The fundamental principle of the policy is that the essential participants of all CPTD programmes are teachers and the whole education system relies on teachers for quality education (DoE, 2006).

The second document that was released by the DoE was the CPTD implementation document (ELRC, 2014).

Section 48 of the National Policy Framework for Teacher Education and Development introduces a new CPTD system with the following requirements:

- The restructured CPTD should put in place all the initiatives for teacher development and ensure they make a direct and effective contribution to the upliftment of the national teaching standards;

- There should be an emphasis and reinforcement of the professional teaching status;
- Teachers should receive clear guidance on CPTD activities that allow them to grow professionally;
- Teachers should be protected from fraudulent service providers who claim to be providing authentic development courses; and
- The expansion of various development activities for a successful CPTD (ELRC, 2014; ELRC, 2020).

Section 49 of the policy stipulates that the SACE should manage CPTD activities after they had been identified by the QMS process, and CPTD must use a professional development point system that is internationally recognised. Teachers are expected to earn professional development points when they participate in different professional development activities that suit their requirements; however, the activities must be endorsed by the SACE (DoE, 2006).

Section 51 of National Policy Framework for Teacher Education and Development classifies professional development activities into four types: The first type is school-driven activities that are followed by the second type, employer-driven activities; the third type is qualification-driven activities; and the fourth type covers other activities and programmes offered by externally accredited service providers, education trade unions, other interested parties, and churches. According to Sections 55 and 56 of the policy, there should be rewards and sanctions during the implementation of CPTD, and therefore, teachers who earn the satisfactory points within a cycle of three years are recognised and given symbols (DoE, 2006).

This discussion shows that in CPTD practices in South Africa, there is no emphasis on the pillars of the knowledge economy because there is no indication that teachers are encouraged to be innovative, to create knowledge, to use existing knowledge, and to be remunerated for their creativity for motivation.

3.8 SUMMARY OF THE CHAPTER

This chapter discussed the review of literature. The concept of teacher development was presented, and the discussion explored the professional development of teachers internationally and in South Africa. The discussion of international CPTD practices covered four developed countries, Belgium, Canada, Hong Kong, and Australia, and four developing countries, India, Tanzania, Zimbabwe, and South Africa. The role of principals was presented in each case, together with how the development practices connect with the knowledge economy. Chapter 4 discusses the choice of the research approach, design, and methodology that the inquiry followed to collect and analyse data.

CHAPTER 4

RESEARCH APPROACH, DESIGN, AND METHODOLOGY

4.1 INTRODUCTION

The previous chapter reviewed the literature on CPTD giving examples from developed and developing countries. The review of literature formed the foundation for the study as it provided an overview of published material on CPTD, the role that principals play in CPTD programmes, and how CPTD contribute to the knowledge economy. Chapter 4 discusses the inquiry's approach, research design, and methods. The chapter covers the methodological assumptions, qualitative research methodology, and its philosophical elements. The chapter discusses the case study design, sampling, data construction strategies, and the analysis of collected data. Various steps to ensure the study's trustworthiness and the ethical consideration are also presented. This chapter presents all techniques and procedures followed to select sites, collect data, and analyse the data to address the research objectives. The main research question was: What are South African school principals' perspectives on CPTD for the knowledge economy? The following were the secondary research questions that guided the study:

- What are South African school principals' views on contemporary teacher development programmes?
- How do South African school principals connect teacher development to the knowledge economy?
- What challenges do South African school principals face in connecting teacher development to the knowledge economy?
- How can the challenges that South African school principals face in connecting teacher development to the knowledge economy be addressed?
- Which teacher development model can be adopted to connect the CPTD to the knowledge economy?

4.2 RESEARCH APPROACH

The first step when starting a research project is to decide on the research approach. There are three approaches that a study can follow: Qualitative, quantitative, or mixed methods approaches. Choosing a research approach is entirely dependent on the research problem or phenomenon. Researchers whose aims are to examine, investigate, or explore, and who are interested in non-numerical information select the qualitative approach. On the other hand, researchers who want to determine, test, or measure the behaviour of some variables and to reduce the data interpretations to numerical values choose a quantitative approach. Researchers can also use a mixed methods approach in which a quantitative approach is mixed with a qualitative approach in order to collect the required data (De Vos, 2001; Welman & Kruger, 2001; McMillan & Schumacher, 2013; Leedy & Ormrod, 2015). Based on the current study's research question, the researcher chose the qualitative approach to collect data.

4.2.1 Qualitative research approach

Leavy (2017) asserts that qualitative approach supporters value the significance of the subjective meaning and experiences that people attach to phenomena and how they attach meaning to processes. Qualitative approaches allow researchers to understand a topic, uncover the descriptions people make about their lives, certain contexts, occurrences, various circumstances, and objects. These perspectives help generate rich, descriptive, and meaningful data.

According to Leedy and Ormrod (2015), the qualitative approach is relevant to investigate phenomena occurring in natural settings and to study all the complexities of those phenomena. The approach was therefore congruous for this inquiry because the interest was to examine principals' experiences with and perceptions of CPTD. Furthermore, McMillan and Schumacher (2013) recommend a qualitative approach because it is characterised by features such as natural setting, direct data construction, rich descriptions, inductive data analysis, and emergent research design. They postulate that this approach permits researchers to personally visit the natural settings of the selected population where they can experience the phenomenon, collect data directly from the

population, and record rich descriptions from their responses. The approach and data construction method also permit researchers to use a thematic analysis procedure to organise the descriptions by the participants into themes for inductive data analysis. They further hold that the approach allows researchers to manipulate the data construction methods when the context changes during data construction. In other words, only the qualitative approach allows researchers to use open-ended questions or to probe to get clarity on certain issues in responses.

Myers (2009) states that a qualitative research approach is used when researchers wish to study social and natural phenomena. This explanation supports the objective of the current study because the focus was on the social phenomena that is experienced by principals concerning teacher development. Creswell (2009) maintains that apart from data construction in the field where participants interact with the phenomenon of interest, qualitative researchers collect data themselves as key instruments, and do not rely on instruments such as questionnaires developed by other researchers.

Qualitative researchers are often interpretivists because they interpret information they get from participants and do not separate the interpretations from their backgrounds (Maree, 2021). Using this research approach, the current study was able to produce a narrative description of how principals experience and understand CPTD based on the knowledge economy. This study valued the qualitative research approach because it allowed the researcher to use oral interviews to collect rich data in the form of verbal responses. Through this approach, the researcher was able to collect the perspectives of the participants with different views based on how they understand the phenomenon under inquiry. Mack, Woodsong, Macqueen, Guest and Namey (2005) define this research approach as a systematic research method that realises specific problems from the participants' viewpoints and not from the researcher's understanding. Therefore, qualitative research is used when researchers aim to collect what participants think about an aspect, what they say about it, how they explain their behaviour, and how they feel about it. This brought an element of subjectivity to this study because it involved different thoughts and feelings.

The subjectivity of the qualitative research approach cautions researchers not to be biased or allow any prejudice but to be inquisitive and record the responses as accurately as possible (Moen, 2006; Cohen et al., 2007; Leavy, 2017). The researcher should also be attentive and flexible for any conditions that may disturb the smooth running of the interviewing process. In this study, the researcher collected data as direct responses by the participants without any distortion.

Furthermore, the qualitative research approach is used to collect rich data that describes a specific phenomenon in its environment to understand it from the perspectives of the inhabitants, and how they understand and attach meaning to it in their social setting (Creswell, 2009; Maree, 2021). This made the qualitative approach suitable for the current study because rich data were collected about the school principals' perspectives of contemporary CPTD to avoid generalisation.

Welman and Kruger (2001) recommend a qualitative approach because researchers can get good descriptions and revelations about the nature of various contexts, arrive at better interpretation and insights, and facilitate the development of new concepts. Existing problems can also be discovered using this approach. Lastly, certain assumptions or claims about the phenomenon can be verified or tested for validity (Neuman, 1994; Welman & Kruger, 2001). The current researcher wanted to gain new insights about teacher development from the perspective of school principals to develop new concepts from the findings.

Similarly, qualitative research helps researchers explore and understand various meanings that individuals or groups use to explain social or human problems. When data are typically collected in the environment of the participant, emerging questions and procedure guide the researcher towards a possible data analysis procedure that inductively builds general themes. This guidance also helps the researcher derive and interpret the meaning of the data segments (Creswell, 2009). The purpose of this study was to collect data from the selected principals, conduct data analysis, and build general themes that were to be interpreted to address the research problem.

In a qualitative approach, the researcher disregards what literature recommends about the phenomenon (Creswell, 2009) because qualitative researchers do not test variables.

They accommodate a variety of voices and explanations according to each participant's point of view to explore actual feelings and understanding. In qualitative research, the researcher is the first research tool in the study, which is why a proper research approach must be chosen at the start of the study.

The current researcher believed that there was no better approach for this study than the qualitative approach because he used the natural settings of the participants and direct data construction to gather rich narrative responses directly from the participants (Leedy & Ormrod, 2010; McMillan & Schumacher, 2013).

4.3 METHODOLOGICAL ASSUMPTIONS

Quantitative researchers begin their studies with hypotheses, which are beliefs about the variables they are testing (Leedy & Ormrod, 2010). Qualitative studies have assumptions, which is what they assume is existing or has been practised. The assumptions should be related to the phenomenon under investigation. This study focused on the following four methodological assumptions that were crucial for the success of the study:

1. All South African schools are implementing CPTD, which is a national programme aiming to develop the professional status of all teachers. The teacher development programmes run together with appraisal processes because during appraisal, supervisors can notice teachers' weaknesses and the areas that need development; the CPTD programmes are followed to develop these areas. It was therefore assumed that there is effective CPTD.
2. All South African school principals are responsible for the implementation of CPTD in the schools. The basis of this assumption is that principals lead CPTD and understand what is expected of them as leaders. All the programmes pertaining to teacher development are housed in the office of the principal as an overseer.
3. South African school principals are implementing CPTD programmes and connecting them to the knowledge economy. The significance of the knowledge economy is that it is the accumulation of apprehension, cognizance, and proficiency for better human capital. Human capital refers to the amount of expertise that workers possess as their economic value.

4. This assumption is rooted in the philosophical paradigms of interpretivism and constructivism. Interpretivism assumes that there is no shared explanation of reality but that reality can be explained in a multifaceted way and is only understood by social groups themselves (Ryan, 2018). This designates that South African school principals have different interpretations of the CPTD processes and the needs of the knowledge economy. The paradigm of constructivism holds that people construct their own understanding and knowledge through experiencing things and reflecting on those experiences (Adom, Ankrah & Yeboah, 2018).

4.4 PHILOSOPHICAL ASSUMPTIONS

The qualitative research approach encompasses several philosophical assumptions. Cohen et al. (2014) refer to these significant assumptions as the lens through which we see the world. They contend that research is about how the researcher understands the world, and depends on their views about the world, what they think understanding the world is about, and what the purpose of that understanding is. Using this definition as background, three philosophical assumptions are discussed in this study, and there are three assumptions in literature that directs research studies, namely ontology, epistemology, and methodology (Saunders, Lewis & Thornhill, 2012). The significance of these assumptions is based on three reasons: Firstly, to assist researchers to formulate research designs; secondly, how to select relevant designs; and lastly, the ability to distinguish relatively outdated designs (Witgenstein, 1958; Gray, 2013).

Quantitative and qualitative approaches normally have different approaches to questions concerning ontology, epistemology, and methodology (De Vos, 2001; Gray, 2013). Qualitative researchers use these components to explain how they view the reality they are inquiring about. However, researchers rely on the views and explanations of the participating individuals regarding the reality. The current study was based on these three philosophical components discussed in the following subsections.

4.4.1 Ontology in the qualitative approach

There are several definitions of ontology in literature. Qualitative researchers (De Vos, 2001; Huff, 2009; Maree, 2021) define ontology as the existence of reality in accordance with human conceptions and interpretations. They believe that reality exists independently of what people understand and believe about it. Similarly, Maree (2021) identifies how reality and the world are separate from the way individuals attach meaning to it or translate it. However, Snape and Spencer (2003) argue that ontology refers to the essence of nature and what we presently know about it.

Furthermore, Richards (2003) contends that ontology covers the assumptions we make about reality and what exists. On the other hand, Huff (2009) maintains that during data collection, the researcher derives reality from the perceptions and assumptions of the individuals. In other words, researchers gather the perspectives of the participants about the reality under investigation, and how participants make assumptions about it. Cohen, Manion and Morrison (2001) suggest that reality is out there and can be explained in words according to individuals' consciousness. The ontological assumptions of the participants permitted the current researcher to collect diverse views on what CPTD is and what they understand about it. Maree (2021) holds that ontology answers the question 'what is reality?'

Ontology is also defined as the study of 'being', which is associated with "what the kind of world the researchers are investigating", including the nature and structure of reality (Crotty, 2003). Guba and Lincoln (1989) contend that to the researchers, ontology is concerned with the nature of reality or knowledge. The reality under investigation was how school principals are challenged by the contemporary teacher development programmes when trying to connect it to the knowledge economy.

4.4.2 Epistemology in the qualitative approach

Epistemology deals with the postulations people construct about the origin of knowledge, the way we look at it, and how we make sense of it (Richards, 2003; Snape & Spencer, 2003). Ritchie and Lewis (2003) explain epistemology as the way the social world can be

learned and known. It seeks to answer the question ‘how can we know about reality and what is the basis of our knowledge?’

Maree (2021) and Ritchie and Lewis (2003) contend that there are three philosophical aspects that emerge when the issue of epistemology is discussed. The first aspect is that the relationship that exists between the researcher and the researched should be interactive. This means that the participants are affected by the researcher to a certain extent, and therefore, the findings can be negotiated between them. The second aspect is that knowledge should emerge out of the local context by considering how people feel and how they make meaning of the phenomenon under investigation. The above researchers maintain that the role of the researcher during data analysis should be to understand that the patterns and themes that emerge are experiences of real-life situations from the participants’ viewpoints and not those of the researcher. In other words, the findings must be based not on what the researcher understands as reality but on what the different individuals view as reality. The third epistemological aspect concerns whether it is possible to generalise a study’s findings. In qualitative research, it is argued that there is no precise way to answer complex human problems because every problem is unique and requires unique definition.

Furthermore, research indicates that in social investigations during qualitative studies, the generated knowledge is influenced by the subjective interpretation of reality from the participants. It was along these interpretations of epistemology that the inquiry managed to engage with various individuals to understand how they describe the contemporary teacher development activities. This study’s success was contingent on participants’ feelings and how they can explain teacher development programmes to another person.

According to Crotty (2003), epistemology is consistent with constructivism in that meaning is not discovered through research but is constructed. Epistemology is significant in research as it is concerned with aspects of the study’s validity. It can validate research and affect trustworthiness because it impacts how reports are generated by researchers in their attempts to uncover knowledge from participants (Lincoln & Guba, 1985; Moon & Blackman, 2014). This study used epistemological constructivism.

4.4.3 Methodology in the qualitative research

Several researchers define methodology in different but understandable ways. Crotty (2003) refers to it as a strategy or typical design that largely influences the choice of methodology and associates the reasons with the desired outcomes. The aim of choosing a method is to describe, evaluate, and justify it as the best method for the project. Similarly, McCombes and George (2022) delineate methodology as a systematic method that explains the methods used for collecting and analysing data. It explains what was done during the research and how it was done to interpret and understand the phenomenon, which is the reality under study.

Methodology should include the type of research conducted, which methods were used to collect and analyse data, and the methods used to mitigate the research biases to allow readers to evaluate the reliability and validity of the study (Bryant et al., 2014; McCombes & George, 2022). In other words, methodology explains the synopsis of the study so all the significant steps taken until the findings are presented in a report. Readers can conclude whether the findings can be trusted through the methodology and how various research strategies were implemented.

According to Leedy and Ormrod (2015), methodology refers to a systematic method used to construct, analyse, and interpret data to understand perspectives about the phenomenon. This means that methodology should comprise the planned, organised, and procedural layout of methods that are justified for various steps of reporting. Qualitative methods were used to address the current study's research questions, and it allowed the researcher to use the case study design. It was used because the research question focused on individuals' non-standardised responses about the investigated phenomenon.

The philosophical paradigms that grounded this study were constructivism and interpretivism. Using these two paradigms, the researcher constructed rich narrative data. The constructivist-interpretivist philosophy holds that knowledge that participants possess about reality is subjective and that they must play participatory roles during data generation (Cohen et al., 2001). It was against this background that the researcher

succeeded in using a constructivist-interpretivist design and interview protocol to collect data. The focus of this methodology was to collect relevant facts to address the main research question: What are South African school principals' perspectives on CPTD for the knowledge economy?

4.5 QUALITATIVE RESEARCH PARADIGMS

Maree (2021) holds that qualitative research is based on some underlying paradigmatic elements that constitute valid research and make the research method appropriate for a specific reason or context. These paradigmatic elements are often referred to as worldviews. Earlier researchers (Witgenstein, 1958) posit the significance of the paradigmatic elements to research, holding that they anchor the central idea of a study. Lincoln, Lynham and Guba (2011) explain paradigmatic elements as foundational perspectives that guide the research process through a set of assumptions.

Maree (2021) asserts that paradigmatic elements are underlying assumptions that indicate whether the researcher is valid for a reason or a context. To understand reality from a philosophical point of view, Maree holds that the following should be established: What reality is; what the origin of reality is; and the possibilities of knowing reality, including the relationship between the knower of reality and the reality. In other words, reality can be explained better by those who live with it because they explain how they feel it and about it, and they are related to the reality they are explaining.

This study was guided by two underlying paradigmatic assumptions, namely constructivism and interpretivism. Leavy (2017) maintains that interpretivism and constructivism are overarching paradigms as researchers who use them are serious about the subjective interpretation of individuals and how they understand their own experiences and circumstances. Researchers do not construct the meaning of reality for the participants or guide them on how reality should be explained, interpreted, or understood. Instead, they are interested in the opinions and feelings of the inhabitants and record exactly how they explain their feelings and beliefs about the phenomena.

4.5.1 Constructivism in the qualitative approach

According to supporters of constructivism, people are free to construct their own explanation on how they understand and what they know about the world. They use experiences about various things and then reflect on their experiences. According to this paradigm, people form much of what they learn through what they experience (Adom et al., 2016). Qualitative researchers believe the phenomenon being studied is best understood by the people who are experiencing it and who can reflect on their experiences.

Damyantov (2022) posits that the constructivist theory is used in qualitative research to generate insights about human performance and understanding about a phenomenon. It involves analysing data from interviews, observations, and other sources to help the researcher develop theories about social phenomena. Furthermore, according to Damyanov, constructivism involves engaging with the selected participants to uncover their optimism, principles, and perspectives about the phenomenon under study (Theys, 2018).

Constructivism allowed the current researcher to use interviews, non-participatory document analysis, and observations to engage with the selected participants to uncover their perspectives. Various perspectives were constructed and recorded as significant data for the study.

4.5.1.1 Assumptions of constructivism

Constructivism supports the believe that the social world is the product of our own making because it is influenced by how we are continually shaped and reshaped through our relations and interactions (Theys, 2018). Therefore, constructivism has the following assumptions:

- *Knowledge is constructed when people interact with their environment:* Knowledge is persistently under construction, which means individuals construct knowledge from the context of their environment. People use everything at their disposal to shape reality in a way they can understand. Different individuals explain reality

according to how they shaped it to fit their situation. Therefore, every principal explains teacher development according to their own environment and context.

- *People learn by actively constructing their own understanding of reality:* The process of learning occurs when people construct new things in their environments as they understand and shape their contexts. Therefore, learning entails the production of new knowledge influenced by the contexts of the environment. In teacher development, teachers continue to learn new things in their own way and use the acquired knowledge in the way they understood it.
- *The interests and curiosity of individuals motivate and drive their learning:* New knowledge is acquired when people are motivated and curious to know new things, especially about their environments and other similar settings. Teachers learn new skills when they are curious to improve their present classroom practices, and only when they are motivated and interested do they remain in the development activities.
- *People think critically and use inherent problem-solving skills to produce new knowledge:* When people are confronted by a challenge in their environment, they apply their inborn problem-solving skills to attempt to solve the problem or to convert the situation into something useful for them. During that process, they learn new ways of dealing with their reality. Principals and teachers do not seek external intervention in all problematic situations. Mostly individuals have some natural creative abilities the use to attempt to solve in a way they find comfortable. This assumption of constructivism was crucial for the current study because one of the research questions sought to examine how principals address the challenges they meet when implementing teacher development. Their strategies and basic problem-solving skills contribute to the construction of new knowledge (Theys, 2018; Feder, 2022).

4.5.1.2 Significance of constructivism to the study

Constructivists believe that learning involves constructing your own meaning through active engagement. Those who learn new things construct their own representation of what they know (Juniu, 2006; Cooperstein & Kocevar-Weidinger, 2004). In other words,

according to constructivism, when a person learns new knowledge, learning builds on what they already know and understand. The current researcher believes that principals' responses reflect what they know and understand, and how they believe their teachers continue to learn new knowledge during teacher development activities.

Individuals who learn to explore the presented knowledge, search out for new relating information, process it, and own it. The study focused on principals' understanding of CPTD. Cooperstein and Kocevar-Wedinger (2004) hold that people should manipulate phenomena or new knowledge, reveal new ways, and use the invention to their advantage. Juniu (2006) assert that people must deliberately make efforts to create a good sense of the information to make it useful to the new situation.

This means that the paradigm relates not only to teachers during the acquisition of new comprehension and proficiency but also to principals by creating an understanding of the phenomenon under investigation. The principals understanding helped them respond to the interview questions, and the individual principals saw the phenomenon differently, which was crucial for the study. The paradigm related well to the study because the researcher wanted to understand teacher development according to the educational leaders. The researcher decided to follow an interview protocol that enabled the participants to construct their own understanding about challenges they experience in the CPTD phenomenon. The participants constructed their own thoughts and responded freely according to their understanding. The responses were free from any interference, either from the researcher or any third party. They were purely constructed and interpreted by the principals themselves. In the presentation of the research findings, they are also quoted verbatim.

4.5.2 Interpretivism in qualitative approach

Ryan (2018) argues that interpretivism is the believe that reality is subjective and cultural because it is based on the past experiences and interpretations of individuals. Ryan further maintains that researchers have their own cultures and norms that they cannot separate themselves from, and this impacts how they deal with data collection and interpretation. In other words, reality can be explained by somebody who is experiencing

it, is touched deeply by its existence, and is affected physically or emotionally when interacting with that reality.

Phenomenology relates to interpretivism because phenomenology assumes that the interpretations of human beings are subjective, including how they perceive the world, and interpretivism is concerned with how the population of a particular setting experiences the phenomenon that affects their lives (Maree, 2021). Phenomenology is explained by Leedy and Ormrod (2015) as a research design that seeks to comprehend experiences, views, attitudes and understanding of certain situations. This understanding made interpretivism a relevant paradigm for the current study.

Interpretivism focuses on two things, reality and human life. The focus of this inquiry was on reality and how the participants interpret and understand it from their viewpoints and their own contexts. The assumption of the researcher was that the participating principals have different perspectives about the reality of the implementation of CPTD in their schools.

4.5.2.1 Assumptions of interpretivism about reality

The gurus of interpretivism (Shutz, 1945; 1962; Cicourel, 1964; Garfinkel, 1967; Malinowski, 1967) posit that reality cannot be divorced from the knowledge of it. This means that reality as an object is connected to the subjects who know it. The interpretivist paradigm relies on the following assumptions with regards to knowledge and reality:

- *Reality is subjective:* Interpretivists maintain that reality exists but depends on the subjective understanding of an individual. Every person's interpretation of reality should be accepted and not totally disapproved. This study used different principals to examine their explanations of the same phenomenon and analysed their various interpretations in one report that addresses the research questions.
- *Reality is multifaceted:* Every human sees reality differently. This means that several explanations can be obtained from the same reality. The principals who participated in the current study attached various explanations to teacher development, and none of them were wrong.

- *Reality is socially constructed*: Individuals' historical backgrounds affect their interpretation of reality. Reality differs because it is shaped by the individual's historical or social perspective (Vygotsky, 1978). The selected principals held different views because of their different contexts and how they interact with other principals about the same phenomenon (Shutz, 1962; Cicourel, 1964; Garfinkel, 1967; Malinowski, 1967).

Interpretivism supporters rely on questioning and observation to dig deep and reveal the understanding of the studied phenomenon. This is typical of the qualitative research approach. The researcher believed that interpretivism was relevant for the study as the phenomenon investigated is known to the school principals, and that their different interpretations should be collected to generate a broader understanding of the concept.

4.5.2.2 Significance of interpretivism to the study

Researchers who use the interpretivism paradigm understand, explain, and demystify social reality by using the perceptions of different individuals, and therefore, interpretivist researchers usually attempt to understand phenomena by interpreting the explanations that people use for them. Maree (2021) holds that human existence can only be understood from self, which is why research techniques should be used to bring an understanding on how people interpret the phenomena within their social environment.

Schutz (1962), Cicourel (1964), and Angen (2000) maintain that during data construction, the researcher should negotiate truth by using dialogues to clear conflicting interpretations among community members as data generation proceeds. The researcher will succeed in collecting more informed and sophisticated perspectives if they foster dialogue between them and the participants. In other words, interpretivism allows researchers to use dialogues instead of strict questions to give space for ambiguous answers to be cleared. Questions should allow probing to get to what the participants really means. Furthermore, interpretivists believe that all the interpretations of participants depend on a particular context, situation, and time of data collection. This notion of interpretivism allows qualitative researchers not to generalise their findings because they

are not restricted from possible re-consideration and reconstruction through conversations.

This study followed the constructivism and interpretivism paradigms because it depended on the unique meanings constructed and interpreted by the participants when data were constructed to achieve the research objectives.

4.6 RESEARCH DESIGN

In literature, research design is defined in several ways. Singh (2006) defines it as a procedure that constitutes the conditional arrangements for collecting and analysing data to establish a combination of relevance and research purpose. It involves the decisions about the data types needed, where and when those can be collected, how best they can be collected, and how much can be anticipated in an inquiry. Kumar (1999) argues that research designs are plans and procedures that researchers adopt to answer the questions they pose with accuracy and validity. Similarly, Johnson and Christensen (2014) explain it as a framework used to collect and analyse data to answer research questions. Yin (2014) explain a research design as the methods used with logical sequence to strike a connection between the field data, secondary research questions, and conclusions. This logical sequence comprise all the questions used in an investigation of a phenomenon. In other words, the research questions lead to the research method and design suitable for the anticipated data to answer the questions. Trochim and Donnelly (2008) contend that research designs are structures that provide guidance for collecting, analysing, and interpreting observations. This means that researchers are guided by the research questions to what type of data, why, and how to collect. Any error in the research design choice will derail the whole study's objective, and the inquirer might end up with data that are irrelevant for the study.

Another definition refers to research designs as masterplans that dictate how data is collected in the most convenient and economical way when investigating the research question (De Vos, 2001). Creswell (2014) calls a research design a plan and logical structure for the investigation of a problem or an issue. On the other hand, Welman and Kruger (2001) define it as an inquiry method that researchers use to sample participants

and interact with them to obtain information. Welman and Kruger propound that in the design, the researcher describes in detail what they plan to do with the participants, including how their responses will be used to reach conclusions about the research problem. In other words, research designs are used to explain the role of participants in the inquiry and how their participation will contribute towards addressing the research problem. This definition is consistent with that of Babbie (2016) who defines it as a logical structure outlining the steps and methods used in research. Alternatively, McMillan and Schumacher (2013) define it as a term for the description of the path followed by the research that summarises all the procedures used, how the study was conducted, and under what conditions the data were obtained. The definition is consistent with how Yin (2014) defines research design.

Leedy and Ormrod (2015), Creswell (2009), Cohen et al. (2014) give five examples of research designs in the qualitative research methodology, namely phenomenological design, grounded theory study, content analysis, and ethnography. The most popular ones are phenomenological and case study designs. Trochim and Donnelly (2008) postulate to choose a perfect research design, researchers should consider the type of data they need, the research purpose and questions, the time allocated to conduct the inquiry, and the resources available to conduct the study.

4.6.1 Case study design

A case study design is often chosen when the researcher wants to thoroughly explore a specific individual or event. The design involves data collection through interviews, observations, and document analysis (Trochim & Donnelly, 2008; Johnson & Chistensen, 2014; Babbie, 2016). A case study design is a qualitative method of inquiry in which researchers collect in-depth and detailed information from participants using a variety of data construction procedures (Stake, 2000; Creswell, 2009; Harrison et al., 2017). Furthermore, Welman and Kruger (2001) predicate that a case study design is used when the researcher aims to examine the dynamics of a particular social system, like a family, a habitat or a group of participants pursuing the project or belonging to the same institution, or individuals sharing the same position of interest. Henning, van Rensburg

and Smit (2004) indicate that a case study research design's objective is not to describe the case but to establish patterns, relationships and dynamics that validate the inquiry.

Several researchers (Gilham, 2000; Henning et al., 2004; Yin, 2014; Harrison et al., 2017; Maree, 2021) support the case study option because when it is carefully planned and well implemented, it reflects important revelations of real-life situations, and the results can be used in other situations of the same context. The current researcher shared this sentiment, and the case study reflected new revelations about CPTD in schools and how principals link the activities to the knowledge economy.

Although some critics claim that findings of a case study design are often biased because it is usually used for a limited number of participants, Leedy and Ormrod (2015) argue that it is the best recommended design for a qualitative researcher who plans to reveal the rich perspectives of a particular situation in its background and from relevant individuals. Teacher development occurs in schools, and principals are the custodians of the programme, and therefore, they were the relevant people to consult to get an understanding of how CPTD is unfolding in their schools.

According to Leedy and Ormrod (2015), during data collection in a case study design, the researcher uses a variety of methods to generate information, including interviews, audio-visuals, observations, and documents. They advise case study researchers to consider three factors when using a case study research design: (1) Details about the context and situation surrounding the case, (2) the physical environment, and (3) socio-economic and historical factors involved in the case. These three factors should also be recorded as they have a bearing on the case under investigation. The current researcher managed to take the three factors into consideration by using three data construction methods: Interviews supplied verbal explanations about the case, and the documents and observation information clarified the context and socio-economy.

In the current study, the best research design was a case study. The researcher considered the research questions, research methodology, size of the sample, sampling techniques, and limitations and delimitations before selecting a case study design. The three factors as advised by Leedy and Ormrod (2015) followed suit because the

researcher supplemented the interview data by observing the surroundings and physical environment of the research sites and using records.

4.7 RESEARCH METHOD

A research method is defined in several ways. Hesse-Biber and Leavy (2011) attest that it is a tool used by researchers to collect and manage data. The research method is the umbrella and includes the procedures used by the researcher to select the population, do the sampling, collect data, conduct analysis, and do the data description and explanation of the phenomena. On the other hand, Leedy and Ormrod (2015) posit that the research method is a general approach that the researcher uses to conduct a research project, dictating some tools the researcher selects. Furthermore, Creswell (2009) defines it as a process that involves strategies for identifying the relevant population to sample participants and collect data. The research method of this study comprised sampling and data construction strategies.

4.7.1 Sampling

According to Creswell (2009), sampling in a qualitative study means identifying the population and selecting a sample or group of individuals that are directly affected by the phenomenon of interest or have knowledge of and experience with it. Creswell maintains that qualitative researchers purposefully choose a sample of participants together with surroundings, documents, or any material that can serve as source of information to understand the research problem and answer the posed questions.

Leedy and Ormrod (2015) hold that whether the researcher wishes to observe, interview, or pursue some combination of perspectives, it is not possible to be in all places of interest at once, and therefore, the researcher must develop strategies to engage only with certain people and leave out the others. The process of choosing who should be involved in the study is called sampling. Leedy and Ormrod distinguish between probability and non-probability sampling methods. Probability sampling is popularly used in quantitative studies, and non-probability sampling is preferred by qualitative researchers. Purposive

sampling falls under non-probability sampling, and in purposive sampling, certain people are chosen for a particular purpose because they possess relevant characteristics.

Similarly, Maree (2021) explains purposive sampling as generally a qualitative research technique and that it has the following five criteria: (1) Connect with the theoretical framework and the research questions; (2) select and collect only rich information about the phenomenon; (3) conform to transferability and credibility; (4) consider ethical pre-conditions; and (5) not be inconveniencing in terms of money and time. The current study satisfied the criteria as the research questions revolved around teacher development and challenges principals encounter in the process, and rich information was collected from the relevant people who leaders of the process are. Credibility and transferability were achieved through the requirements heeded during the selection of the participating individuals, while all efforts were taken to follow the ethical considerations before commencing with data construction. The whole data generation process was feasible and not expensive.

Purposive sampling is used to increase the amount of information obtained (Patton, 2002; Holloway & Wheeler, 2010; McMillan & Schumacher, 2013). This method is used to ensure that the limited sample comprise individuals who have the relevant information in respect to the phenomenon. This study used a small sample of 10 principals.

4.7.1.1 *Selecting the participants and sites*

When selecting participants and sites, it is important to select sites that are suitable and accessible and then to indicate clearly the persons needed, at what time they will be needed, and how they will participate in the process (McMillan & Schumacher, 2013). In this study, the participants were 10 purposefully sampled school principals with a minimum of five years of experience from one education district in the Limpopo province, South Africa. These principals came from different circuits in the district. Most selected schools are Quintile 1 schools, which means the parents of learners do not pay any fees. Nine schools depended on a subsidy from the state, which represents the school fund. Only one selected school is a Quintile 4 school and charges some fees. The participants' schools also formed the research sites because some aspects were observed, and

documents analysed to validate the data obtained through interviews. The participants and sites were selected for the following reasons:

- School principals, as educational managers, manage and lead all school activities, including CPTD, which was the heart of this inquiry;
- The criterion of at least five years' experience as a principle puts the participants in a good position because they possess rich, in-depth knowledge about the phenomenon of CPTD; and
- The schools of these principals formed research sites and the relevant contexts for the required information. The perspectives of the principals depended on the environment in which the phenomenon is experienced. The schools have other rich information, which, when observed and documents analysed, contributed relevant information.

The sample was relatively small and manageable. Onwuegbuzie and Leech (2007) and Yin (2014) maintain that in qualitative inquiries, small samples are often used because the choice of sample size is an essential precondition as it determines the extent to which the researcher can draw conclusions. Although the research sites were a far apart, the size was manageable because the sites were covered over 10 days of data collection. Only one principal participated at each site.

4.7.2 Data construction

Creswell (2009) holds that data construction processes involve actions by the researcher to set the demarcations for the study. The researcher must indicate how information will be collected and whether strategies such as interviews, documents, or visual materials will be used to gather and record the required data. Creswell identifies two strategies for data construction to make certain that only relevant information is collected for the study. Firstly, the researcher should purposefully identify the individuals, and secondly, the research should specify the type of data anticipated. The type of data to be collected determines the type of instrument to be used. Creswell (2009) tabulates different qualitative data construction types together with their options, advantages, and limitations. These include interviews, document analysis, observations, and audio-visual

materials (Creswell, 2009; Leedy & Ormrod, 2015). In this study, the researcher opted to use non-participant observations, secure some interviews with the participants, and perusal certain office documents as data construction strategies.

4.7.2.1 Semi-structured interviews

Maree (2021) explains interviews as two-way conversations in which the researcher poses questions to participants to collect information or to broaden their understanding of certain ideas, living norms, perceptions, viewpoints, and ways of handling things about a phenomenon. Maree maintains that the aim of qualitative interviews is to assist the interviewer to extract rich narrative information that will contribute to a better understanding of how the participants construct knowledge and their social reality to deal with their own situational challenges. The correct use of interviews normally helps establish a relationship of trust with the interviewees because when there is trust, participants give rich undistorted perceptions that cannot be collected through any other way (Maree, 2021).

Semi-structured interviews were used in this research because Welman and Kruger (2001) and Maree (2021) maintain that semi-structured interviews usually follow an interview protocol that the researcher develop before the commencement of the interview. The questions usually trigger new perceptions that relate directly to the research problem being addressed. As the interviews are semi-structured, the researcher can re-direct the participant back to the focused issues if irrelevant issues pop up in the conversation.

The best data construction method for this inquiry was semi-structured interviews because of their capacity to ensure the current researcher understood the various views and perspectives of the principals concerning CPTD implementation programmes and the challenges they encounter.

The researcher used a list of interview questions (Creswell, 2009) to interact with the participants to extract the required information and record answers (**Annexure G**). Creswell (2009) accentuates that during interviews, the researcher should record information using handwritten notes, audiotaping, or videotaping. In this study, the

researcher audio-recorded the interview and took notes as backup in case the audio-recording equipment failed (Creswell, 2009).

4.7.2.2 Observations

Observation of the physical environment was used as the second data construction technique. Observation uses the sense organs (Mwita, 2022). In other words, the researcher collects data by seeing, touching, tasting, or smelling. This method supplements the first data construction method, which used the sense of listening during interviews. According to Mwita, observation is divided into two methods, namely participant observation and non-participant observation. Participant observation is used when the researcher observes a phenomenon while being part of the research participants, and non-participant observation is used when the researcher is not part of the research subjects (Mwita, 2022).

Bryman et al. (2014) assert that during non-participant observation, the researcher takes notes about conversations, activities, or physical conditions without actively participating in any of those. They caution data collectors to respect the privacy of participants while taking notes. The researcher was permitted to take a walk around the selected sites for observation of important physical elements, and documents were also politely requested and the reasons for using them were explained. Fry, Curtis, Considine and Shaban (2017) define observation as a mode of data construction in which the researcher collects systemic information about a setting or a group. According to the authors, this mode of enquiry is important for understanding the phenomenon and its context at the same time. This background helped the researcher to use non-participant observation.

An observation schedule was prepared to record anything relevant to the study without involving the participation of the principals (**Annexure H**). The aspects of interest, according to the aim of the study, were the physical conditions of the research site and the available learning and teaching resources. The main reason for the observation of the surroundings of the data site was that the context of the phenomenon also impacts the interpretations, feelings, and perspectives of the participants. Data obtained from the observation of the research sites helped supplement the interview responses.

4.7.2.3 Documents analysis

The third data construction method was the analysis of documents. Researchers (Onwuegbuzie, Leech & Collins, 2010; Mwita, 2022) argue that valuable data can be left out if a single data construction method is used. Onwuegbuzie et al. (2010) hold that document analysis is a data construction strategy that uses texts and cultural artefacts or any evidence that cannot be subjected to interviews. They assert that the interpretation of documents reveals underlying evidence that could not be conveyed through the spoken word.

When using documents as a data construction technique, the researcher's focus must be on all types of written materials that supply information about the phenomenon (Creswell, 2009; Maree, 2021). These documents may be handwritten or printed, official or unofficial. The difference between primary and secondary data sources is that primary sources refer to published sources, and secondary sources refer to unpublished documents (Maree, 2021). Leedy and Ormrod (2015) hold that documents that are involved in document analysis are appropriate written documents or audio-visual materials.

The following criteria was adopted and used to select the documents to be included in the data construction process:

- Consider the kind of documents preferred.
- Is the publication date important, if any?
- Are they based on original data or only opinions?
- What was the purpose of having those documents?
- Under which contexts were the documents produced?
- How should the contents of the documents be structured?
- How are the contents related to the current study? (Maree, 2021).

The researcher used the above criteria to select documents to collect data to supplement the data collected through interviews and observation. The research questions guided the researcher about the documents relevant to the study, and included QMS implementation documents, such as the school's QMS file; teachers' individual QMS files; and the minute book for school development workshops. However, individual files were not perused for

correctness of content but to ensure they were available. A significant document in the teachers' files was the personal development plan document. Personal development plans comprise a list of activities that the teacher plan to do to improve identified areas of weakness; it is a SACE requisite. Other documents that were looked at were the school's post establishment and the asset register. These documents were important as the former comprise the detailed enrolment of the school and the teachers allocated to it by the department, and the latter displays a record of assets, including technological devices. The schedule used for document analysis is attached as **Annexure I**.

4.8 DATA ANALYSIS

Trent and Cho (2014) define data analysis as a research method in which collected data are summarised, systematised, and interpreted to establish meaning. The collected data remain in the form of raw information from different participants or research sites. The researcher should use available methods of analysing data to put the pieces of information together in order to build a report that makes sense to readers. In other words, the researcher should combine all the data obtained from different sources together and check how far they address the research questions, and this is called data analysis.

According to Vogt et al. (2014), data cannot express themselves, and researchers must speak on their behalf. Leavy (2017) argues that data analysis leads to interpretation, which leads to analysis to make a cycle. McMillan and Schumacher (2013) maintain that the process of analysing data is an ongoing cycle in which data are organised into categories and patterns are identified among the existing categories.

Furthermore, Henning et al. (2004) accentuate that the researcher must skilfully process the captured data into information that is meaningful and can be used to understand the phenomenon. Maree (2021) maintains that interpretive qualitative researchers prefer inductive data analysis strategies rather than deductive data analysis, which is mostly used by positivist quantitative researchers. In inductive data analysis, the themes come from the collected information itself, and the researcher can identify multiple realities out of the collected data.

Lincoln and Guba (1985) posit that inductive data analysis assumes that there are many different realities or views on reality, which is why qualitative researchers carry out their inquiries in the natural context of participants to extract the best possible perceptions. Leedy and Ormord (2015) describe data collected by qualitative researchers as more personal because the data are collected in participants' own language and capture different perspectives in a literary style. Qualitative researchers try, by all possible means to reach the serious complexities of the phenomenon under inquiry in the language the participants use.

Among the 15 different qualitative data analysis techniques that Ratcliff (2013) suggests, this researcher opted for thematic analysis to making sense of the collected data for the interpretation of findings. Qualitative data comprise groups of narratives that can be better analysed using a method that searches for themes in the narratives.

4.8.1 Thematic analysis

The features of thematic analysis made it the best method for this study. This qualitative data analysis method involves procedures and phases during which the researcher searches across the entire data set to pinpoint, group, interpret, and name the repeated patterns into themes (Braun & Clarke, 2006; Kiger & Varpio, 2020). Villegas (2022) calls it a process through which researchers mingle with sets of qualitative data to establish how the data form meaningful patterns, which are later named themes. The researcher uses their subjective experience in this process. The process of inductive thematic analysis involves going through a chunk of narrative data, identifying patterns of information and grouping them into themes, assigning codes to those themes, and then using their structures and content to make interpretations (Guest, MacQueen, & Namey, 2019). According to Guest et al. (2019), qualitative researchers who opt for thematic analysis understand that they should move beyond counting words or frequency of phrases or responses to identification and description of ideas within the data. The ideas are called themes in thematic analysis (Guest et al., 2019).

Braun and Clarke (2006) explain themes or patterns of data as statements that comprise valuable emerging ideas about the data and how they relate to the research question.

These statements represent patterned responses from which meaning can be made. Clarke and Kitzinger (2004) argue that the significance of a theme depends on whether it contains important ideas related to the secondary research questions. In other words, when doing thematic analysis, the researcher should check for groups of patterned information that emerge from the data and organise them into themes.

This process of identifying and arranging themes during data analysis requires the researcher to follow the steps set out by Braun and Clarke (2006) and Vaismoradi, Jones, Turumen, and Snelgrove (2016). The first phase is when the researcher familiarises themselves with the data; second, they search for themes and design codes; third, they review the themes; then they define and name the themes; and lastly, they produce a report. Figure 4.1 illustrates the path of raw data from collection to the production of report. When the report of the findings is ready, the researcher should also check its quality by considering whether it is trustworthy (Creswell, 2009). These phases are discussed in more detail in the following subsections.

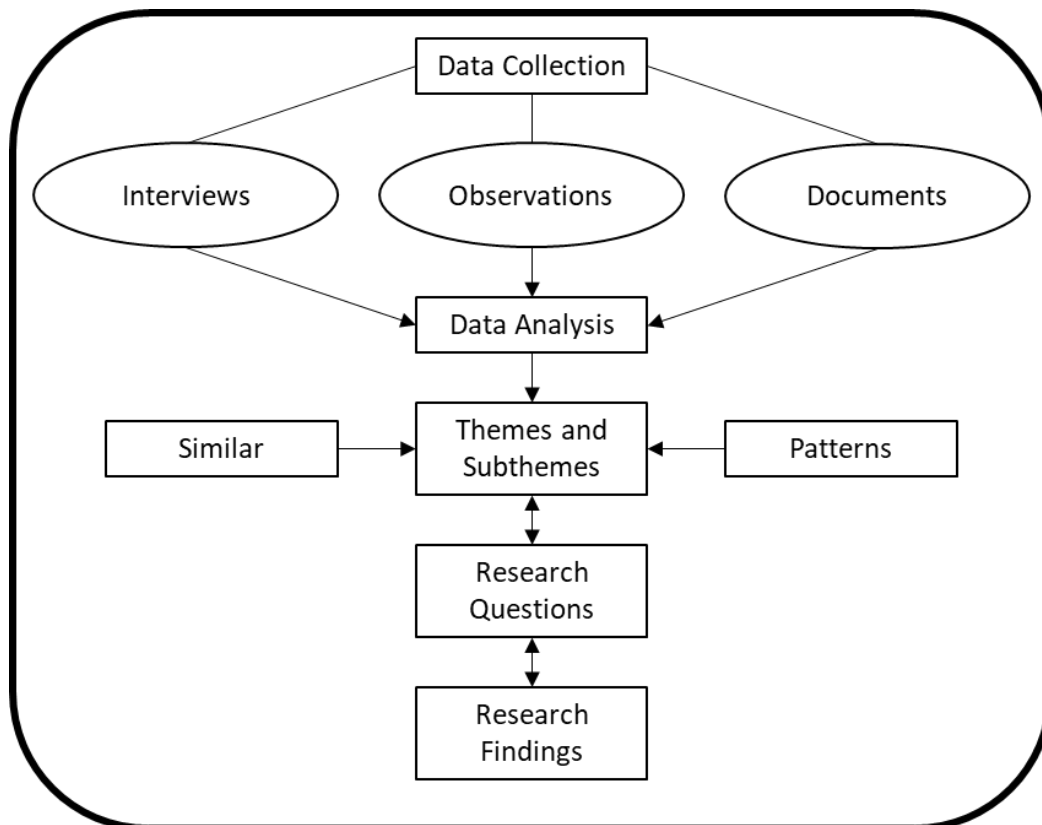


Figure 4.1 A typical data path in qualitative study from data collection to report

4.8.1.1 Familiarisation with the data

Braun and Clarke (2006) assert that during the first phase of data analysis, the researcher should repeatedly listen to the audio-recorded data and re-read the transcripts several times to compare the similarity of the content. The current researcher transcribed the audio recordings, and while doing this, listened to the recordings repeatedly, becoming familiar with the data. The findings from the interviews were presented by writing down responses for each interview question. The thoughts, feelings, and experiences were considered as the researcher read the transcripts several times. This familiarisation significantly facilitated the gathering of knowledge and general understanding.

4.8.1.2 Searching for themes and coding

The generated data was organised to detect the relationships among the patterns of responses. Similar responses were categorised into different themes that have similar relations to the research questions. The themes were given unique codes according to the common ideas they carry. The identified themes had features that answered the secondary research questions. The theoretical framework of SLT and the reviewed literature also played a part in this second phase.

4.8.1.3 Reviewing the themes

The researcher reviewed the themes to confirm that they all relate to the research questions. The themes were then broken down into subthemes for simplification and to understand the patterns and their relationships. The subthemes also emerged from breaking down the complex themes. The main ideas and emerging sub-ideas helped the researcher move to the next step in which themes were defined and given names.

4.8.1.4 Defining and naming the themes

The themes were given names or headings related to the research problem. The wording of the themes was aligned with the secondary research questions to enable smooth interpretations. The emerging subthemes were also given names for easy explanation of

the categories of responses. After this grouping of patterns into themes and subthemes, the procedure graduated to the final step of compiling a final report about the findings.

4.8.1.5 Producing the report

The main purpose of analysing the data was to consider the collected data and interpret it so the findings can be reported to evaluate whether the research questions were addressed through the data. Vogt et al. (2014), Trent and Cho (2014), and Leavy (2017) state that data analysis in qualitative research should indicate the appropriations on how far the participants make perceptions about the phenomenon under study. Merton (1975) and Joffe (2012) contend that thematic analysis focuses on the public conceptualisation of the phenomenon under investigation. They indicate that the process should go beyond concentrating on observable information into deeper concepts that are usually shared unconsciously in groups. This means that thematic analysis reveals that there are some understandings that are similar among individuals. Those individuals reveal the same understanding of concepts even when they are responding in the same contexts. The similar views are detected when patterns of information are identified and grouped together. Their contextual thoughts, knowledge, experiences, attitudes, and beliefs about the phenomenon indicates how it affects them similarly although they use different words to express their feelings.

When all the phases of the analysis process were completed, the researcher produced a written report as the last step to present the findings (Braun & Clarke, 2006; Vaismoradi et al., 2016). Chapter 5 discusses the presentation of the research findings in detail. Five themes were identified from the collected data and the themes helped derive meaning from the data and how it links with the research questions.

4.9 QUALITY ISSUES OF THE STUDY

Qualitative studies use terms such as validity, practicality, and effectiveness to establish quality in the findings report (Maree, 2021). Leedy and Ormrod (2015) hold that for the qualitative researchers to ensure quality of their studies, they should do the following:

- *Spend extensive time in the field*, which was achieved by allowing more time with the participants. The aim was to allocate one day to each participant;
- *Consider negative cases*, which means that when cases seem to contradict the assumptions, they are reconsidered and revised;
- *Use thick description* by giving rich details about the sites and the participants with regards to the relevant data and by quoting responses verbatim;
- *Seek opinions from colleagues*, which was achieved by taking the interpretations of the data to colleagues in the research field to check whether the researcher made correct interpretations; and
- *Use participants validation* by taking the conclusions back to the participants to ask whether they agree with them.

[Holloway and Wheeler \(2010\)](#) claim that it is often difficult for researchers to agree on how the trustworthiness of their qualitative study can be judged or established. However, Guba (1981) and Maree (2021) argue that trustworthiness and credibility in qualitative studies have unique ways of being established. Stahl and King (2020) maintain that quality can be established by indicating the trustworthiness, consistency, and relevance of the study. The current researcher used these three measures to ensure the quality of the study's findings. These measures are discussed in the following subsections.

4.9.1 Trustworthiness for quality

Stahl and King (2020) and Lincoln and Guba (1985) state that qualitative researchers should worry about the trustworthiness of their inquiry findings because in this research approach, reality is constructed and not tested as in quantitative studies. Therefore, qualitative researchers should strive for trustworthiness to give readers confidence in their work. Therefore, researchers must apply various means to make their inquiry reports trustworthy. Two instruments, validity and reliability, are often used to check for issues of quality for quantitative studies (Creswell, 2009; Leedy & Ormrod, 2015), but in qualitative research various strategies are used to ensure a study is trustworthiness (Guba, 1981; Lincoln & Guba, 1985; Denzin & Lincoln, 2005; Maree, 2021), including assurance of credibility, indication of transferability, issues around dependability, and confirmability.

4.9.1.1 Assurance of credibility

Assurance of credibility refers to the level of confidence that readers can have in the truthfulness of the research findings. Credibility confirms whether the findings are reliable perceptions analysed and correctly interpreted from the individuals' original data (Lincoln & Guba, 1985). Lincoln and Guba (1985) identify strategies to establish credibility, such as acceptable period of engagement in the field, enough observation, data collection triangulation, and member checking. They further maintain that the researcher should decide which strategy to use when designing the study because not all the strategies might be suitable.

Maree (2021) identify strategies that can be applied to ensure credibility. He advises researchers that they should adopt the best research methods, use research designs that relate well with the research questions, and choose a theoretical framework that aligns with the research question and methods underpinning the study. To achieve this, the current researcher selected a research design that relates to the research question, namely case study, which allowed the researcher to successfully get the perspectives of participants when collecting data in their natural settings. The current inquiry was underpinned by a theoretical framework that involves social learning because learning is a crucial element in teacher development.

Stahl and King (2020) hold that credibility can be established through another strategy that involves using different ways to implement methodological triangulation, member checking, and prolonged engagement. They define triangulation as applying several data sources supplementing one another to establish connected patterns of data. This strategy helps the researcher recognise similar outcomes through various data sources. They identify the following four methodological triangulation options:

- *Data triangulation* is the use of more than one method of data collection to establish findings, such as data from transcripts, observations, documents, test scores and other relevant data sources;

- *Investigator triangulation* is when researchers collect data for the same research problem and conduct a comparative analysis of individual findings to construct one report;
- *Theoretical triangulation* is using multiple theoretical orientations, such as constructivism and interpretivism, to understand the findings or direct the study; and
- *Environmental triangulation* is using more than one situation or context to conduct the intended study.

The second method of establishing credibility is involving participants, and is called member checking (Leedy & Ormrod, 2015; Stahl & King, 2020). This method is seen as a productive research practice by Stahl and King (2020) as it involves more participants involved in various roles within the same inquiry. Member checking involves checking with participants during the face-to-face interview and presenting an overview of the report after conducting the study with them. The third method that facilitates credibility is prolonged engagement with the research context, and means involving participants who have completed several cycles or have long been involved in the phenomenon under study (Leedy & Ormrod, 2015; Stahl & King, 2020).

The current researcher used theoretical, data, and environmental triangulation to facilitate credibility. He also implemented prolonged engagement for data construction, and member checking. These are discussed in the following subsections.

4.9.1.1.1 Theoretical triangulation

The current study used the assumptions of the two qualitative theoretical research paradigms to guide the research. The assumptions of constructivism and interpretivism permitted the researcher to construct data in a manner that restricted researcher interference, which enabled the participants to construct their own interpretations and beliefs about CPTD.

4.9.1.1.2 Data triangulation

This method allows researchers to use several data construction methods to supplement the data obtained through the main method. The main data construction strategy was semi-structured interviews. Data from the interviews were supplemented by non-participatory observations and document analysis, which were secondary methods. Information from the three sources supplemented one another because what was said in the interviews was proven and validated through the other two methods.

4.9.1.1.3 Environmental triangulation

Environmental triangulation is obtained by using several contexts during data construction. A study that uses a few environments or a small number of research sites to make conclusions cannot claim credibility. This study collected data from 10 principals and their school contexts to facilitate its credibility. The contexts of the 10 sites were not the same, and therefore, the different environments about the same phenomenon made the study credible.

4.9.1.1.4 Prolonged engagement

This credibility enrichment strategy means using participants who have long service or exposure to the studied phenomenon, which was CPTD implementation programmes in the current study. Participants who are newly appointed cannot have prolonged engagement with the phenomenon, and therefore, the researcher decided to use principals with a minimum of five years of school leadership with the assumption that they possess the relevant information. The researcher also ensured enough time was taken with the participants to get enough data. The prolonged engagement in the field was realised by assigning one day per participant.

4.9.1.1.5 Member checking

Credibility is established by involving the participants to verify the researcher's interpretations (Stahl & King, 2020). Member checking is performed on the first level when the researcher meets with participants face-to-face during interviews. This is different

from when surveys are sent over a network of participants or respondents without seeing or meeting them. The researcher met with each principal in their school, established relationships of trust, and conducted conversational interviews with them. Secondly, member checking occurs when after analysing the results and compiling a report, the participants are briefed about the report and how their views were transcribed and interpreted. According to Stahl and King (2020), the kind of relationship established between the two parties involved helps the researcher go back and shape the practice and interpretations. A healthy relationship often leads to trust.

4.9.1.2 Issues around dependability

Dependability is defined by Lincoln and Guba (1985) as the extent to which findings maintain stability when tested several times. The participants' personal evaluation of the findings and interpretation of the study are involved. Lincoln and Guba call dependability the "trust in trustworthiness". Korstjens and Moser (2018) argue that dependability includes consistency and neutrality. This study used thematic data analysis to go through the data, interpret it, and make recommendations. The data analysis method used is a standardised and acceptable method in literature.

Stahl and King (2020) hold that dependability in qualitative research is established through a peer review mechanism, which means that the research report is given to other researchers to go through it and check for anything that might render the report untrustworthy to the readers. In this case, the complete research report will go through several review levels before it will be presented to the public as a journal article. As is the norm of the university, research reports are first checked by students' supervisors, who then send them to internal moderators before they are passed to external moderators. Dependability is established when this series of moderators agree that the report displays authenticity. This is a clear indication that a research article can be created from the report and sent to public journals. The findings of the current study are therefore dependable.

Furthermore, Korstjens and Moser (2018) hold that it is salient to check the level of subjectivity between the data and the data analysis to check whether the researcher's own viewpoints did not impact the interpretation and reporting of the findings. To achieve

dependability, Tobin and Begley (2004) assert that the researcher should ensure there is logic and traceability and clearly document the research process. In this study, the researcher presented all the steps taken in the thematic data analysis process to establish logic and achieve dependability. The researcher will also follow all the moderation steps of the university to establish the dependability of the study.

4.9.1.3 Confirmability

The extent to which other researchers can confirm the report or research findings is called confirmability. This element indemnifies the report that the researcher's imagination did not affect data and that the interpretation of the findings can be trusted as a true reflection of the generated data (Lincoln & Guba, 1985). Confirmability is also concerned with neutrality, which maintains that confirmability and dependability should be treated as the same because they both emphasise that it should be determined that the researcher's preferences did not influence the findings. Lincoln and Guba (1985) call the process of maintaining dependability and confirmability an audit trail. To achieve it in this inquiry, the researcher provided an explanation of all the steps taken from generating the data, extracting meaning from the data, to discussing the research findings.

Furthermore, Stahl and King (2020) maintain that confirmability means getting as close to objective reality as possible. Qualitative researchers use subjectivity because they depend on what the participants have to say about what is investigated, which is subjective. Confirmability in qualitative inquiries is established when researchers strive to be accurate when using participants' responses without adding or removing anything.

Similarly, qualitative researchers also achieve confirmability by explaining their methodology choices. The reasons for selecting one research approach instead another, for the selected design, for the choice of data collection and data analysis, and how the report was prepared are all detailed in various sections of the current research report. These steps reveal the transparency and confirmability of the research path.

4.9.1.4 Indication of transferability

Transferability is the strategy of using thick description to maintain the degree to which qualitative research results are transferrable to other contexts with a different group of participants (Lincoln & Guba, 1985). According to Korstjens and Moser (2018) transferability also relates to applicability, and therefore, the researcher must describe the participants and the whole research process in detail. The researcher can then assess the transferability of their own findings if this has been well attended to.

Stahl and King (2020) presume that in qualitative research, patterns and descriptions are easily applicable between several contexts because qualitative researchers have a tendency to transfer findings to expand understanding. In other words, in qualitative inquiries, researchers can develop further understanding of a phenomenon by transferring findings within researches because the information supplements previous findings. Stahl and King accentuate that transferability is only possible when circumstances in a study are portrayed in thick descriptions.

Patton (2002) holds that successful transferability requires readers to evaluate the study independently so they can decide whether the findings can be transferred to other settings. The current researcher explained the profiles of the participants and why only those with a minimum of five years of principalship experience were purposefully sampled. The report also gives thick descriptions and uses the verbatim responses of the participants. Readers can decide whether the findings from these participants can be applicable to their own situations.

4.9.2 Consistency for quality

The research was guided by questions and objectives throughout the data generation processes to sustain consistency. Finlay (2016) and Morse, Barrett, Mayan, Olson, and Spiers (2016) highlight that consistency makes findings trustworthy if the researcher does not deviate from the research questions during data collection. In the current study the researcher used interviews, observations, and document analysis to generate data that related well with the research questions. The data gathering tools were applied consistently in all the research sites and with all the participants (Yin, 2014).

4.9.3 Relevance for quality

Stahl and King (2020) and Maree (2021) postulate that relevance can be established by triangulating the data gathering methods. The researcher used three strategies to collect data from all the 10 sites and participants. The relevance of the collected data was established. The researcher managed to collect the perspectives of the school principals, and the findings were supplemented by information from the observations and documents analysis. Thematic analysis allowed the researcher to get themes and subthemes from the patterned responses (Braun & Clarke, 2006). The findings were relevant to answer the research questions.

4.10 ETHICAL CONSIDERATIONS

There are various definitions of the term ethics in literature. Chilisa (2005) defines research ethics as behavioural rules that are used to regulate the conduct of researchers so participants and data are contacted in a sound manner that protects the participants or respondents from any kind of harm. According to Chilisa, the best way to ensure the researcher adheres to these ethics is to confirm the anonymity of the participants and conceal their responses. Other researchers predicate that because people could potentially think and experience physical or psychological harm because of their inherent feelings, researchers must consider the research ethics of their proposed study before they begin to involve participants (Leedy & Ormrod, 2015). In short, all researchers should consider whether their studies abide by the ethical principles before they expose people or any creature to an inquiry.

According to Leedy and Ormrod (2015), researchers can take care of the ethical issues by protecting their participants from harm, obtaining informed consent before involving them, respecting their privacy, establishing an honest relationship with them, and abiding by the established professional code of ethics that exists in all institutions of higher learning. Therefore, no research should be conducted if ethical principles are not satisfied.

Similarly, Maree (2021) proposes following nine guidelines to confirm the consideration of ethics issues: (1) Obtain permission for the research, (2) obtain informed consent from

participants, (3) establish an element of anonymity and confidentiality, (4) inform participants of their right to cease participation at any stage, (5) ensure participants are not interfered with, (6) respect and give responses utmost consideration, (7) recognise various roles, (8) promote of social customs, and (9) provide counselling when necessary. The current study adopted and followed these nine steps to abide by the ethics principles before beginning with the inquiry, and during and after interacting with the participants. The participants were 10 South African school principals from a district under the jurisdiction of the Limpopo DoE. The nine ethical consideration steps are explained below. These steps also indirectly contribute towards the quality of the study because they indicate the respect with which the researcher treated the data sources.

4.10.1 Obtaining permission for the research

Every institution of higher learning has an institutional review board or ethics committee. Researchers should apply to the board of the institution where they are enrolled to obtain ethical clearance to commence with a study (Maree, 2021). The current researcher is registered at the University of Pretoria and followed all the ethical requirements stipulated by the institution and the ethics committee. The researcher applied to the University's ethics committee, and the application was approved. The subsequent ethical clearance certificate is attached as the first pages of the thesis. The next step was a written request to the Limpopo DoE to be permitted to conduct the research in the province (**Annexure A**), which was approved by the provincial ethics committee from the office of the premier (**Annexure B**), who issued an ethical clearance certificate (**Annexure C**). This approval letter was then sent to the HoD, who wrote a permission letter (**Annexure D**).

4.10.2 Obtaining informed consent from the participants

The sample in this study comprised 10 school principals who were also gatekeepers of the research sites and who had to grant permission for the research to be conducted at their schools. McMillan and Schumacher (2013) state that researchers should always secure written permission documents before they get to the research sites to commence with the inquiry. Permission was requested through letters and attached to the letters of request were consent letters for the principals (attached as **Annexure E**. Leedy and

Ormrod (2015) predicate that when a researcher intentionally recruits people to supply information in research, the nature of the research should be revealed to them, their rights should be explained to them, and they should be informed that after agreeing to participate, they can withdraw their participation at any stage of the research should they feel uncomfortable to proceed.

The participants' rights were explained to them beforehand in a letter that provided a brief description of the purpose of the study, the role they were requested to play, and the anticipated duration of participation (Annexure E). A consent form was given to them to sign as an indication of their voluntary participation (**Annexure F**). Their confidentiality was ensured, and they were assured that even when signing the form with their details, their identity would not be revealed anywhere in the study report.

4.10.3 Establishing an element of anonymity and confidentiality

The participating principals were asked to fill and sign consent forms before participating in the study. This seemed like a contradiction as they were promised confidentiality and anonymity, but the researcher clarified the issue by showing them the significance of their consent for ethical issues. The participants were re-assured that their names will not appear anywhere in the final study report, and that only codes or pseudonyms would be used to identify them and their schools.

4.10.4 Right to cease participation at any stage

The research orientation held beforehand confirmed to all participants that signing a consent form does not take away their right to withdraw if they no longer feel comfortable at any stage of the interview. Should they feel like withdrawing, they may also request to be given back the signed consent form. This right is important in all research to avoid involving participants who are uncomfortable because they may supply data that is emotionally tampered with. The validity of such information is at risk. The current researcher managed to establish harmonious and conducive environments at all the research sites and no participant felt the need to withdraw.

4.10.5 Ensuring participants are not interfered with

Data collection procedures should be free from any form of influence from the third party. Researchers should avoid influencing participants as it can jeopardise the whole process. Holloway and Wheeler (2010) caution researchers that any sort of influence encountered by participants compromises the trustworthiness of the findings because the data will reflect the researcher's opinions. This is a dangerous ethics contravention. The current researcher's actions remained that of a research tool to collect data, and his activity was limited to asking questions, observing, and analysing documents.

4.10.6 Respect and give responses utmost consideration

Maree (2021) asserts that no data should be collected from the participants or research sites in an unfair manner. The current researcher respected all the standards of data collection by explaining what all the collected data would be used for. Participants understood that their responses were recorded using an audio recorder for transcription at a later stage. Furthermore, they knew that the researcher walked around the premises to make notes of the buildings and other facilities to supplement the data collected during the interviews. They were also aware of several documents that were borrowed from their offices to collect further relevant information about the phenomenon. At the end of data generation, all the documents requested from the research site were returned in good order and with appreciation for permitting the usage.

4.10.7 Recognition of various roles

The researcher should always be aware of their role during data construction. The role of the researcher was non-participatory in all the three methods of data construction. This ethical consideration allowed the researcher not to be tempted by how some sites were handling their issues. His role was limited to that of an ordinary individual collecting data, and he remained neutral to avoid unnecessary criticism and bias. Participants felt free to express themselves according to their own beliefs and understanding.

4.10.8 Promotion of social customs

Data generation processes should not appear as witch-hunting exercises that collect information for evil purposes. The research inquiry should proceed in a manner that attaches social values to the whole study. The participants should believe in the researcher and have hopes that the collected information will be used to their advantage and not to reveal their lives to dangerous third parties who will prey on them. Leedy and Ormrod (2015) use the phrase “protection from harm”. The principals were advised to choose any room on their premises in which they feel comfortable to proceed if their office was not an option. The required documents were collected, and alternative rooms were used in a few instances when the principal’s office was frequented by visitors. There was a mutually respectful relationship between the researcher and the participants, and the words ‘colleague’ or ‘friend’ were used during conversations.

4.10.9 Provide counselling when necessary

There are some sites that may be in such a heinous condition that everybody feels emotionally touched. In such instances, the researcher should be in the position to utter comforting words. The current study discovered two schools in which learners were attending school in very poor condition. The researcher sympathized with the principals, even if there was nothing the researcher could do, to show that he understood their situation. This ethical issue allowed the researcher to develop social relationships with the sites.

All nine ethical considerations shared the objective of protecting the participants from harm during data collection. Participants encountered safe and conducive environments in which they enjoyed their freedom of expression about what they know and understand about the phenomenon being studied.

4.11 SUMMARY OF THE CHAPTER

Chapter 4 outlined the chosen design and methodology used in the research. The research approach and the reasons for choosing it was explained. The explanation covered the methodological assumptions, the philosophical elements of this qualitative

study, the case study design, sampling, data construction and analysis, issues of trustworthiness, and ethical considerations. The next chapter presents the findings that emanated from data analysis.

CHAPTER 5

PRESENTATION OF THE RESEARCH FINDINGS

5.1 INTRODUCTION

Chapter 4 described the research methods and how they were used to conduct the study. The explanation covered the research paradigms, research approach and sampling strategies, qualitative data construction and analysis, trustworthiness, and ethical considerations. Data were collected from 10 participating school principals using semi-structured interviews with a prepared interview protocol. The present chapter presents the research findings. The chapter begins by tabling and discussing the demographic profiles of the participating principals, followed by an explanation of their interview responses through the emerging themes. Interpretations of the research findings are supported by relevant verbatim extracts from the participants. The outlined themes that were identified together with subthemes relate to the following research objectives guiding the study.

- To examine South African school principals' views on contemporary CPTD programmes;
- To investigate how South African school principals connect CPTD to the knowledge economy;
- To explore the challenges that South African principals face in connecting CPTD to the knowledge economy;
- To investigate how the challenges South African school principals face in connecting CPTD to the knowledge economy can be addressed; and
- To propose a possible model that can be adopted to connect CPTD to the knowledge economy.

5.2 DEMOGRAPHIC PROFILES AND DETAILS OF THE PARTICIPANTS

The focus of the inquiry was to examine the perspectives of South African school principals on CPTD for the knowledge economy. Data were obtained using an interview

protocol where participants were asked nine questions. Their responses were recorded on a tape recorder for every interview session, and all the responses were transcribed.

The 10 participants were a combination of primary and secondary school principals. The aim was to purposefully involve principals with five years or more experience. This criterion was significant because principals with longer tenure have the necessary experience and perspectives on the CPTD participation of their teachers. In addition, principals who completed several three-year cycles of CPTD were in a good position to understand the teacher development programmes. Every participant was visited at their workplace, and no inconvenience was caused during the interviewing process. Table 5.1 summarises the profiles of the participants, all of whom hold Bachelor of Education Honours (B.Ed. Hons) degrees, and this is followed by descriptions of the school environments.

Table 5.1 Profiles of the principals

Principals	Years as a principal	Qualifications	Total teachers
Principal A	6	B.Ed. Hons	13
Principal B	14	B.Ed. Hons	13
Principal C	13	B.Ed. Hons	8
Principal D	10	B.Ed. Hons	15
Principal E	9	B.Ed. Hons	22
Principal F	22	B.Ed. Hons	26
Principal G	9	B.Ed. Hons	14
Principal H	11	B.Ed. Hons	31
Principal I	9	B.Ed. Hons	31
Principal J	7	B.Ed. Hons	8

5.2.1 Principal A

This participant's school is situated in a remote rural setting surrounded by farms, and is a Quintile 1 school, and therefore, not supposed to charge any fees. Most of the learners come from nearby farms, but the school has the potential to grow in response to a developing mining area in the vicinity. Enrolment figures were still manageable but low at the time of the study, which negatively affects the number of staff members allocated to the school. The school's remote location is challenging for teachers who are required to attend workshops and other development programmes organised by the DBE, and these travelling costs also negatively impact the school's budget.

5.2.2 Principal B

Principal B's school is also a no-fee school in a rural area. Its enrolment, as learned from the file of post establishment documents of several years, has dropped drastically, reducing staff from 30 to 13 at the time of the study. The reasons for the drop, according to the participant, were related to community issues. The school is not remote and is not far from the circuit office. There are several feeder schools in the vicinity and another secondary school. The other secondary school also gets learners from the feeder primary schools, but because of community issues, some parents choose to take their children to schools further away. Teachers can access the workshop centres with ease because the workshops are usually held in one of the adjacent schools.

5.2.3 Principal C

This principal's school is very remote, situated deep in a farming area. It is a multi-graded no-fee school that depends on the annual allocation of funds from the DBE. Parents are poor and cannot contribute anything to support the school resources, which come entirely from the DBE. School enrolment is very low because of the state of poverty in the area, and this often negatively impacts the number of teachers allocated.

5.2.4 Principal D

Although this participant's school is semi-urban, it is also a Quintile 1 school. The school's funding benefits from its hostel facility. It was previously a school for White learners during apartheid government but has recently started to include Black learners. Enrolment at the school is increasing thanks to the hostel, and the number of teachers is also increasing. The researcher accidentally saw several post establishment documents when asking for the most recent one. Although resources are still insufficient, the school is in a better position than most schools in the area. The teaching staff is mixed, with a small percentage of White teachers.

5.2.5 Principal E

Principal E heads a Quintile 4 school with a hostel facility. The school is semi-urban but is situated in an area surrounded by farms. It is a state-aided independent school, some of its teaching staff are appointed by the school governing body, and its enrolment is slowly increasing. Because school and hostel fees are low, the school is not well resourced.

5.2.6 Principal F

This principal's school is a Quintile 1 combined school that depends entirely on the DBE for resources. It is situated in a poor village surrounded by farms, and learners from the farms depend on scholar transport. Fluctuating enrolment results in a small number of teachers. The fluctuating numbers were seen as the principal handed out a file containing several post establishments of the previous years.

5.2.7 Principal G

This principal's school is in a semi-urban area but surrounded by farms. It is a Quintile 1 school that does not charge fees and has few resources. Enrolment at the school is increasing slowly, but the number of teachers remains stable, with a small percentage of White teachers. The department takes a long time to consider adding teaching posts because the enrolment increases slowly. This increases teachers' workload.

5.2.8 Principal H

Principal H's school is a Quintile 1 school in a semi-urban rural village. It was converted into a technical high school three years before the study took place and has partial, though insufficient, resources. The school's enrolment figures are gradually increasing because learners are attracted by the technical subjects it offers.

5.2.9 Principal I

Although better off than many schools, Principal I's school is not fully resourced. It is situated in a township and has the potential to increase enrolment because of the

introduction of some technical subjects. Consequently, the school has a satisfactory number of teachers.

5.2.10 Principal J

Like Principal C's school, this school is a multigrade Quintile 1 school situated in a remote farm area with poor resources. The enrolment at this school is static because the area does not attract learners, and all the current learners come from surrounding farms and depend on scholar transport.

5.3 RESEARCH QUESTIONS, THEMES, AND SUBTHEMES

Several research questions guided the data construction and the rest of the study. The implementation of thematic data analysis led to the emergence of five themes with subthemes. Braun, Clarke and Weate (2016) maintain that this analysis strategy uses a set of analytic approaches that allows the researcher to pinpoint patterned information across a collected qualitative data set. Villegas (2022) argues that researchers who use thematic analysis should ensure the interpretation of themes is always supported by the collected data. Although thematic analysis is recommended for most qualitative inquiries, Villegas maintains that a continuity of data between the sets of responses from individual sites or participants should be ensured. In other words, the analysis should comprise all the information belonging to the same category or question. According to Villegas, researchers are not allowed to make any claims about how language was used in the responses. When responses are quoted to validate the finding, words should be taken verbatim.

All five steps of thematic data analysis were followed to arrive at five themes and their subthemes, which are discussed in the next section. The researcher started by familiarising himself with the data, looked for themes and coding, reviewed the themes, finalised and named the themes, and lastly, produced the report on findings (Braun & Clarke, 2006; Braun et al., 2016; Villegas, 2022).

The following themes emerged from the data analysis: South African school principals' views on contemporary teacher development programmes; South African school

principals connecting teacher development to the knowledge economy; challenges South African school principals face connecting teacher development to the knowledge economy; addressing the challenges South African school principals face connecting teacher development to the knowledge economy; and proposing a teacher development model to connect CPTD to the knowledge economy. Table 5.2 summarises the themes with their subthemes along with the research questions.

Table 5.2 Summary of the research questions, themes, and subthemes

The Research Questions	Corresponding themes	Subthemes
What are South African school principals' views on contemporary teacher development programmes?	1. South African school principals' views on contemporary teacher development programmes	1. Description 2. Advantages 3. Suggestions
How do South African school principals connect teacher development to the knowledge economy?	2. South African school principals connecting teacher development to the knowledge economy	1. Human capital 2. Innovation 3. Organisational dynamics 4. Technology
What challenges do South African school principals face connecting teacher development to the knowledge economy?	3. Challenges South African school principals face connecting teacher development to the knowledge economy	1. Reluctance to learn 2. Timing and paperwork 3. Lack of resources and support 4. Lack of motivation
How can the challenges that South African school principals face in connecting teacher development to the knowledge economy be addressed?	4: Addressing the challenges faced by South African school principals connecting teacher development to the knowledge economy	1. Apply managerial guidance and leadership 2. Encourage support from colleagues (SLT) 3. Encourage further learning and qualifications 4. Maximise use of available resources 5. Supplement resources 6. Organise external support and motivation by department
Which teacher development model can be adopted to connect the CPTD to the knowledge economy?	5: Proposing a teacher development model to connect CPTD to the knowledge economy	1. Contemporary teacher development model 2. Departmental training workshops 3. Supply of resources 4. Incentives and motivation 5. Support for principals and teachers

5.4 DISCUSSION OF THEMES

The themes and their subthemes are presented in the following subsections. Direct quotations from the principals' answers to the interview questions are included to support the findings.

5.4.1 Theme 1: South African school principals' views on contemporary teacher development programmes

This theme emerged from the responses of the principals linked to the following research question: What are South African school principals' views on contemporary teacher development programmes? The researcher wanted to understand the views of the school principals on existing CPTD and focused on how the principals described the programmes and what they felt needed to be reviewed or modified. The data revealed that all participants understood and supported the CPTD processes and programmes. They believed that CPTD is useful to keep teachers abreast of the dynamics of the education sector.

5.4.1.1 Sub-theme 1: Description

The SACE Act (RSA, 2000) stipulates that there should be a council for teachers. The council's responsibilities are firstly, to register all practising teachers, secondly, to regulate the profession through ethics and standards, and thirdly, to facilitate CPTD. According to the Act, these teacher development programmes are classified as educator-initiated tasks, tasks initiated by the school, and tasks initiated by external offices (RSA, 2000).

Educator-initiated tasks require educators to first realise the need for development and then locate relevant sources of information. In school-initiated programmes, the principal must realise the need to develop a particular skill or a variety of skills and suggest programmes to develop those skills. The circuit, district, or even national education departments must develop the third category of teacher development activities.

The views and descriptions from the study participants mainly involved development activities initiated by teachers, schools, and external bodies. Participating principals described teacher development programmes in South Africa as “*very good*”, “*good*”, “*key*”, and “*of paramount importance*”. For example, Principal E described CPTD as “*a very good programme ... I think all the teachers should be involved in it to develop themselves*”.

Participants believed that CPTD should be administered constantly for the benefit of the teaching staff. They indicated that what they liked about these programmes is that *“the programmes keep teachers abreast with everchanging needs in their profession”* (Principal F). According to the participants, all teachers should be involved in teacher development programmes because they are good developmental initiatives from the department.

5.4.1.2 Sub-theme 2: Advantages

The participants confirmed that the existing teacher development programmes are beneficial to their teaching staff for different reasons. Most principals commented that the programmes are important to develop teachers in their work. The principals liked the programmes because participating teachers are kept informed about what is happening or has changed in their field. They noted that it is through CPTD programmes that teachers move with the changes and are not taken by surprise.

Principal B interpreted the advantages of CPTD programmes as the vehicles that drive continuous learning in the teaching staff, noting that the availability of these programmes enable teachers to adapt to the changes in and development of their profession. The principal explained that *“it ensures that teachers become lifelong learners. It develops teachers on the work they are doing and ensures that teachers move with the present changes”*. Principal F added that an important advantage of teacher development programmes is that during participation, the process keeps *“ensuring that my teaching staff keep abreast and well-apprised with the everchanging needs of today’s teaching and learning processes”*. The other participants also emphasised the issue of keeping teachers informed about the latest developments in the teaching profession. CPTD improves teachers’ knowledge because it is meant to develop all the teachers in the education system.

Principals H and J pointed out that because the teaching profession is not stagnant, CPTD helps ensure teachers they develop their skills so they can acquaint themselves with new developments in education. They believed that teachers are given these development opportunities to engage with other experienced teachers. During these engagement

activities, they are assisted to develop their own academic achievement. Principal J observed the following about CPTD:

Teachers and give them opportunities to grow as teachers so that they are able to deal with the challenges concerning teaching and learning as a whole, and also to ensure that in recording their development, they are able to track and find out where they need to be developed further to gain teaching, learning, and knowledge.

The participants wished that all teachers could realise the advantages teacher development programmes hold for them in their profession. The advantages, if realised, have the potential to generate intrinsic motivation for interminable participation.

5.4.1.3 Sub-theme 3: Suggestions

Almost all the participants were happy with the teacher development programmes. However, they also suggested possible additions and modifications to the contemporary teacher development programmes that they believed may improve the significant contribution of CPTD to the knowledge and skills of teaching communities.

Principal A was of the view that *“teachers are supposed to add on [to] what the department is offering”*. In other words, teachers should not wait for the DBE to make programme changes but should bring their own initiatives and modifications to programmes for their own professional advantage. Teachers should also be motivated to initiate their own training. This opinion is in line with the stipulations of the SACE Act regarding teacher-initiated activities (RSA, 2000). Principal A maintained that it is not only the DBE’s responsibility to summon teachers for professional development.

Principal D added that teachers should be intrinsically motivated to participate in teacher development programmes and that *“CPTD should start with the interest of the teacher to develop himself”*. This opinion implies that teachers should be positive about professional training to enable them to sustain and benefit from the programmes.

In addition, Principal D suggested that CPTD should not only give teachers accumulated points on the system but should also benefit them monetarily. Teachers should also be

able to use the points when they apply for promotional posts: *“CPTD should benefit teachers in one way or the other, in monetary status or for promotional purposes”*.

According to Principal D, the department should also assist teachers by supplying them with equipment to be used for teacher development activities. This participant was concerned that teachers do not earn enough to afford to feed themselves and their families, let alone be able to purchase additional materials demanded by their profession. It is therefore the government’s responsibility to subsidise teacher development programmes by supplying the required technological equipment. Principal D put is as follows:

Teachers should also be supplied with gadgets so that they can use them to develop themselves for capacity-building so that development becomes compulsory because if it is optional, the young teachers will just drop [out] on the way if they feel like dropping [out].

Principal E proposed that *“the process should not involve a lot of paperwork so that teachers do not take most of their time on paperwork because their duty is to teach”*. The participant emphasised that the fundamental duty of teachers is to offer tuition to learners, and therefore, they should not be given additional paperwork because most of the teaching job has to do with papers, marking, preparation of marksheets, and presentation of learners’ academic performance.

According to Principal F, CPTD programmes must be crafted in a way that motivates teachers. In his opinion, the only thing that motivates teachers is money, and therefore, he suggested that a monetary value must be attached to teachers’ participation, adding that teacher development programmes should be implemented outside school hours. He said, *“They must provide value for money ... they must occur outside the normal teaching and learning time”*.

Principal G maintained that principals were doing their best with teacher orientation and development. The principal blamed on the DoE for not providing enough programmes and suggested that appreciation should be shown for every effort teachers make to

develop themselves. According to this participant, awarding certificates would mean a great deal to teachers:

I think at school level, we are trying our best, but it lacks at the department's side. The department must provide more programmes which can be done online ... they must give [teachers] appreciation in the form of certificates as they progress in their development.

Principal G believed that the current teacher development programmes are rigid and structured and should instead offer a variety of options from which teachers can choose. In terms of the timing of CPTD, the following crucial suggestion was made by principal H:

We need to continue with them, but we must make sure that these teacher development programmes do not affect the day-to-day running of the school. Teachers have ± 800 hours per annum teaching time, and we must follow the PAM [Personnel Administrative Measures] that tell us about the hours, and use extra hours of the teachers, and inform them three months in advance and make sure that we (the principals also) organise workshops for them. Those organised by the school and those organised by the department—if we can organise them over the school holidays—they will not interrupt the day-to-day running of the school.

Principal H was very worried about the teaching time consumed by teacher development programmes run by schools and by the education department. The principal emphasised that the teaching time should never be affected by these programmes because the sole responsibility of teachers is to teach. This response indicates that every teacher development activity should be organised to not disrupt time for teaching and learning. The participant expressed concern that if this issue is not dealt with, it could result in developing teachers to the detriment of learners. Other principals also commented on this, saying the following:

The timing is not appropriate as it consumes the teaching time. It is also overloading teachers with more paperwork. I propose that the programme be conducted online.
(Principal I)

I think the department should come up with (more) programmes that not only take teachers to a common venue where they just try to say they are developing them, but in most cases, we look at this type of developments that don't have the proof that I have attended. I wish the department should at any moment when they are calling teachers to a workshop or say any developmental programme, they should have some form of motivation, maybe say in the form of issuing out certificates to recognise that they have attended. (Principal J)

The issue of certificates of attendance was also recommended by Principals D and G to give teachers some motivation to continue as they track their own progress.

Table 5.3 Summary of participants' views on contemporary teacher development programmes

Principals	Descriptions used	Anticipated results
A, B, D, E, I, H	Very good	Teachers move with present changes
	Good	
	Good initiative	Teachers become lifelong learners
	Developmental	Their knowledge improves Keep teachers abreast
C	Paramount importance	Keep teachers abreast with everchanging needs
F	Key	
G	Assisting	Develop the profession

5.4.2 Theme 2: South African school principals connecting teacher development to the knowledge economy

Under this theme, the participants responded to the following research question: How do South African school principals connect teacher development to the knowledge economy? The knowledge economy in the education sector stands on four pillars, which are human capital, organisational dynamics, innovation, and technology (Marishane, 2020). The engine that connects these pillars is the learning process. Human capital is another term for the human resources or teachers who are involved in CPTD.

The four pillars of the knowledge economy emerged as the four main subthemes under this theme. The subthemes are human capital, which is how teachers gain knowledge in the school; innovation, which is how teachers are encouraged to be innovative;

organisational dynamics, which is how they use organisational dynamics to develop themselves; and technology, which is how they use technology to demonstrate their CPD.

5.4.2.1 Sub-theme 1: Human capital

The custodians of CPTD processes are the teachers themselves, and therefore, the development programmes must be designed for the benefit of the teachers. Human capital is the economic value of workers' experiences and skills (Kenton, 2016). Kenton (2023) holds that the success of every organisation depends on its human capital. Organisations should invest in capacitating their employees because the company's human capital is directly proportional to the success of the company.

The participants shared the view that the education sector is dynamic and that teachers must take measures to conform to the changes and acquire new knowledge, comprehension, and cognizance. The principals' responses covered different ways in which teachers (human capital) could involve themselves in their own professional development. The following detailed response from Principal A broadly includes the views of almost all the other principals:

I encourage teachers to attend regularly the training workshops organised by the department. I also encourage them to register courses which will help them to excel in their subjects because they know which areas are problematic for learners. Those courses will assist them to develop their content knowledge. I also encourage them to read policies and publications regarding their field of work, which will reinforce them. They must read circulars to keep themselves informed about changes in the Department of Education. They should also register courses such as ACE [Advanced Certificate in Education] in the subjects they are teaching. This will add value to their knowledge.

This response indicates the significance of development activities for teachers. All the other principals mentioned elements of attending local or external workshops as a way to gain knowledge.

According to Kenton (2023), examples of human capital include the technical skills of the workers, which demonstrate the education, experience, creativity, problem-solving skills, and sound mind of workers. It is also significant to note that growth in human capital leads to increased innovation, productivity, and durable participation (Kenton, 2023).

5.4.2.2 Sub-theme 2: Innovation

Human capital, as a pillar of the knowledge economy, encourages staff to be innovative in their profession. Innovation happens when an individual renews or updates a product by applying new techniques or ideas with the aim of adding new value to the system (Innolytics.net, 2023). Innovation can be nurtured when staff members are not only encouraged but also given opportunities to renew or update what is at their disposal.

The participants supported the idea of becoming innovative in the teaching profession because innovation results in improvising. They discussed various ways in which they encourage their staff members to be innovative. Principal A encourages teachers to be innovative despite the shortage of technological devices in the school, and he described his approach as follows:

Teachers are encouraged to be proactive and not wait for the district to provide tasks for them. I encourage them to initiate things on their own. Even if resources are still limited in the school, some of them are beginning to purchase some tools for themselves.

Principal A explained that while the Limpopo DoE habitually did not deliver stationery and textbooks on time, 'lazy' teachers would just wait without doing anything. Principal B spoke of some useful strategies to encourage the teaching staff not to simply wait in this situation. Teachers can create their own processes to continue with lessons while waiting for material to be delivered. They should also not wait for district officials to explain how to load their teacher development points on the system but should use their smartphones. Principal B explained that *"every teacher has a smartphone which has Microsoft Office. I encourage teachers to use their cell phones to prepare lessons and present them, and again to upload their CPTD points on the system"*.

Similarly, Principal C believed that innovation should begin with the schoolmaster. The educational manager should take the lead and run internal workshops about issues of concern and not wait for other offices to arrange workshops. During those workshops, the principal should address matters that will motivate teachers to be innovative and creative. The principal explained, *“We run school-based workshops to encourage teachers that when they lack textbooks they can’t wait but to check their ATPs [annual teaching plans] and then google on the internet for the information to teach those topics”*. Related to this statement about running internal workshops, Principal G said, *“We do have staff meetings and phase meetings and we do have white boards in the school and we encourage them that there are different ways in which they can teach concepts using the technology that we have”*.

Technology changes often take teachers by surprise. Principal D emphasised the importance of teachers taking advantage of existing technology to create ways to simplify their teaching duties. Teachers should be creative and not retain old methods of teaching when the teaching content has developed to new levels. The principals said the following about using technology in teaching and learning:

Timeously and often, I encourage teachers to not be overtaken by changes of technology, innovation, and developments. I emphasise also the issue of transformation because teachers become outdated in terms of information and become redundant and no longer useful to the system. Time and again I encourage them to develop themselves in using the new technology. (Principal D)

I always encourage teachers not to depend on textbook knowledge to teach. They should use the internet to source for more information on their subjects so that they are always ahead of the information in textbooks. (Principal E)

Principal E encourages teachers to be strategic and innovative beyond depending on textbooks when preparing and presenting lessons. He dislikes seeing teachers who read from the textbook in class presentations. According to the participant, learners can see whether the teacher has prepared and will always appreciate and trust the teacher who explains the subject matter without reading. In Principal E’s opinion, good teachers use

textbooks when preparing the lesson, not for presentation, because they have already absorbed the subject matter.

From a different standpoint, Principal F's strategy to encourage innovation is to ensure teachers are supplied with as much support material as possible to enable them to stretch their thinking "outside the box". The participant recommended the following:

The important thing we do to motivate teachers to be innovative is providing them with all possible LTSM [learner-teacher support material] they need; to provide them with necessary equipment and apparatus to perform their duties. Providing teachers with the necessary training and information is very important to motivate them to be innovative in their work.

Innovation involves creativity. This means that teachers should first be intrinsically motivated to get started but will extrinsic motivation to continue the process. Principal H proposed a strategy as follows to encourage teachers to continue to be innovative:

Education is not stagnant; it is changing always, so we motivate them to attend workshops and make sure they come with new things that will assist. For every innovation that will contribute to the development of the school, the teacher is applauded, given a pat. All teachers are given a chance to be innovative. They are not restricted to the system of the school. Innovation is allowed in the school.

In addition to this strategy, Principal I asked the school governing body to change the data supply option of the school's service provider to unlimited. He believed that when data is uncapped, teachers are excited to explore several options on the internet to supplement the information provided in the available textbooks, explaining that "the school has uncapped data. I motivate them to use it to supplement information provided in the prescribed textbooks".

5.4.2.3 Sub-theme 3: Organisational dynamics

The dynamics of an organisation occur in such a way that staff members are often taken by surprise by changes. Some staff members resist change while others remain flexible to accommodate change. Some see change as a good chance to acquire new

understanding and skills, while others view it as a strategy of management to frustrate employees and remove them through voluntary severance packages.

In schools, examples of organisational changes are the restructuring of curricula in line with recent economic demands and local skills deficiency, loss of staff members due to relocation or unforeseen circumstances, and granting persistent long-term incapacity leave to staff members, which requires placement of substitute staff. In the following paragraphs, participants describe scenarios in which teachers responded positively to organisational dynamics, and in so doing, they benefitted from their positive attitude and developed themselves professionally. The first scenario was described by Principal B and refers to the loss of management posts:

I encourage them to take the dynamics positively. Example is that we had a decline in enrolment causing an increase in workload to teachers. We sat down and planned and this time [stuck] to our plans. This made us to work like a team. We also lost management posts; some teachers were asked to assist in the SMT [School Management Team]. That opportunity made them to learn a lot when they act as HoDs. They know what is expected from HoDs and teachers. They know that teachers must follow programmes when they teach because they control their work and learn how to lead a team.

Principal B reported that some teachers are reluctant to assist in situations where there is a need because they assume they will be doing the work of other individuals. On the other hand, some teachers are flexible and assist by taking on the extra jobs as positive challenges. The latter end up learning new skills in their new responsibilities. The participant explained that this is a good example of intrinsically motivated CPTD. Ordinary teachers develop managerial skills and become their own departmental heads, which gives them better opportunities to occupy promotional posts as they arise.

The next scenario was described by Principal C and refers to multigrade teaching:

We are understaffed. Our teachers are forced to multigrade, which means teachers find themselves teaching subjects which they did not major in during their studies.

By encouraging them to teach those other subjects, they feel developed in the subjects.

When teachers willingly assist in the teaching process by offering teaching subjects that not their majors, they equip themselves with extra skills. These teachers become more sought-after as they are no longer rigidly teaching their major subjects.

The third scenario relates to being understaffed and teaching more subjects, and Principal E described it follows:

Most of them take the dynamics positively to develop themselves, like when the enrolment goes down and teachers must teach more subjects than they use to teach. I encourage them to use the increasing work to their advantage to develop themselves.

The existence of more work in an institution often poses a great challenge to the management of the institution to come up with strategies to manage the additional work. Teachers who see such dynamics as opportunities to grow will often take on more subjects. In preparing to teach those subjects, they are forced to explore more content to enhance their understanding. Reading extra material indirectly equips them with more knowledge that they could not have accessed in their major subjects. These activities contribute to CPTD.

The fourth scenario refers to replacing underperforming teachers with a single teacher, and Principal G described it as follows:

We had a Maths Lit Grade 12 class which was continuously poor-performing, basically because it was handled by a teacher who never majored in Maths or Maths Lit. We had to give the subject to our Maths teacher to teach both Maths and Maths Lit. This teacher showed good development in Maths Lit by producing very good results. He ended up liking the subject and performing more than in pure Maths. This showed us that for this teacher to take organisational dynamics positively assisted him to acquire new skills.

According to Principal G, they were faced with a challenge of an underperforming teacher who took the subject because he wanted to develop himself in it. But since he failed, the principal was obliged to replace him with a teacher who specialised in pure mathematics. It seemed a great challenge at first, but the willingness of this teacher enabled him to teach the new subject, and in the end, he enjoyed it more than his major subject and was grateful to the school for offering him this opportunity.

Principal H described the fifth scenario that relates to teaching related subjects on top of major subjects as follows:

Our school has just changed from an ordinary high school to a technical high school. Most of the teachers from the previous system did not do these technical subjects. Some of the teachers started developing themselves so that they can be able to teach the new subjects.

In the process of restructuring schools to accommodate new learning areas, the school under the management of Principal H was restructured to a technical high school. The main challenge was that they had insufficient human resources to handle the new technical subjects. With only two teachers, they introduced technical subjects in Grade 10. In the following year, enrolment increased, and more teachers were needed for the new subjects. Those who volunteered to help because they had an interest in the subjects demonstrated dedication and self-motivation, enabling them to develop new skills during lesson preparation. Intrinsic motivation and SLT played a major role in their CPTD.

The final scenario was related to the introduction of new subject or stream, Principal I described it as follows:

We introduced electrical technology in Grade 10 with only one educator to offer the subject. The following year, learners happened to follow the subject in massive numbers to unable him to handle the subject alone. I had to check profiles of teachers and encouraged those with basic knowledge of the subject to assist. [A few] of those who showed interest and commitment managed to take the challenge positively, which resulted in developing their skills and expertise in the subject.

This scenario is similar to the fifth scenario because the Principal introduced a new subject with one teacher, only to find that the new subject was very popular. The enrolment of learners increased in the new subject, and the existing teacher needed assistance to handle them. Teachers with fundamental skills in subjects close to the new subject were willing to assist. These teachers were excited to enhance their skills and knowledge and developed a love of the new subject. In each of examples of organisational dynamics, it is important to see how individuals use the dynamics to their advantage to enhance their CPD.

5.4.2.4 Sub-theme 4: Technology

Marishane (2020) confirms that the pillars of the knowledge economy are based on learning. Technology, as one of the catalysts for organisational change and staff training, positively contributes during learning opportunities. Teachers develop their professional apprehension and proficiency through learning. Technology makes the learning process smooth and user-friendly.

The participants in this study detailed the various steps they had taken to connect teacher development to the knowledge economy by using technology in their institutions. Principal B explained as follows that they are fortunate to have laptops and projectors in the school that most teachers use for lesson preparation and presentation.:

We have laptops and projectors. We had workshop with teachers on how to prepare lessons through laptops and to present them through projectors. They learned that what is good about using laptops for lesson preparation is that the following year you just edit and not start from scratch.

Most schools in the province are Quintile 1 schools that do not have enough technological equipment because they depend entirely on the state for resources. Principal C explained as follows why it is a problem when schools do not have this equipment:

We have one laptop and one projector. They are not enough, but I encourage them [teachers] to make use of them when they get chance so that they get used to the

technology of today as teaching is moving towards a paperless state, if I may put it that way.

It is crucial to note that even though this school has only one laptop and one data projector, the principal still encourages staff members to share the facilities. He explained that his staff did not complain and used a timetable to manage this opportunity to their advantage. It was clearly challenging for the whole school to depend on one laptop and one projector.

Principal D emphasised the issue of orientating new staff members during their induction to use new technology. Although he admitted being unfamiliar with the new technology himself, he found it important that staff members were not overtaken by the continuous changes in the teaching profession. He explained as follows:

I engage teachers, especially the beginners, to use technology available. There is a new program called the Cawood, introduced by the department, that encourages the use of smartboard and to deal away with the issue of chalk and dusters. I encourage them to learn about it. I also encourage them to use the PowerPoint presentation and must make use of the e-filing.

Although Principal E's school is not well resourced, and the staff used what they had, depending on the knowledge that a few teachers possessed. These teachers are encouraged to assist those willing to learn more about technology. The teachers all realise the importance of technology in the profession. Principal E said the following:

In the school we have one interactive board and three overhead projectors. At the moment one teacher has attended the course for ICT and will soon take the other on board in terms of using the technology. I encourage all the teachers to improve their skills in ICT.

Principal F manages a no-fee school that is entirely dependent on the government for resources. This principal has created a culture in which one teacher with appropriate knowledge teaches others so they can learn to work with the available technology tools. Although this principal is not technologically literate, he believed it is important to

encourage the staff because a knowledgeable staff leads to knowledgeable learners. Principal F stated the following:

For the use of computers, overhead projector, photocopy machine, and internet facility, we do provide the necessary training for the utilisation of these new technology tools. Also, key is our effort of providing free Wi-Fi for our teachers to gain access to the internet.

The school that Principal G manages has a few interactive boards and is the only school in the study with these boards. However, some teachers, especially those who feel discouraged because of their age, struggle to use the technology available in the school and have returned to traditional methods despite of the principal's insistence that they will be overtaken by their own learners. Principal G said the following:

At our school we do have Wi-Fi, we do have white boards, so we encourage them to use that and use technology available to them. But there are still teachers who are not up to date with the use of technology, and we try to teach them and encourage them to use the technology as well.

Principal H's school used new technology far more efficiently than the other schools in the sample. After being restructured as a technical school, it received donations from companies who use the schoolyard for advertising boards. There is also a healthy competition between teachers to come up with new technological methods of teaching and learning. The teachers generally work as a team and teach one another new techniques. Even their learners have developed the habit of completing tasks on their gadgets. Principal H explained it as follows:

COVID has taught us many things. We had to teach our learners at home. Our school, being an MST [maths, science, and technology] school, most of our teachers have laptops, all teachers have data projectors, and the school has Wi-Fi. Teachers are able to teach learners whether they are at home or anywhere. They are able to send them work in their gadgets so that technology is used maximally. Technology really assists us. We can even hold meetings while we are in our different homes.

Finally, Principal I encourages teachers to maximise the use of the resources they have. While most principals reported not allowing learners to bring smartphones into the classrooms, this principal encourages the practice to promote technology usage in classrooms. He encourages all teachers to create electronic communication platforms where teachers and learners can contact one another remotely and share tasks and solutions to challenges. Principal I found that another critical purpose of smartphones is to access information from the internet, and described it as follows:

The school currently has 10 laptops and five overhead projectors. I encourage them to use those laptops and overhead projectors for lesson preparation and presentation as well. I encourage learners to have smartphones for teachers to create WhatsApp groups for home schooling and to access information from various technological sources.

He indicated that the strategy of allowing learners to use smartphones for learning and teaching seemed to be effective because he had noticed a corresponding improvement in learners' academic performance.

5.4.3 Theme 3: Challenges that South African school principals face connecting teacher development to the knowledge economy

Under this theme, participants answered the following question: What challenges do South African school principals face connecting teacher development to the knowledge economy? The participants were generally in charge of the CPTD in their institutions. Although they were not aware of the concept of the knowledge economy as such, it became evident that they were implementing programmes to connect professional development to the knowledge economy. The principals described various challenges they had experienced on different occasions when connecting the CPTD process to the knowledge economy.

5.4.3.1 Sub-theme 1: Reluctance to learn

The principals in this study reported the challenge of some teachers' negative attitudes when required to participate in teacher development activities. These teachers do not

want to seek the necessary apprehension and proficiency for them to move forward with other teachers. As noted under the previous theme, among Principal A's staff members, some older teachers are still reluctant to improve their professional skills because they feel it is useless for them to try to learn new things when they have so few years left in the system. He called the attitude *"very primitive, barbaric and uncivilised"*, noting that *"you still find teachers who cannot participate on online teaching and who cannot teach through the PowerPoint. They still do it the traditional way ... others were just thinking it won't be possible for them to learn these new things at their age"*.

Principal B has a similar challenge because most of his teachers complain about their low salaries even after submitting further certificates. The teachers blame the DoE for not motivating teachers with monetary appreciation when they submit certificates of further studies. The principal claimed that this led to *"reluctancy to further studies in some of the teachers; some teachers don't want change. Teachers don't want to further their studies because of the salaries they get"*.

Principal D reported that most of his teachers *"connect on the Wi-Fi only to abuse the system instead of browsing for useful information"*, meaning that they use the internet for entertainment and to watch non-educational programmes. He referred to them as *"juvenile teacher-delinquents"* because they act like teenagers in spite of his attempts to coach and encourage them to search for more information to enhance their content knowledge.

For Principal E, *"the first challenge is that most teachers don't want to change"*. When something new is introduced, they feel threatened as if the change wants to push them out of the system. In addition to feeling negative about change, some teachers in Principal I's school resist any challenge in the organisation that requires them to change how they work. These teachers do not want to learn anything new, particularly when advanced pedagogical strategies are introduced.

5.4.3.2 Sub-theme 2: Timing and paperwork

Most of the principals reported having insufficient time to fully implement the teacher development activities. They also found the preparation of paperwork to be submitted as evidence for CPTD implementation to be challenging.

Principal C reported being over-burdened with work because of the shortage of human resources. Together with the other study participants with similar challenges, Principal C complained that the departmental authorities do not permit schools to recruit extra staff members, even when their circumstances are unique. As the principal of a small understaffed school, he has had to manage the situation for several years without any assistance and has had no time to focus on CPTD. He explained as follows:

As a principal I find myself being a Jack of all trades because I have to teach some subjects and at the same time be an admin clerk because our province does not provide admin clerks to schools. My time to be involved in teacher development is consumed by the many duties that I am supposed to do.

Furthermore, in terms of paperwork, he found it a mammoth task to lead teacher development programmes because he has many other unnecessary responsibilities: *“I find it very difficult as a principal as there is much paperwork to be supplied as evidence. The much paperwork should be reduced because it is time consuming”*.

Principals D, E, and I expressed similar difficulties with the quantity of paperwork, explaining that each teacher is supposed to maintain a file of paper records of their own CPTD, and the principal must ensure these files are complete and controlled during the process. Principal D referred to *“a challenge of lot of paperwork in terms of classroom observation. Most schools will just do it for the sake of complying and not for the purpose [of development]”*. Principal E said the following:

But according to me, the process should not involve a lot of paperwork so that teachers do not take most of their time on the paperwork because their duty is to teach ... the programmes should not involve a lot of paperwork because teaching itself has paperwork.

Principal I considered the programme to be good, *“but the timing is not appropriate as it consumes the teaching time. It is also overloading the teachers with more paperwork”*. The problem of overload was also mentioned by Principal G, who reported that teachers have too much work because there are too few teachers. The principal said, *“I think teachers are overloaded. They find it difficult to find time to develop themselves, time to reach out and get information with the current curriculum that we have”*.

In most cases, according to Principal H, the department has not organised the timing of development workshops effectively. His teachers were inundated with a series of workshops that came one after another. It appeared that the department had forgotten that teachers needed more time for involvement in actual classroom teaching activities. Principal H found that teachers attend workshops simply to comply but are unmotivated to participate in development activities. He explained that *“the challenge that we have is time. We have so many teacher development workshops that we might end up developing teachers throughout the year, forgetting that the main purpose of teachers is to teach”*.

5.4.3.3 Sub-theme 3: Lack of resources and support

One of the dominating challenges the participants raised is lack of resources. The participants pointed out that in order to connect teacher development to the knowledge economy, resources must be made available, especially technological resources. Human capital depends on technological resources for the accessibility of knowledge, skills, and experience. Principal A commented the following:

Our school does not have enough resources ... Lacking enough material, if we can try to offer our own training in the school. We need to outsource to get a relevant person with expertise to come to our remote school to assist teachers in developing particular skills, but such people are not available in the department ... trying to liaise with the circuits for assistance, but we just request but in many instances we don't get that provision from those offices.

Principal A is eager to implement CPTD programmes but faces the ongoing challenge of minimal assistance from the education authorities. In this participant's opinion, rural schools situated in remote areas far from resources should be prioritised by the

department to supply necessary resources. However, they are instead the most neglected schools and remain poor.

Principals C, D, and E also raised concerns about the inadequate number of teachers at their schools, which results in huge workloads carried by the few available teachers. To aggravate the problem, their schools are not supplied with enough resources. This leaves principals with no option but to choose only affordable development programmes and to leave the others. They commented the following:

We are understaffed ... we have one laptop and one projector. They are not enough.

(Principal C)

The department does not supply schools with the new technology for teachers to use. (Principal D)

In the school we have only one interactive board and three overhead projectors.

(Principal E)

The national DBE has classified public schools into quintiles to determine their status for the collection of fees from parents. According to these norms and standards, Quintile 1 and 2 schools are not supposed to charge any fees from the parents because they are poor. The school of Principal F is situated in a very poor rural and remote village surrounded by farms where some of the community members work. It is 70 kilometres away from the town and circuit office and is severely overcrowded as it is the only school to serve the learners from the village and surrounding farms. According to Principal F, their particular situation appears to have been overlooked by the authorities, and the school is in need of extra human, physical, and financial resources. Principal F explained as follows:

As a Quintile 1 school, overcrowded as we are, and mainly as a combined school starting from Grade R to Grade 12, needs are huge. Financial constraints are limiting our initiative and efforts to expand our teacher development needs to the required new context ... availability of skilled teachers in the field of new technology is a huge

problem. Shortage of physical resources, classroom and equipment aggravates the whole situation.

Principal H experiences a similar serious challenge from lack of resources. The DoE had organised teacher development workshops in venues located far from the school, sometimes requiring teachers to use up the meagre school funds for transport to attend these workshops. The participant believed that the department should bring the workshops to the teachers instead of the current situation. He maintained that the money lost to transport can be better used towards purchasing physical resources to enable the principal to run his own teacher development workshops. He explained as follows:

We have a serious challenge because most of the workshops need cash, and we have a challenge of cashflow, being a no-fee school and a technical school. There are so many projects that need to be done, but with the limited resources that we have, we have difficulty.

The teachers at Principal J's school are willing to participate in CPTD but do not have enough resources at the school to enable them to benefit. Some teachers are even willing to remain after hours to have one knowledgeable teacher explain how lessons can be presented using PowerPoint or a data projector. The school needs assistance from the education authorities in the form of technological resources. The principal said, *"I would say even though our school does not use that much of technology, but what is available, teachers are more willing to use"*.

5.4.3.4 Sub-theme 4: Lack of extrinsic motivation

One of the challenges participants identified in teachers' attitudes to CPTD is the need to be motivated throughout their development. Extrinsic motivation is driven by external rewards such as money or grading (tangible), and praise or fame (intangible) (Kendra, 2020). In other words, people are motivated extrinsically by things to which they attach value. If people receive these things following an activity, they are motivated to continue the activity. The principals hinted at a lack of extrinsic motivation in teachers during their participation in CPTD programmes, which can be grouped into the subcategories discussed in the following subsections.

5.4.3.4.1 No change in salaries (Principals B, E, F, and J)

The participants reported that teachers generally complained about the salaries they receive. Teachers are unmotivated because those who have obtained further qualifications did not receive salary increases in recognition of their study efforts. The morale of teachers remains low because of this issue and because the DBE only provides teachers with a small lump sum after submitting the qualification, but their salary remained the same. The principals commented as follows:

Teachers don't want to further their studies because of the salaries they get.
(Principal B)

Teachers are discouraged to further their studies because the department no longer pays for the recognition of qualifications. (Principal E)

They [the activities] must provide value for money. (Principal F)

Principal J offered the following input:

When we talk of teacher development, in most cases in the new dispensation, the department is only recognising your qualifications once off and they are no more adjusting your notch and all stuff. That is what is demotivating most of our teachers. This is a challenge because teachers are complaining that they are spending a lot in terms of developing themselves while the department is not recognising the amount of time and money that they have spent ... that is one of the reasons why teachers lack motivation to register and develop themselves.

5.4.3.4.2 No monetary gain in the accumulation of CPTD points (Principal D)

Principal D pointed out that the points that teachers accumulate during CPTD activities are only professional development points with no monetary value. In other words, no matter how many points a teacher accumulates, they receive no money. As teachers were already complaining about low salaries, they want any activity that the department engages them in to have monetary value. Principal D explained as follows:

Teachers are losing interest because they accumulate the points but [the points] don't benefit them ... [the teachers] should be motivated and encouraged to take teaching seriously.

5.4.3.4.3 Lack of certificates for development courses (Principal G)

According to Principal G, teachers complain that the different development activities offered by the DBE are not rewarded with certificates. Teachers who attend development activities cannot show evidence that they had done so. Principal G proposed that *“teachers should be motivated on it because they are so overloaded at the moment ... they must give them appreciation in the form of certificates as they progress in their development”*.

Most of the principals believed that the education authorities, as employer and initiator of most development programmes, should motivate participation. They considered the lack of motivation from the department as most difficult challenge that impact the smooth running of CPTD. The principals pointed out that creating their own certificates at school level for development activities cannot not substitute for certificates coming from the department as employer.

5.4.4 Theme 4: Addressing the challenges faced by South African school principals connecting teacher development to the knowledge economy

According to the participants, some of the challenges they cited could be internally addressed with support from relevant officials, but most challenges would be best solved by the education department or by any type of external support to schools. According to the NEPA (RSA, 1996a), read together with the EEA (RSA, 1998) and the SACE Act (RSA, 2000), it is the responsibility of the education department to design programmes for the appraisal of teachers. The DBE should also come up with measures to support CPTD programmes, including assisting principals to enable them to run school-based programmes as the need arises. Principals should also use their own discretion and managerial knowledge and experience to ensure that management functions are carried out efficiently. The education department, as employer, remunerates principals for the

application of their skills. Managerial skills are acquired through infrequent departmental workshops and through managerial courses that principals take at their own expense. The strategies suggested by participants in this study arose from their own skills and experience of daily educational leadership and management.

5.4.4.1 Sub-theme 1: Apply managerial guidance and leadership

According to the participants, the first crucial step is to identify why individuals resist participating in teacher development programmes. This step enables the principals to give the individuals one-on-one attention and support. The principals applied managerial guidance and leadership in different ways to encourage their teachers to take part in CPTD activities. These approaches are discussed individually in the following subsections.

5.4.4.1.1 Encourage reading policies and participation (Principals A and F)

The DoE communicates with schools, through principals, via circulars and policies. Teachers who are reluctant to read these documents are always behind in terms of the recurring development in the department. Therefore, Principal A makes a point of encouraging all teachers to read departmental policies and circulars, as well as textbooks and other publications. He explained as follows:

I also encourage them to read policies and publications regarding their field of work, which will reinforce them. I encourage them also to adjust to the new system of accessing tasks that are sent through emails and WhatsApp. Encourage them to learn to get means of downloading them to administer them.

Principal F noted that “*at school, teachers are provided with a variety of available resources like extra textbooks, study guides*”.

5.4.4.1.2 Organise and lead school-based workshops (Principals C, D, and G)

The effectiveness of a school is based on good communication between the school management and the teaching staff. The school manager can sustain communication by holding meetings and workshops with teachers on a regular basis. According to Bagire,

Byarugaba and Kyogabirwe (2015), managers use meetings to improve communication, employee engagement, team building, and management development. These authors discovered that meetings bring employees closer to the management of the organisation, which enables the sharing of knowledge, problems, and solutions. The principals explained their approaches as follows:

We run school-based workshops to encourage teachers. (Principal C)

We start with our own capacity-building workshop where we have subject committees and subject initiative programmes and in-service training. Teachers should be clarified whenever they meet challenges during development activities. (Principal D)

We do have days that we have fun days with one another so that we can get to know one another to share challenges of life at school and those at home, because sometimes challenges at home reflect at school, so that we can support one another. (Principal G)

5.4.4.1.3 Encourage attendance at workshops and training (Principals B and H)

Principals B and H suggested the following strategies to encourage reluctant teachers to participate in CPTD.

I encourage them to also attend subject competitions, subject conferences, and to register for the conferences and attend them. (Principal B)

By making sure that all professional development workshops are attended and that they must attend skills workshops as our school is based on skills, as our subjects are technical. (Principal H)

5.4.4.1.4 Offer psychosocial support (Principals I and G)

Offering psychosocial support to teachers encourages them to cope in a solution-focused way by reframing problems into alternatives and workable solutions (Ebersöhn, Loots, Eloff and Ferreira, 2015). Teachers can cope with challenging problems if principals offer

them physical and psychological support. Ebersöhn et al. (2015) hold that teachers who are psychologically supported through partnerships, school-based interventions, and self-determination, develop positive identity formation, personal growth, commitment, and enhanced self-confidence.

The principals believed that it is essential for principals to offer psychosocial support to teachers because when their morale is low, they struggle to carry out their duties. The following comments by Principals I and G show their believed that it is the duty of the educational manager to confirm that the teaching staff are supported physically, emotionally, and psychologically.

First, I investigate the reasons for their resistance. Secondly, I try to address their individual challenges and try to support them individually. (Principal I)

We do have days that we have fun days with one another so that we can get to know one another to share challenges of life at school and those at home, because sometimes challenges at home reflect at school, so that we can support one another. (Principal G)

5.4.4.2 Sub-theme 2: Encourage support among colleagues (social learning theory)

Xavier, Jacobi and Tura (2018) suggest that the advantages of implementing SLT in a work situation are knowledge translation, knowledge transfer, knowledge exchange, and knowledge co-production or mutual learning. When teachers collaborate, they share knowledge and skills. The participants encourage teachers in their schools to collaborate towards a common goal, which is to bring about the best academic performance of their learners, and to achieve the shared educational goals of their schools. The principals implement this strategy of encouraging their teachers to collaborate to exchange knowledge and skills in the following ways:

We need to outsource to get a relevant person with expertise to come to our remote schools to assist teachers in developing particular skills. (Principal A)

We sat down and planned and this time we [stuck] to our plans. It made us to work like a team. (Principal B)

We work as a team to share knowledge ... they are encouraged to look for someone who is better in that subject or section to come and present the lesson for the teacher. (Principal C)

We refer others that we can't do ourselves to subject symposiums and conferences. We encourage teachers to also use their own initiatives and be decisive. (Principal D)

At the moment one teacher has attended the course for ICT and will soon take the others on board in terms of using the technology. I encourage teachers to improve their skills in ICT. (Principal E)

But we do encourage them to sit together when they get free periods and to discuss things of development in teacher forums and to share information they get from sources. (Principal G)

I also outsource knowledgeable colleagues to assist where they experience challenges. (Principal I)

5.4.4.3 Sub-theme 3: Encourage further learning and qualifications

As one of the strategies to enhance teacher development for the knowledge economy, the participants believed it imperative to inspire their teachers to take educational courses with institutions of higher learning to add to their credentials and increase their knowledge and skills. Courses at tertiary institutions can also increase pedagogical skills in the teaching community. Sir Francis Bacon once said that the process of reading makes a full man while conference and writing make an exact and ready man (Vickers, 1992). In other words, when you read (or take courses that make you read), you accumulate new knowledge that empowers you to do the best in your occupation or career.

Principal H commented that “*our education is not stagnant*”. Education in schools and in the education department continues to change. For this reason, teachers should

continually develop their comprehension and proficiency to keep themselves informed of new developments. The necessary information is obtained in institutions of higher learning. Principals A, B, E, F, I, and J expressed very similar views about registering courses. The following response by Principal A summarises these responses:

I encourage them to register courses, which will help them to excel in their subjects because they know which areas are problematic for learners. Those courses will assist them to develop their content knowledge. They should also register courses such as ACE [Advanced Certificate in Education] in the subjects they are teaching. This will add value to their knowledge.

5.4.4.4 Sub-theme 4: Maximise use of available resources

Participants agreed that before they can complain about a shortage of resources, they must maximise the use of anything available to reveal what they really need. Most indicated that teachers complain about the shortage of textbooks, and then, when the problem is investigated, there is a stack of textbooks that the complainant says are not enough.

Okongo, Ngao, Rop and Nyongesa (2015) propound that resources are not only methods of teaching and the materials used but also include the allocated time for teaching and learning opportunities, the comprehension acquired through various development programmes, and their current experience. This suggests that teachers should trust their personal internal resources in addition to those supplied to them by an external source. When they consciously use what they already have, they realise what needs to be supplemented. The principals commented as follows during the interviews:

We encourage them to use technology available to them. (Principal F)

Our school does not have enough resources, but I inspire teachers to make use the less resources available to prepare and present lessons. (Principal A)

We have one laptop and one projector. They are not enough but I encourage [teachers] to make use of them when they get chance so that they get used to the

technology of today ... In most cases we try to create fundraising opportunities.
(Principal C)

I encourage them to use those laptops and projectors for lesson preparation and presentation as well. I encourage learners to have smartphones for teachers to create WhatsApp groups for home schooling and to access information from various technological sources. (Principal I)

5.4.4.5 Sub-theme 5: Supplement resources

The principals mentioned difficulties accessing resources, which affects their efforts to implement CPTD programmes for the knowledge economy. The main strategy they use to deal with this challenge is to supplement the available resources as far as possible.

Marple, Bugler, Chen-Gaddini, Burr and Finkelstein (2017) found that teachers who want to enliven the knowledge of their learners, take their time to find the resources they need to support the learning success of their students in standardised tests. This suggests that teachers should be encouraged not to depend on the supplied materials but to search for other materials they might find useful for their unique classroom situations.

The following interview extracts shows the strategies participants adopt to encourage their teachers to supplement the available resources through various means:

I encourage them to initiate things on their own even if resources are still limited in the school, but some of them are beginning to purchase some tools for themselves ... Teachers are encouraged to make some means to reach remote places of the workshops. (Principal A)

In most cases we try to create fundraising opportunities so that with the little money we get we can hire somebody to do the admin duty so that the principal can focus on the management duty. (Principal C)

I usually encourage the SGB [school governing body] to budget for such technology materials instead of waiting for the department. (Principal E)

Most of the time we request some donations from business partners and so forth and use our school source as advertisement place for those business companies.
(Principal H)

5.4.4.6 Sub-theme 6: Organise external support and motivation from the Department

The education department must support schools by issuing post establishments to all public and state-aided schools on an annual basis. The department should also ensure schools are encouraged to fill existing vacancies as far as the post establishments are concerned (RSA, 1996a). Another departmental responsibility is to provide CPTD programmes to enhance the duties of the teaching staff (RSA, 2000). Another strategy proposed by the participants to deal with the challenges they face connecting teacher development to the knowledge economy is to involve the DBE to provide further support and motivation to the teachers. They explained this as follows:

Through trying to liaise with the circuits for assistance, but we just request but, in many instances, we don't get that provision from those offices. (Principal A)

[The] department should give teachers bursaries to further their studies. This will encourage them. The social welfare should have a session with teachers at least once a year to address the issue of unnecessary debts. Salaries of teachers be increased. (Principal B)

The department should get a resource person and motivational speaker for the teachers to make them understand why they became teachers because most of them joined teaching because they were frustrated by their first choices of profession ... they should be motivated and encouraged to take teaching seriously.
(Principal D)

I think teacher development programmes should also focus on encouraging teachers to further their qualifications by promising them increment on their salaries.
(Principal E)

CPTD programmes must be directly linked to what is happening at schools. They must be ongoing. They must provide value for money. (Principal F)

The department must provide more programmes which can be done online ... the department should support us on that. (Principal G)

Make sure that these teacher development programmes do not affect the day-to-day running of the school ... inform them three months in advance and make sure that we organise workshops over the school holidays so that they will not interrupt the day-to-day running of the school. (Principal H)

For challenges above my expertise, I invite professionals to come and address them. (Principal I)

I wish that the department should at any moment when they are calling teachers to a workshop or any developmental programme, they should have some form of motivation, maybe say in the form of issuing out certificates to recognise that they have attended, not just been there so that each and every educator can produce to say I have attended ... attendance certificates to motivate others who do not want to attend and that even in future when they want to apply, they [will] be in the position to be able to include all those documentary proofs in the applications. (Principal J)

The participants believed that the education department is obliged to support their efforts in CPTD programmes. Although they use their own strategies as far as possible to address challenges in teacher development, they need the education department to do its work motivating teachers to view CPTD as something that can directly benefit teachers and build their confidence.

5.4.5 Theme 5: Proposing a teacher development model to connect continuing professional teacher development to the knowledge economy

The principals were concerned about the contemporary teacher development programmes because the programmes are either not well developed or the DBE is not fulfilling its role to orientate educational leaders about them. Every policy from the national education department should be advocated down to the schools for implementation. The

participants' suggestions showed that the contemporary teacher development model must be reviewed. The positive components of the model must be kept and the components with which the principals are unhappy should be improved. The subthemes that emerged under this theme are contemporary teacher development model, developmental training workshops, supply of resources, incentives and motivation, and support to all education workers.

5.4.5.1 Sub-theme 1: The contemporary teacher development model

All the schools are involved in the implementation of QMS and CPTD programmes as national policies for teacher development. QMS' purpose is to appraise teachers to identify strengths and weaknesses for each teacher to develop their own personal development plan. The personal development plan belongs to the SACE's CPTD activities. The principals had different views about the effectiveness of the contemporary teacher development programmes. The following suggestions shed light on how they proposed the model can be shaped.

For example, during lock-down teaching was supposed to continue through programs such as Teams and WhatsApp, but that was not happening because teachers are still behind in terms of the use of technology. That's [not] how teacher development is supposed to be. (Principal A)

Appraisal scores of teachers [must] be linked with their subject performance. (Principal B)

The much paperwork should be reduced because it is time consuming. (Principal C)

CPTD should start with the interest of the teacher [motivation] ... Again, the points accumulated through CPTD should benefit teacher in one way or the other, in monetary status or for promotional purposes. Teachers are losing the interest because they accumulate the points, but they do not benefit them. (Principal D)

QMS as a new instrument, has a lot of paperwork in terms of classroom observation [and] most schools will just do it for the sake of complying and not for the purpose. (Principal D)

Teacher development programmes should also focus on encouraging teachers to further their qualifications by promising them increment on their salaries. Also, the programmes should not involve lot of paperwork because teaching itself has paperwork. (Principal E)

CPTD programmes must be directly linked to what is practically happening at schools. They must provide value for money. (Principal F)

The department must provide more programmes which can be done online. (Principal G)

It is also overloading the teachers with more paperwork. I propose that the programme be conducted online. (Principal I)

According to these comments, the participants are concerned about how the programmes are conducted and wished for a change. The issue of a lot of paperwork was repeated by several principals. The findings showed that presently teachers are not motivated to participate. Principal D believed most teachers are just doing the activities for the sake of compliance, which means they do not reap benefits. Most teachers are involved only because of the extrinsic motivation of fear, as pointed out in the theoretical framework.

5.4.5.2 Sub-theme 2: Departmental training workshops

The DBE has an obligation (RSA, 1996a; RSA, 1996b; RSA, 2000) to issue policies for the employment of teachers and for their CPD. The policies should clearly stipulate how they should be appraised, and how their development programmes are planned. During the implementation of CPTD programmes, the principals experience some challenges. The aim of this study was to examine those challenges and how the principals understand them in their social settings. The participants made the following comments:

It becomes difficult to reach the workshop venues ... Circuits should bring workshops closer to the schools because we have a challenge of distance. (Principal A)

We have so many teacher development workshops that we might end up developing teacher throughout the year, forgetting that the main purpose of teachers is to teach. These many workshops which are organised by the department give a challenge to our planning. Some of the workshops are not planned, we just receive a circular that there is a workshop the following week and the teacher did not plan for that, so it affects our planning ... most of the workshops need cash, and we have a challenge of cashflow being a no-fee school. (Principal H)

It [departmental teacher development] is not appropriate as it consumes the teaching time. (Principal I)

The principals' perspectives showed that the timing of the departmental programmes is disturbing because them because it seems the department is unaware that they as school leaders have their own programmes or plans. Their concerns show that a sustainable communication channel should be developed between principals and the DBE. The two parties seem to be operating in isolation.

5.4.5.3 Sub-theme 3: Supply of resources

Resources are crucial for schools to operate well and to produce results according to their mission statements. Bernstein and Batchelor (2022) assert that schools are supposed to be supplied with resources to enable them to achieve their objectives. According to the NEPA (RSA, 1996a), the Minister of Education is obliged by legislation to ensure schools are resourced on an equitable basis. The participants raised the following concerns:

Our school does not have enough resources.... modern, one overhead projector and a laptop ... resources are limited in the school and some of them are beginning to purchase some tools for themselves s... lacking enough material if we can try to offer our own training in the school. (Principal A)

We have one laptop and one [data] projector. They are not enough... in most cases we try to create fundraising opportunities. (Principal C)

Teachers should also be supplied with gadgets so that they can use them to develop themselves for capacity-building so that development becomes compulsory.
(Principal D)

The department does not supply schools with the new technology for teachers to use. I usually encourage the SGB [school governing body] to budget for such technology resources instead of waiting for the department. (Principal E)

Availability of skilled teachers in the field of technology is a huge problem. Shortage of physical resources, classrooms, and equipment aggravates the whole situation.
(Principal F)

I would say even though our school does not use that much of technology, but what is available teachers are more willing because they are aware that we are approaching an era where technology will be taking most of the activities in the classroom. (Principal J)

Most principals' concern was that there is a tremendous shortage of technological devices in their schools. Their responses show that they want to implement departmental programmes but they struggle without the necessary resources.

5.4.5.4 Sub-theme 4: Incentives and motivation

Motivation is one of the crucial components of the SLT that impacts learning. Motivation affects learning extrinsically and intrinsically, and both have significant implications on learning and teaching (Schunk & DiBenedetto, 2020; Cherry, 2022). In other words, both teachers and learners need motivation. Conducive circumstance encourages intrinsic motivation, and authorities are responsible for external motivation. When the two types of motivation are combined, they lead to a successful education system.

This sub-theme holds that the principals had ideas how the DBE can motivate teachers through incentives. The following responses show that they believe motivation is the main driver for teacher development.

Department should give teachers bursaries to further their studies, this will encourage them ... salaries of teachers be increased. (Principal B)

The department should get a resource person and motivational speaker for the teachers to make them understand why they became teachers ... most of them were frustrated by their first choice of profession. Teaching was their third priority and had to do PGCE [Post Graduate Certificate in Education] to make them teachers. They should be motivated and encouraged to take teaching seriously. (Principal D)

Teacher development programmes should also focus on encouraging teachers to further their qualifications by promising them increment on their salaries. (Principal E)

They [department] must give them appreciation in the form of certificates as they progress in their development. (Principal G)

They [teachers] are spending a lot in terms of developing themselves while the department is not recognising the amount of time and money that they have spent. They are just been given a once-off incentive and their notches are not increased as per their qualifications that they have achieved. That is one of the reasons why teachers lack motivation to register and develop themselves. I wish that the department should at any moment when they are calling teachers to a workshop or any developmental programme they should have some form of motivation ... in the form of issuing certificates to recognise that they have attended ... just attendance certificates to motivate others who do not want to attend. (Principal J)

The perspectives of these principals propose that incentives should be included in the teacher development model to reinforce it. They emphasised that incentives for participation in teacher development activities would be a significant move to make CPTD an effective programme.

5.4.5.5 Sub-theme 5: Support to principals and teachers

In schools, the principals' support to teachers is of paramount importance because it relates positively to teachers' psychological needs, satisfaction, and work engagement

(Rothman & Fouche, 2018). Research show that school principals' responsibilities are to deliver social assistance to their teaching staff, and the support teachers receive from principals establish structured and supportive workplaces (Maas, Schoch, Scholz, Rockow, Schuler, Wegner, & Keller, 2022).

Similarly, research shows that as the role of principals has grown and expanded in complexity over the years, new duties and roles have added to their range of responsibilities, and they are demanding further training opportunities, special time, and more technological resources to deal with the challenges (Barkhauser, Pierson, Gates & Hamilton, 2012; Scheerens, 2012).

The participants raised their concerns as proposals for the extra support they need. They are aware that their responsibility is to support teachers and reinforce education activities in their schools. Furthermore, teachers expect the same support from them in the social context. The made the following suggestions:

We need to outsource to get a relevant person with expertise to come to our remote schools to assist teachers in developing particular skills, but such people are not available in the department. (Principal A)

The [Department of] Social Welfare should have a session with teachers at least once a year to address the issue of unnecessary debts [of teachers]. (Principal B)

We are understaffed. As a principal I find myself being a Jack of all trades because I have to teach some subjects and at the same time be an administration clerk because our province [Limpopo] does not provide admin clerks to the schools. (Principal C)

The department should assist in funding. (Principal D)

As a Quintile 1 school as we are, and mainly as a combined school, starting from Grade R to Grade 12, needs are huge, financial constraints are limiting our initiatives and efforts to expand our teacher development needs. (Principal F)

I think at school we are trying our best, but it lacks at the department's side.
(Principal G)

For challenges above my expertise, I invite professionals to come and address them. (Principal I)

Principal F was concerned about the separation of his school into primary and secondary schools. He wished that the department could support this issue as speedily as possible. The support needed by Principal H was that after converting their school into a technical high school, the department was supposed to support them with resources as they continued to be a no-fee school.

5.5 NON-PARTICIPANT OBSERVATION

The researcher supplemented the data collected through interviews with observation of relevant aspects in all the participants' schools. The schools were named with the letters A to J to hide the real names and ensure anonymity. This data generation tool focused on the general appearance of the schools because the philosophical elements of this study indicated that perspectives about reality are affected by the environment in which reality takes place.

The aspects the researcher focused on were divided into three categories. Category A looked at the physical appearance of the school, and elements in this category were the buildings of the school, the library, the science laboratory, and enough accommodation. Category B included the availability of technological tools, such as laptops, data projectors, white boards, interactive boards, chalkboards, Wi-Fi connectivity, and any other devices. Category C comprise the general comments to conclude whether the observation qualifies that the school is well supported by the education authorities. Nine of the selected schools are Quintile 1 and not supposed to charge any fees, and only one of schools is a Quintile 3 school, which can charge some school fees. After being given permission by the principals, the researcher started with the observation activity by walking through the yard and taking note of the buildings using an observation sheet. Some principals accompanied the researcher while others allowed him to observe alone

and promised to explain wherever necessary. The findings of the non-participant observation are presented in Table 5.4 and discussed in detail in Chapter 6.

Table 5.4 Non-participant observation

A: Physical appearance	
Aspects observed	Availability and Comments
Buildings (library, science laboratory, enough accommodation, etc.)	<p>School A only has a few buildings, and they appear good but have signs that they were maintained long time ago. There is neither a science laboratory nor a library. Accommodation is not enough for the learners.</p> <p>School B was moved to new premises a year ago because their old buildings collapsed. There are enough classrooms, but the surroundings are not maintained. The school does not have a building specifically for science or a library.</p> <p>Schools C and J look like old cottages and appear neglected. Even if learners are not overcrowded, the surroundings are not conditionally favourable for teaching and learning.</p> <p>Schools D, E, and G look better than others, although none of them has a library or science laboratory.</p> <p>School F has few buildings, especially looking at the enrolment and it being a combined school. Learners appeared overcrowded, and there is no building for special purposes.</p> <p>School H is a big school with enough classrooms. There is a science laboratory but no library.</p> <p>School I is accommodated in a former college of education and has enough classrooms no functional science laboratory or a library.</p>
B: Technological tools	
Aspects observed	Availability and Comments
Laptops	<p>Schools A, C, and J have only one laptop for administration purposes.</p> <p>School G has one laptop for administration and one for other purposes.</p> <p>Schools B, D, E, and F each has two administration laptops and two extra ones used by the HoDs.</p> <p>School H has more than 10 laptops, and School I had six, two for administration and four used by the School Management Team.</p>
Data Projectors	<p>Schools A, B, D, E, F, and G have one data projector each, and School I has two.</p> <p>Unfortunately, Schools C and J do not have any.</p> <p>School H has five.</p>
White boards	<p>Schools D, E, and G have three white boards each.</p> <p>There is no white board in Schools A, B, C, F, and J.</p> <p>School H had most of their classrooms fitted with white boards recently after it was converted into a maths, science, and technology school.</p>
Interactive boards	No school has an interactive board.
Chalkboards	<p>Schools A–G, I, and J depend on chalkboards for teaching and learning.</p> <p>Only School H has one interactive board that was recently delivered and not used as it was incomplete.</p>
Network connectivity	Schools A, B, F, and J has limited network connectivity, and School A has problems with ordinary cellular network coverage.

	Schools C and J do not have any reliable internet connection. Schools D, E, G, H, and I have a better network connectivity. Only Schools E and H have the network connection extended to the classrooms.
Any other technological devices	No other technological devices are available in the schools.
C: General comments (Does the school appear well supported?)	
Schools A, B, and F appear not well supported. Schools C and J appear neglected. The remaining schools are better but none are great.	

5.6 DOCUMENT ANALYSIS

Several documents were requested from the principals to supplement the interview data. Data were generated from the schools' QMS files, a few individual teachers' QMS files, minute books for school development workshops, the schools' post establishment, learner-teacher support material registers, and asset registers.

5.6.1 Schools' quality management system files

All 10 schools had QMS files because they are obliged to submit them to their circuit offices twice a year after the mid-year appraisal and the annual appraisal. Each file is supposed to have copies of the teachers' completed appraisal instruments, of their composite score sheets, and of the schools' summary score sheet consisting of all teachers' scores, appraisal timetables, snapshots of teachers' performance per range of scores, mid-year or annual certificate to indicate that teachers on the lists were appraised for the period, and a year programme for the implementation of QMS. The schools complied with this requirement, but in a few schools (Schools A, G, I, and J), there was evidence that the principal had to make several corrections before the file was approved. This finding partially satisfied the requirement of whether QMS is properly implemented in schools. QMS implementation is linked to CPTD because it is responsible for teacher appraisal. When teachers are appraised for performance, some weak performance standards are identified and are subjected to CPTD for development. QMS forms the basis for professional development.

5.6.2 Individual teachers' quality management system files

Under normal circumstances, each teacher is supposed to have a file containing all the documentation or copies of appraisal sheets for record purposes. Such a file should have,

among other things, the personal development plan document indicating the plans for development activities. Most schools were not keeping QMS files for teachers, and only Schools D, F, G, H, and J had evidence of keeping such files. However, the personal development plan document could not be located in those files. Other schools claimed that those files are with the teachers, but there was no evidence for these claims. Schools A and B showed some loose documents that they claimed belonged to the teachers, but they did not explain why only a few were kept in principals' offices. The findings showed that the schools are only interested in the QMS implementation for the purposes of the annual requested submission. The researcher believes that it is because, firstly, the education authorities need regular submissions and the files are moderated for correctness and compliance at circuit and district levels, and secondly, QMS submissions are remunerated with a 1.5% monetary value to the salaries of teachers. Teachers' files are used to keep records of the teacher's development process activities. As indicated above, development starts with the appraisal of the teacher, and therefore, the files remain crucial documents that can prove that there is CPTD in the school.

5.6.3 Minute books or attendance registers for school development workshops

Not one of the nine schools have records of local professional development workshops. Only School F had evidence of several attendance registers that were labelled with the names of workshops on topics that qualified as development activities. Although Schools A, B, D, G, and H claimed to be conducting school workshops for teachers, there was no evidence of it. This means that professional development activities are not done in the proper manner even when the principals claim they are being done.

5.6.4 The schools' post establishment

Every school had a post establishment neatly filed among important documents. This document indicates the school's enrolment figures, subjects offered, and how teachers are allocated to each school according to the provincial ratio. Primary schools receive teachers' posts at a ratio of 1:35, and the ratio of secondary schools is 1:33. Schools B, C, F, and J have low enrolments according to the documents. The low numbers disadvantage them because they receive few posts. The challenge is that the national

curriculum has a fixed number of subjects that must be offered from the Foundation Phase to the Senior Phase, and the few allocated teachers become overloaded. Schools C and J were the most overloaded due to their teacher allocation. The other schools were better, but still overloaded because of the subjects being offered. It was worst in School F, a combined school, in the Intermediate Phase where each classroom had 65–105 students. Grade 7 had 70 learners, and those learners were crammed into one classroom. The challenge is that more teachers are necessary to split the classrooms. The researcher found that teachers are not fairly allocated to schools as teachers in smaller schools are overloaded and the classrooms overcrowded. Smaller schools are obliged to do what is referred to as multigrade teaching, which is when several grades attend in one classroom, and the teacher has to strategize to offer integrated tuition to them.

5.6.5 Learner-teacher support material registers

The learning and teaching support materials register is a document that is used to register all textbooks delivered by the education department, and is used by the education authorities to track whether deliveries were made to the school, and by the school to maintain their learner-teacher support material policy on textbooks supply and retrieval. In Schools A, C, I, and J, the principals produced only loose papers with records of delivered textbooks. They claimed that there are teachers who work with textbooks and the records might be with them. Schools B, D, and E had the registers but there was no consistency in how they were used. It seemed that they were not regularly updated. In Schools F, G, and H, the researcher could access the registers with complete information. The general finding is that either there is no proper supply of learner-teacher support material to schools, or the supplier, who is the DBE, does not check whether schools have indeed received the materials. That could have obliged every school to keep copies and make them available for any monitors who might visit the school to check. Random checks ensure schools have their prepared documents ready, but if schools are seldom checked, they do not bother to prepare them.

5.6.6 Asset registers

An asset register is one of the important management documents that contains a list of assets purchased by the school. The register should be updated each time the school purchases a device. None of the 10 schools could produce an updated asset register, which indicates that assets are not managed effectively. The registers are there but not updated. The researcher could not use them to look at available or old assets.

5.7 SUMMARY OF THE CHAPTER

Chapter 5 presented the data analysis and findings of the study. The data that were collected using interviews were categorised into patterns that were developed into themes. Direct quotations from the participants were used to validate the findings. Supplementary data obtained through observation and document analysis were also presented. Chapter 6 presents the discussion of the research findings and relates them to the theoretical framework that was discussed in Chapter 2 and the literature review presented in Chapter 3.

CHAPTER 6

DISCUSSION OF THE RESEARCH FINDINGS

6.1 INTRODUCTION

The research findings were presented in Chapter 5. The findings emanated from the thematic analysis of the generated data. The findings were supported with direct quotes from the interview responses of the participants. This chapter discusses the findings presented in the previous chapter. The discussion also covers the extent to which the findings are consistent with literature or not supported. The theoretical framework that underpins the study is also compared with the findings for consistency. The discussion of the findings follows the objectives of the secondary research questions. In conclusion, the study introduces a model that the researcher believes can be adopted to connect CPTD to the knowledge economy. Chapter 7 discusses the proposed model in detail.

6.2 THE RESEARCH OBJECTIVES AND QUESTIONS

The main objective of the inquiry was to explore South African school principals' perspectives on CPTD for the knowledge economy. The study was guided by the following research question:

- What are South African school principals' perspectives on CPTD for the knowledge economy?

The following secondary research questions guided the study:

- What are South African school principals' views on contemporary teacher development programmes?
- How do South African school principals connect teacher development to the knowledge economy?
- What challenges do South African school principals face in connecting teacher development to the knowledge economy?
- How can the challenges that South African school principals face in connecting teacher development to the knowledge economy be addressed?

- Which teacher development model can be adopted to connect the CPTD to the knowledge economy?

6.3 DISCUSSION OF FINDINGS

The aim of discussing the research findings is to address the preceding research questions. The discussion of research findings was assisted by literature that relates to the research topic. When presenting the discussion of the themes, reference is often made to the reviewed literature to confirm or disapprove the findings. The findings of the study revolved around the following topics: (1) South African school principals' views on contemporary teacher development programmes; (2) South African school principals connecting teacher development to the knowledge economy; (3) the challenges faced by the South African school principals to connect teacher development to the knowledge economy; (4) addressing the challenges faced by South African school principals to connecting teacher development to the knowledge economy; and (5) proposing a teacher development model to connect CPTD to the knowledge economy. This chapter presents the findings using the above topics as themes.

6.3.1 South African school principals' views on contemporary teacher development programmes

The study aimed to examine South African school principals' views on contemporary teacher development programmes. The subthemes that were drawn from the theme are a description of teacher development programmes; perceived advantages of teacher development programmes; and suggestions for teacher development exercises. These subthemes are discussed in this section.

Through the semi-structured interviews, the school principals described the current teacher development programmes as good, very good, and of paramount importance. All the participants indicated that the development tasks encourage CPD to update teachers about the dynamic changes in the teaching occupation. Literature (Hargreaves & Fullan, 1992; Leithwood, 1992; Darling-Hammond, 1994; Evans, 2002) supports the finding by maintaining that teacher development is an important process that involves specific

developments through on-duty training activities or staff advancement exercises and is purposeful with instructional programmes to improve the proficiency of the teaching community. Keiny (1994) describes teacher development as a process through which professional growth is realised.

The participants shared sentiments that all teachers should participate in teacher development programmes because they are regularly updated about the changes in their profession and those pertaining to teaching skills. The findings are consistent with how Schulle and Dembele (2007), Mishra and Koehler (2006), and Kumar and Azad (2016) define teacher development, calling it a programme that gives teachers the opportunity to reflect on their practices, gain knowledge and skills, and in turn, produce effective learners. Alternatively, Tanzania's Ministry of Education and Culture (1995) and Ministry of Education and Vocational Training (2008) assert that CPTD exposes teachers to new methodologies and keep them abreast of new developments in teaching. In other words, teachers are exposed to new methods and strategies that advanced colleagues are implementing for the benefit of their learners and schools.

Secondly, the participants reported about the perceived advantages of the current teacher development programmes. They indicated that the training activities help keep teachers well informed about their profession in subject understanding and teaching skills. Consistently, Mishra and Koehler (2006) point out that PTD allows teachers to develop three areas of teaching, namely content knowledge, pedagogical skills, and technological skills. The finding is further supported by Darling-Hammond's (1994) statement that the advantages of teacher development is a process of expanding professional teachers' knowledge base, and that by participating in PLCs, teachers share knowledge and deepen their practices for teaching as they are exposed to new structures and approaches. Similarly, Evans (2002) indicates that teacher development is fundamental as teachers get opportunities to restructure their teaching knowledge throughout the process because it is endless. Hargreaves and Fullan (1992) add that teachers use teacher enrichment opportunities to gain knowledge and insight about new developments.

The participants further indicated that teachers should be self-motivated, so they realise their own information gap and participate in activities to close the gaps. The finding is

supported by research. Tschannen-Moran et al. (1998) posit that teachers should first do self-introspection and self-reflection and further be self-motivated to successfully and enthusiastically engage in teacher development. Jasper (2003), Driscoll (2007), and Angus-Cole (2021) maintain that self-reflection is a fundamental element in teacher development. The finding that teachers are identifying their own development activities is supported by the SACE Act (RSA, 2000) that sets forth that development activities are classified into three categories, and one category is teacher-initiated activities. According to the participants, teacher development activities are the vehicle that transports perpetual learning in teaching staff. The teachers themselves initiate their development activities, and the school and other education authorities intervene to support and offer resources to facilitate those initiatives. In Hong Kong, school management has the responsibility to orientate teachers on teacher development activities and offer them time to participate in those activities (EDB, 2020).

The other perceived advantage of teacher development is that teachers get opportunities to interact with other professionals to acquire new skills. This concurs with the assumptions of SLT about learning together, maintaining that individuals learn by observing good models within themselves (Bandura, 2004; Postholm, 2012). Coe et al. (2020) hold that teachers develop their teaching practices when they collaborate with colleagues in PLCs where they share good practices and resources, either physically or online. Teachers also feel motivated when they see that what they thought was challenging is done without much effort by colleagues. These modelling processes raise their self-efficacy levels.

The third aspect referred to suggestions about contemporary teacher development programmes. Participants were happy about the development ventures, but they believed that there are several things that should be added or modified to make the activities more efficient and effective. Principals believed that the recent programmes that have been initiated by the DoE should accommodate local arrangements for professional development. In other words, teachers should also get opportunities to participate in internal activities aimed at enhancing pedagogical skills and subject content knowledge. They believed that teachers do better when they start learning to improve the things they

work with daily. Teachers are often challenged when their development begins with foreign study materials that they encounter in external departmental workshops. The assumptions of the SLT presume that the self-efficacy certainties of individuals can be affected by previous and current negative or positive experiences, and that self-efficacy is enhanced by intrinsic motivation when an individual starts with an interesting activity before moving on to more complex activities (Bandura, 2004). The finding concurs with the findings of Coe (1998) and Worth and van den Brande (2020) that there is increased teacher motivation when teachers see themselves improving the situations they work in daily. They maintain that this also leads to job satisfaction and retention. The principals were worried because most of the departmental development activities are not planned and they frequently interfere with the principals' own plans. The departmental activities usually supersede those of the schools because they are the higher authority.

The participants further suggested that the professional development programmes should not only award teachers with development points but that the points should benefit them in the form of money or assist them for promotion purposes. The principals raised the complaint that teachers are worried that they accumulate points and there is no indication of how the points will benefit them. Richardson and Watt (2010) hold that awards and incentives play a significant role in extrinsic motivation to facilitate the participation of teachers in school activities and to retain them in the profession.

Furthermore, the principals suggested that the department should send them their year plan for teacher development activities so schools can plan their own activities and avoid the inconveniences of having to drop their plans to attend the impromptu ones of the DoE. In Hong Kong, the CPTD policy is issued in advance and schools know what they are expected to do concerning new teachers, serving teachers, and those wishing to train for promotional purposes (EDB, 2020). The finding is also inconsistent with the NEPA (RSA, 1996a), which stipulate that the National Minister of Education should announce the policies for appraisal and teacher development to schools in good time to allow smooth implementation.

6.3.2 South African school principals connecting teacher development to the knowledge economy

The study's second objective focused on examining how South African school principals connect teacher development to the knowledge economy. The theme was further divided into four subthemes, namely the development of human capital, innovation, effects of organisational dynamics, and use of technology.

All participants shared similar views about how human capital is developed in their schools. They maintained that it is central for the teaching staff to attain the required knowledge, proficiency, and experience to be effective and efficient. The only way in which teachers can enhance their skills is by participating in internal and external activities. Internal activities refer to school-organised workshops, and external ones are planned by the DoE. The view is consistent Serdyukov's (2017) assertion that education is dynamic, and that it remains the responsibility of teachers to move on with the changes by developing their knowledge and skills by participating in existing teacher development activities. The finding is supported by Mishra and Koehler (2006) and Kumar and Azad (2016) who posit that specialised teacher improvement activities increase teachers' content knowledge, teaching skills, and technological usage awareness. The principals stated that they advise teachers to use every available opportunity to ensure they obtain the necessary expertise. Moorhead (2014) contends that professionalism's interest is to serve the public interest and to make themselves available to others. Public service means keeping abreast with their present needs. One can only know the public's present needs by updating knowledge through training and exposure to information material.

The principals believed educational leaders should organise developmental workshops to supplement those arranged by the education department. Most participants encourage their teachers not only to participate in their own development activities but also to attend every departmental workshop because they trust that the department knows better about what teachers are supposed to do in schools. The NEPA (RSA, 1996a) supports this finding and provides that the DoE is accountable for curriculum provisioning and the development of teachers to implement the curriculum. The department decides on a national curriculum policy and the core subjects for each grade. Teachers are allocated

to schools according to their specialisation and the curricular needs. Those teachers are then exposed to a series of development workshops to orientate them about the curriculum. The department is also responsible for the perennial development of teachers, so they do not lose focus of the curriculum and the mission of the department.

Furthermore, participants also maintained that teachers should be encouraged to enrol for educational courses with institutions of higher learning to augment their subject content apprehension and pedagogical commands in their subjects. This view is consistent with Kenton's (2023) statement that the success of every organisation depends on its human capital because knowledgeable workers produce marketable products. Organisations should encourage and motivate their employees to improve their qualifications because the institution's human capital is directly proportional to its economic success. The suggestions also concur with Section 2 of the Teacher Summit (ELRC, 2009), which hold that it is imperative to ameliorate the superiority of teacher education and development in the national education system. Quality teachers possess enough knowledge and know how to use their teaching skills for the benefit of their learners.

The participants reported that they always encourage teachers to be innovative and creative so their progress and that of their learners are not delayed by the late arrival of learner-teacher support material. Instead of waiting for the departmental supply of textbooks, teachers are encouraged to use the available technology to source information from the internet and improvise. Teachers are also advised to liaise with neighbouring schools for surplus of materials. Mithans and Grmeck (2020) support this finding by maintaining that the use of textbooks is not the only option for teachers because learners become bored. These authors suggest that teachers should use textbooks in a creative manner to bring something interesting to their presentations. Most learners can read for themselves, and they get bored when the teacher repeat what they read for themselves instead of explaining the information in different and interesting ways.

The participants raised their concerns that the provincial DoE has a tendency to deliver the necessary learner-teacher support material late, which is why they encourage teachers to use what is available and modify it into something useful for the classroom.

They explained the frustration of teachers under those circumstances and indicated that a shortage of materials causes confusion and stress among teachers. According to the principals, some teachers have lost faith in the department and started rejecting circulars inviting them to workshops. This supports Chisholm's (2013) finding that corruption in the supply of textbooks in Limpopo province leads to learners and teachers receiving books late in the year or not receiving any books.

The principals believed that innovative teachers search for information on their own and then use it in their classrooms to supplement what is available. These views concur with the idea that innovation means renewing or updating a product by applying new techniques or ideas so a new value is created in the system (Evans & Leppmann, 1970). Innovation is maintained when staff members are encouraged and given opportunities to renew or update what is available. It is also supported by Serdyukov's (2017) statement that innovation increases instructional capacity, effectiveness, and institutional productivity. Serdyukov's example of innovation supports the views of the participants when he maintains that innovation occurs when new technology is introduced in the classroom to create a situation in which learners experience the real world. These findings concur with that of Redding et al. (2013), who maintain that innovation is the successful use of an existing device to solve another problem.

Further crucial responses about innovation were reported in relation to the motivation of innovative staff members. The principals motivate their individual teachers for every innovative activity. Chen (2022) poses several things to be done to improve employee motivation. According to Chen, principals should first create a positive work environment which is supportive and inclusive. Next, principals should recognise and reward achievements and accomplishments. They should also delegate challenging duties to reveal skills talents, and interests among teachers. Encouraging teamwork and collaboration follows as strategy to create platforms for knowledge sharing. The fifth strategy is to establish a balanced work distribution to avoid unnecessary workloads on few individuals. Lastly and most crucial, Chen argues that motivation strategies which are not enduringly monitored, measured and reviewed are likely going to collapse.

One principal revealed that they encourage their teachers to be innovative and always find new alternative ways of doing the same thing, and that they reward such innovative practices from individual teachers. They even publish new ideas for others to implement in their classrooms if the ideas are relevant and authentic. New teaching strategies or creative classroom arrangements that positively affect teaching and learning are appreciated, officially reported, and adopted as a form of extrinsic motivation. Principals also strive to supply teachers with available resources such as free Wi-Fi and extra textbooks because they believe that such resources help teachers to broaden their minds, be innovative, and bring new things into their classrooms. The finding is consistent with Okongo et al.'s (2015) assertion that principals are supposed to establish opportunities for teachers to access more resources and materials for their daily duties.

The researcher discovered that participants have experienced various organisational dynamics in their schools during the previous years, which was mostly because of how the Limpopo DoE allocate teachers to schools. Small schools are disadvantaged as they always get a small number of teachers and must cope with the same national curriculum subjects. When enrolment drops, teachers are quickly transferred to other schools, which leaves fewer teachers to cope with the same number of subjects. Participants raised their concerns about some teachers who resisted changes and who became emotional when they were supposed to be flexible during organisational and cultural changes. When given extra work, some teachers regard it as bullying. This finding is supported by De Wet and Jacobs (2013), who discovered that in some instances of reported bullying, teachers were revolting against extra work, which means teachers think that their seniors are bullying them when they give them extra work because of the shortage of teachers in their schools.

However, it was evident in the responses, that most teachers use the organisational changes to their developmental advantage. The principals cited instances when lower enrolment resulted in a bigger workload for the limited personnel allocated to the school. Most teachers used this as an advantage to develop the skills to teach new subjects. In one school, the principal indicated that some teachers even volunteered to take new subjects about which they had basic knowledge because they wanted to explore other fields of knowledge, and they enjoyed the new subjects more than their main subjects.

Some junior teachers also acquired management skills when they got opportunities to act in senior positions when management posts were lost. The finding is consistent with Khan, Khan and Turi's (2019) statement that some teacher workloads become important opportunities for development.

Although developing skills in subjects that are not teachers' field of specialisation goes against the Teacher Summit (2009), which maintains that teachers should strengthen content knowledge in the subjects of their specialisation, the participants regarded it as a positive move towards teacher development. The principals argued that these teachers are developing new skills and broadening their knowledge. The participants' views concur with the view that when individuals acquire new knowledge, it contributes to the knowledge economy because the more teachers search for knowledge in the new fields, the more they strengthen the school's knowledge base, which is human capital (IBRD, 2007).

In the fourth sub-theme, the participants raised concerns about the shortage of technological resources in their schools. Only two principals reported to be better equipped than others in the district. Besides the challenges, the principals maintained that the use of technology is enforceable because of its significance for teacher professional development. They all encourage their teachers to use any available technological device to their advantage. One principal indicated that he encourages his teachers to use their smartphones in the place of laptops to prepare lessons; this is an example of innovative practices. This is consistent with Zhang's (2022) assertion that the use of technology provides teachers with extensive access to a variety of learning material, which contributes to professional development. According to the World Bank (2022), schools should be supplied with new technological devices because the use of ICT can persuade teachers to improvise and revamp their classroom practices to broaden learning.

The participants shared the view that teachers should be strongly encouraged to use available technology. Most of the schools the researcher visited had only one computer and one data projector. The principals of those schools encourage teachers to teach one another on how to use these tools to prepare and present lessons because all teachers

should be prepared for the technology based. Fourth Industrial Revolution. On the same note, other participants reported that they encourage teachers to learn to use the Microsoft office software in their smartphones for lesson presentations. Bandura (2004) supports this finding by maintaining that good-behaving individuals become models from which other individuals learn by observing, which means that teachers who implement ideas to use technology encourage others to copy their practices.

The principals complained that the DoE does not fulfil its responsibility of providing all schools with enough technological resources on an equitable basis. The availability of such resources, according to these principals, will not only help learners see the real world in their classroom but will also motivate and encourage teachers to engage in CPTD activities. This view supports the explanation that the unequal opportunities caused by apartheid in South African schools has not yet been dismantled (Dube-Londt, 2023). Therefore, teachers in rural disadvantaged areas are less motivated to teach because they cannot afford to bring authenticity into their classrooms. The current researcher is therefore certain that it is vital that teachers be equipped with technological resources and the knowledge to use them as part of their specialising skills improvement; this is also supported by Chisholm (2013).

6.3.3 The challenges that South African school principals face connecting teacher development to the knowledge economy

The objective of this inquiry was to investigate the challenges that South African school principals face connecting teacher development to the knowledge economy. The theme was subdivided into four subthemes: Reluctance to learn, timing and paperwork, lack of resources and support, and lack of motivation.

The participants raised concerns regarding the attitude of teachers who do not want to learn new things. The situation is exacerbated by some veteran teachers who are resistant to change. This finding supports Snyder's (2017) assertion that veteran teachers present some unique stereotypes and challenges that make them resistant to change. Khalifa and Gooden (2016) maintain that the challenge that school leaders face in teacher development is teachers' resistance to change. The current researcher believes that

school principals struggle to connect teacher development to the knowledge economy because teachers do not accommodate change or welcome new skills. The finding is also consistent with Lawler (1994) who discovered that performance appraisal and development practices often frustrate managers and often create conflict between supervisors and subordinates, which results in situations of dysfunctionality. Furthermore, Lawler contends that performance appraisals should be organised in way that will motivate and guide individuals to develop and be effective. Moreover, Nichols (2017) posits that professionals who do not upgrade their knowledge through further reading and training are likely to lose their profession because clients will quickly notice the declining expertise. Once the expertise died, there is no longer profession to talk about.

Next, the participants complained about several teachers who seem to have wrongfully taken the teaching profession. This conclusion emanated from their negative attitude and behaviour towards teacher development activities. One principal indicated that there are some teachers who took the profession as the last option and are therefore not serious about it. The finding is consistent with Lukas and Samardzie (2015) who postulate that teachers are not equally qualified, motivated, and justified to teach to an extent that one can ask why they took the profession. The other principal indicated that it seems the admission to the teaching profession is no longer rigorous but relaxed.

All the participants expressed their concerns about the timing of departmental teacher development training activities because the education authorities have a tendency of organising teacher development workshops randomly and do not follow a regular schedule. This finding concurs with De Clercq and Phiri's (2013) finding that the education authorities appear uncertain of what to include in teacher improvement programmes and when to implement them. They also assert that in many instances, the DoE relies on private companies to run development workshops, which may be the reason they do not have a schedule for annual workshops. Another concern propounded by the principals on this issue is that the workshops are in many different venues that are far from the schools, which drains the travel budgets of small schools.

Furthermore, participants raised concerns about the work overload of teachers in their schools. They believed that one of the challenges that make teachers reluctant to change is that they are overloaded with teaching responsibilities and then have to make time for CPTD activities. This finding is supported by Bernstein and Batchelor's (2022) statement that teachers face excessive demands and increasing workloads, and that this fosters anger, stress, and frustration and promotes reluctance to participate in other educational activities. According to the principals, teachers are overloaded because the schools do not have enough teachers because their enrolment decreased. This challenge results in teachers having to teach other subjects because they must share the load. They blame the departmental policies that do not care about small schools even though the national curriculum requires a certain number of subjects to be taught in every school. When teachers are unnecessarily overloaded, they rebel and are difficult to manage. The principals indicated with regret that teachers become confused when they are supposed to engage in development activities because of the number of subjects they are handling. When subject advisors invite teachers for workshops, they must attend because they teach subjects they were not trained to teach. The spirit of resistance affects the whole school and impacts development activities. This finding is supported by Rutherford, Long and Farks' (2017) finding that teachers display feelings of overwhelm and helplessness when their workload is too heavy because of work for which they were not trained. Zee and Koormen (2016) state that even experienced teachers who are usually very confident may also feel less confident when they do not receive sufficient moral support in times of overload. The extra work usually results from subjects that they are supposed to share because they are the only remaining teachers at the school and the school should teach all the subjects of the national curriculum.

The participants reported another challenge they face concerning lack support and resources from the DoE, namely that their schools are poorly resourced with regards to technological devices and proper infrastructure to reinforce teacher development. The finding was also confirmed by the observation data and document analysis information. Several schools were poorly maintained and looked neglected. Bernstein and Batchelor (2022) discovered that several South African schools are under-resourced and that it impacts teacher work relations. They assert that the dynamic job demands in the teaching

community requires resources that are equal to the task. Unfortunately, many South African teachers are frustrated because they do not have enough resources while other schools are better off. During observation, the researcher noted that the lack of resources is so severe that some schools do not even have electricity.

The principals further complained about lack of consultative support when they encounter problems with teachers and teacher development. They were concerned that when their enrolment goes down, the department will quickly transfer teachers from their schools to other schools without assessing whether the remaining teachers will be able to carry the workload. This finding supports Bettini, Jones, Brownell, Convoy, Park, Leite, Crockett and Benedict's (2017) finding that when novice teachers are left with an increased workload, they become emotionally exhausted and less motivated for further development activities.

The principals also complained about their staff members' lack of motivation. They believed the DoE should offer motivational incentives for every achievement in teacher improvement activities. The finding is supported by the stipulations of the SACE Act (RSA, 2000), which requires teachers to earn points during CPTD programmes; however, there is no monetary value attached to the points. According to the SLT, if individuals are not internally or externally motivated through incentives, they are unlikely to continue acquiring new skills (Bandura, 2004).

6.3.4 Addressing the challenges that South African school principals face connecting teacher development to the knowledge economy

The study aimed to examine how the challenges that South African school principals face connecting teacher development to the knowledge economy can be addressed. Six subthemes describe the procedures to work on the challenges, namely applying managerial guidance and leadership, encouraging support from colleagues, encouraging further learning and qualifications, maximise use of available resources, supplementing resources, and organising external support and motivation by the DoE.

Participants asserted that principals should not depend only on the DoE for support to run their schools. They believed that they should use their management and leadership skills

to motivate and encourage teachers to participate in all pursuits aimed at developing the skills of the teaching community. Principals should regularly arrange school-based workshops to sustain communication channels with teachers. This view is consistent with Achmad's (2017) claim that principals remain the most important factors in schools because they influence and encourage subordinates to participate in activities and achieve goals. The participants' belief is also supported by Bagire et al.'s (2015) statement that principals encourage teachers to participate in development tasks and team building activities by steadily holding meetings with them.

The principals believed that they should offer psychosocial support to teachers when they feel discouraged. This support generates intrinsic motivation and teachers realise they are valued, and therefore, become more resilient. This is supported by Ebersöhn et al.'s (2015) finding that teachers can deal with their physical or psychological problems when principals support them through school intervention strategies.

The participants maintained that teachers should be encouraged to work together as a team and support one another to deal with internal challenges that impede and demotivate them. Their belief is consistent with the SLT's principle (Bandura, 2004) and Xavier et al.'s (2018) finding that when teachers are working together in a social learning environment, they co-produce knowledge, and exchange, translate and transfer the knowledge among themselves in a mutual relationship. Forte (2009) assert that managers should maintain daily, continuous, and open communication with the employees. Communication is vital as, according to Forte, it has two advantages, which are (1) to handle daily performance appraisal and development problems as they occur, and (2) to maintain continuous feedback vitally important to give direction, coaching, and teaching the workers to persevere and improve their work performance.

The principals mentioned that teachers should always be advised to further their qualifications through institutions of further learning to increase their pedagogical skills. Strong, Fletcher and Villar's (2004) and Serpell and Bozeman's (1999) finding supports this because they claim that teachers who are encouraged to continuously further their qualifications have a significant effect on their students' achievement because of the comprehension and proficiency they gain in the process. They maintain that such

teachers are always motivated to engage further in CPTD. Samsidh (2022) holds that parents choose schools with qualified teachers because (1) highly qualified teachers have deep knowledge which they can impart effectively to learners, who in turn develop better understanding and do better in tests and examinations, (2) teachers with right qualifications are knowledgeable in their subjects, thus they can make learning material accessible to learners and can use a variety of effective teaching methods to assist learners to understand better, and (3) teachers with high qualifications are in good positions to be trusted by parents because they have excellent classroom management to create safe and conducive environments for the learners. Preston and Hammond (2002) contend that the benefits of further qualifications in the teaching field are that further learning empowers an individual through knowledge and skills development, which raises self-efficacy. Malebe, Ochieng and Nyabisi (2023) contend that supervisors should encourage teachers to further their studies to improve their opportunities for career development.

The other strategy mentioned by the participants was to ensure the maximum usage of available resources before trying to supplement the available resources. The principals explained that they encourage teachers to use what they have, for example, only one laptop and one data projector, instead of complaining about their lack of resources. Okongo et al. (2015) support this view and state that teachers must be confident in the skills they possess, which they regard as available resources.

The participants shared similar sentiments regarding supplementing available resources using local materials. The principals reported that they advise teachers not to undermine their skills and to be creative and innovative to manipulate what they have to be multifunctional. The opinion of manipulating available resources to create new ones is supported by Bugler et al. (2017) and Marple et al. (2017), who state that teachers should consider the uniqueness of their classroom situation and create relevant materials that will be meaningful to their learners, rather than wait for imported teaching aids.

The principals raised their concern about lack of proper support from the DoE when they meet leadership and management challenges, which was cited as a reason for trying all other strategies mentioned in the preceding paragraphs. When all their strategies have

been exhausted, they believed that they must face the DoE and request support and motivation for teachers. This view is supported by Bipath and Nkabinde's (2018) statement that the DoE has a responsibility to ensure all levels of management, from top to school level, receive the necessary support and motivation. They claim that intervention of the education authorities confirms the proper execution of all roles and responsibilities, including that of teachers. The NEPA (RSA, 1996a) and the EEA (RSA, 1998) both support this finding because they stipulate that the state is responsible for ensuring stability and consistency in education provisioning. In addition, the department of education in Australia developed NTWAP [National Teacher Workforce Action Plan] on 15 December 2022 (Australian Government, 2022). One of the priorities of their action plan is to improve the retention of teachers by increasing the support given to teachers and principals. The action plan, according to the Australian education Ministers, should develop mentoring and induction guidelines to support new teachers and new school leaders.

The researcher found that the kind of motivation and support the participants envisage from the DoE is certificates for the workshops attended by teachers, and better salaries after the achievement of further qualifications. Researchers (Sinclair, 2008; Richardson & Watt, 2010; Han & Yin, 2016) support this finding and reveal that if teachers are not motivated with better salaries and incentives, they are likely to leave the profession in search of greener pastures. They maintain that motivation and support impact the recruitment, retention, and daily concentration of teaching staff.

6.3.5 Proposing a teacher development model to connect continuing professional teacher development to the knowledge economy

The subthemes discussed under this theme are the contemporary teacher development model, departmental training workshops, supply of resources, incentives and motivation, and support to the rest of the teaching staff, including the principal.

The analysed information showed that the contemporary model for CPTD does not successfully connect teacher development to the knowledge economy. The CPTD programme is done and uploaded on the SACE system through computers, but some

schools do not have a single computer. The researcher discovered that the challenge of resources was aggravated by the negligence of the provincial DoE. The principals complained that the paperwork that must be completed in two sessions (mid-year and annual) for the QMS implementation adds to their managerial load (ELRC, 2020). This overload is exacerbated by the allocation of teachers to schools based on enrolment numbers.

Principals of small schools have to fill many roles, which includes teaching, managing, and administration duties. These principals shared the general view that the education authorities should consider the amount of work to be done despite schools' enrolment numbers. They believed that when teachers and principals are not overloaded, everybody will be motivated to attend a successful teacher development programme. Another view was that the DoE should, at least, supply each school with a computer and a data projector. The researcher discovered that teachers were unhappy about the CPTD system of allocating points, which are not of monetary value to the teachers.

Furthermore, the participants raised their concerns about haphazard dates for the departmental professional development activities. They complained that the DoE has the tendency to arrange workshops that interfere with local development plans. Principals are not given a fixed year plan to enable them to fit their own activities around it. Teachers are notified only one week ahead of training. A worrying discovery was that small schools drain their coffers to attend workshops because all teachers are expected to attend. This concurs with the finding of Chisholm (2005), Ndimande (2006), and Mestry and Ndhlovu (2014) that teachers in poor schools are also expected to attend departmental activities in the same way as those from wealthier schools, which is a contradiction within the school system. This has a significant financial impact on small schools because they receive funds according to their enrolment, and the unplanned workshops dig deep into the school funds, and teacher development processes also require money for resources.

The participants complained about the lack of technological resources in their schools. They complained that there are still schools that do not have a single computer but are expected to run teacher development plans in the same way as other more resourced schools. One principal expressed his concern that they have only one laptop that was

donated for administration purposes and is being used and can therefore not be used for other activities. The finding goes against the South African Schools Act (RSA, 1996b), which obliges the Minister of Basic Education to resource schools on an equitable basis. Other participants raised their concerns that teachers fight over the only data projector, and they attributed this shortage to unsuccessful policies of redressing the inequalities of the past. This finding concurs with those of Veriava (2010), who revealed that there are ongoing infrastructural backlogs that impact equal education provisioning in South Africa. She recommends that provincial prescripts regulating the spending of school funds should be relaxed to enable poor schools to purchase the basic resources they need.

The researcher discovered that principals are concerned about the lack of motivation and incentives for teachers despite their continuing participation in CPTD. They indicated that teachers are demotivated because there are no certificates or incentives to show for their achievements. Their salaries are still low despite submitting further qualifications to the employer. The finding is inconsistent with Mestry's (2017) finding that improvement in qualifications, combined with experience, make teachers better individuals who enjoy the profession. However, it supports van der Berg, Taylor, Gustafsson, Spaul and Armstrong's (2011) finding that top-performing teachers leave the teaching profession because they are attracted by better wages in the private sector. It also supports Armstrong's (2014) assertion that the structure of teacher remuneration and incentives is so unattractive that it is likely to deter other people from joining the profession. Similarly, Makhuzeni (2014) argues that relevant teachers are not retained in the department because their good performance is not recognised. She maintains that employees who are committed to their duties and have records of good performance and development should be awarded with senior positions.

The finding showed that principals are not satisfactorily supported by the DoE, and the participants complained about their working conditions, which are deteriorating as if the employer is no longer interested in their schools. They argued that only schools that are underperforming are regularly visited by the DoE because they receive national attention. Others believed that the school should underperform so they can get support from the department. The finding supports that of Deliwe and Seabe (2022) that the probability of

receiving a visit for support from the education authorities is often influenced by the characteristics of the school. They hold that smaller schools receive fewer, or no, visits than larger schools.

The findings also showed that principals are not well inducted into their positions after being appointed. Sepuru and Mohlakwana (2020) contend that South Africa, like other countries in Africa, appoints teachers into principal posts without formal training. There is no minimum formal qualification, and only a few years of teaching experience is considered necessary, but this does not mean the experience has prepared them for educational management. The participants raised their concerns that leading local teacher development affairs usually becomes a challenge because the department neither inducts nor supports them. They believed that departmental induction and support are crucial because they both contribute to their professional development as principals. This perspective is supported by Bush (2018) and Michael and Kitula (2022), who assert that the induction and support given to educational leaders prepares and changes them from ordinary teachers to school leaders and equips them with managerial skills.

The current researcher believes that school principals in South Africa are not properly supported in their managerial duties, which negatively impacts the leadership of CPTD programmes. Therefore, this study proposes that an alternative teacher development model can be adopted to close the gaps identified in the research findings. The researcher believes the proposed model will be able to connect CPTD implementation processes to the knowledge economy.

6.4 SUMMARY OF THE CHAPTER

Chapter 6 discussed the findings of the study. The theoretical framework underpinning the study, together with the literature review, were compared to the findings, and contradictions and confirmations were discussed. The findings led to the creation of a proposed model to address the challenges that South African school principals face connecting teacher development to the knowledge economy. Chapter 7 presents and discusses the proposed model.

CHAPTER 7

PROPOSED MODEL FOR CONNECTING CONTINUING PROFESSIONAL TEACHER DEVELOPMENT TO THE KNOWLEDGE ECONOMY

7.1 INTRODUCTION

Chapter 6 presented the discussion of the study's findings and examined whether the findings were consistent with or contradicted the theoretical framework discussed in Chapter 2 and the literature reviewed in Chapter 3. Chapter 7 presents and discusses the proposed model for connecting CPTD to the knowledge economy and explains the elements of the model.

7.2 THE PROPOSED KNOWLEDGE ECONOMY TEACHER DEVELOPMENT MODEL

Cox (2019) contends during the 21st century, teachers should be flexible and accommodating so their teaching styles evolve with the dynamic world. He indicates that teachers should have the following abilities: (1) The abilities to adapt to technological changes and use them in teaching, (2) have collaborative skills and be able to perform in a team, (3) the abilities to participate in critical thinking and develop learners into critical thinkers, and (4) the abilities to defend the teaching profession and excel in it for the education of their learners.

Mthanti and Msiza (2023) argue that school managers should be leaders in integrating technology into curriculum development because teachers rely on them for guidance as educational managers. Dlamini and Mbatha (2018), and Philippsen, Tondeur, Roblin, Vanslamrouck and Zhu (2018) contend that teacher professional development should be a systemic continuous programme throughout teachers' careers and focus on developing inclusive technology classrooms. Phillippsen et al. (2018) emphasise that teacher development should be a step-by-step activity. It is against the above literature review and the research findings discussed in Chapter 6 that the current researcher proposes an alternative teacher development model. The findings indicated that the present situation is inconsistent with what literature anticipates with regards to CPTD in schools.

The researcher believes that an alternative model can assist in the step-by-step approach while developing technologically advanced teachers and learners for the knowledge economy. A proposed model with eight components is discussed in this chapter to address the challenges of connecting teacher development to the knowledge economy. Figure 7.1 illustrates the proposed model.

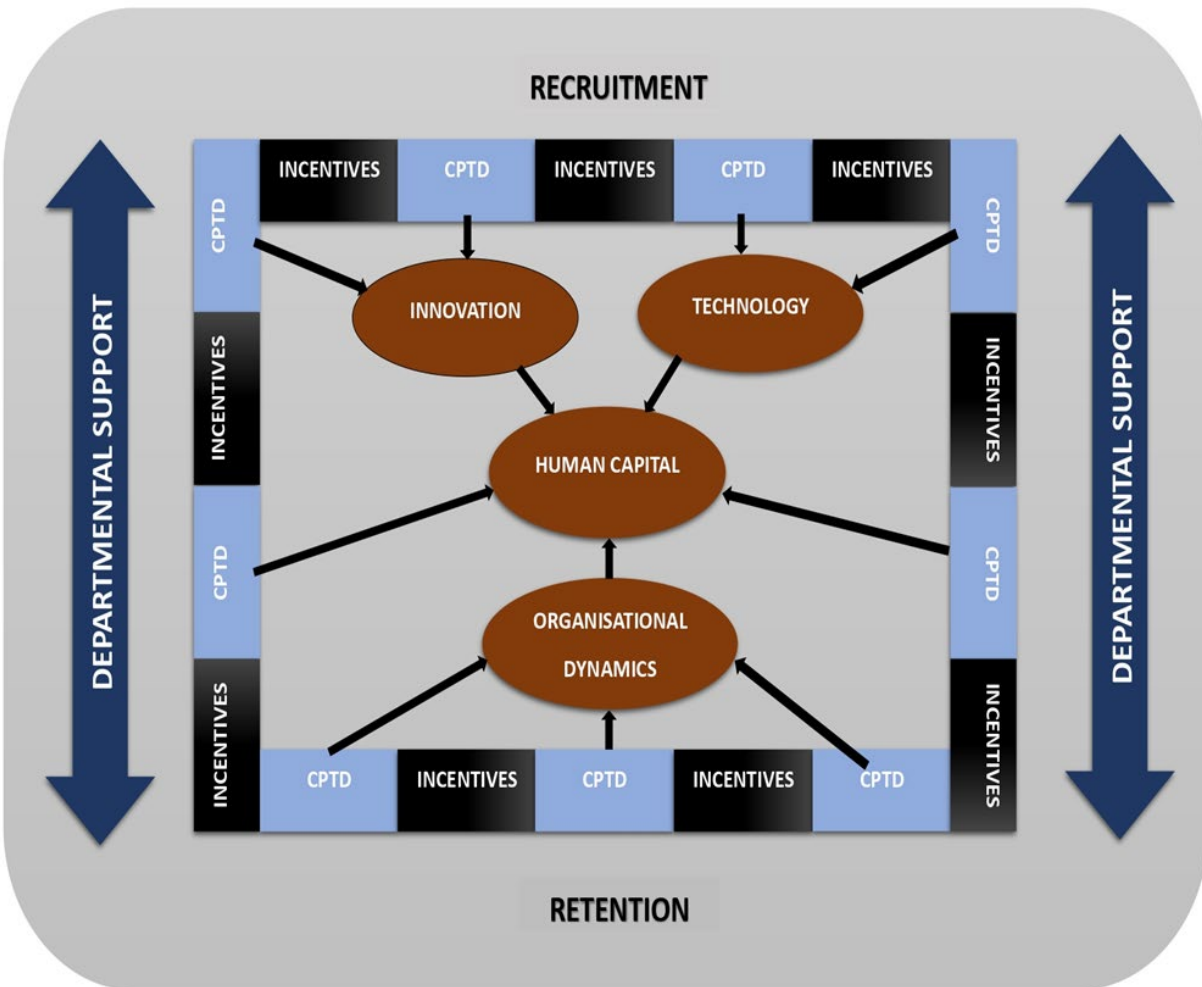


Figure 7.1 Knowledge economy teacher development model

7.2.1 Elements of the knowledge economy teacher development model

The fifth objective of this research was to develop a model that can be adopted to connect contemporary teacher development programmes to the knowledge economy. School principals should create progressive and advanced learning activities that are aimed at

both teacher effectiveness and learner achievement (Bilge & Aslanargun, 2017). Szeto and Cheng (2018) maintain that to sustain the benefits of CPTD activities, there should be sound interpersonal relationships between the school manager and teachers. The model aims to generate effective teacher development activities by encouraging sound interrelationships between principals, heads of sections, and teachers by introducing incentives within all development activities. The components of the model are recruitment, CPTD activities, incentives, use of technology, advantage of organisational dynamics, development of human capital, departmental support, and lastly, retention of teaching personnel. These elements are explained in the following subsections.

7.2.1.1 Recruitment

The effectiveness of teaching staff depends entirely on the personnel recruited into vacant positions. The educational manager should start by recruiting teaching staff based on operational requirements and not on personal intentions. Teachers should be appointed, firstly, according to their qualifications, and secondly, according to specialisation subjects. If these criteria are followed carefully and correctly, it will avoid anger, stress, and frustrations (Bernstein & Batchelor, 2022). The EEA (RSA, 1998) presupposes that provincial HoDs should annually supply each school with a post establishment prepared according to their latest enrolment. The post establishment indicates all the allocated posts for each school, as informed by the enrolment and the type of curriculum offered in the school. It is up to the principal to recruit the right teaching staff into the positions based on the curriculum requirements of the school. It is the principal's fault if the wrong personnel are recruited. The study revealed that some teachers are teaching subjects that were not their majors, and therefore, they sometimes resist development activities. The concern by participants that some teachers seem to have taken a wrong profession qualifies for the model to recommend that properly qualified teachers (Lukas & Samardzie, 2015) be recruited. Teachers who landed into the profession through one-year certificates should be thoroughly put into INSET activities while they are still on probation. This will test their desires to join the profession. Furthermore, the literature review revealed that developed countries, like Hong Kong, do not only consider the qualifications of teachers before they are appointed but also require principals and

teachers who are appointed in promotional posts to have undergone relevant training, including managerial courses (EDB, 2020).

7.2.1.2 CPTD activities

CPTD activities should start with the induction of new staff members, and include mentoring, coaching and support. CPTD activities involve the national policies on appraisal and teacher development, such as the QMS, and have three categories, namely teacher-initiated, school-initiated, and external or department-initiated (RSA, 2000). The category of teacher-initiated activities comprises efforts by individual teachers to get more knowledge about the subject from colleagues, which is supported by the SLT, visiting the internet for resources, organising co-teaching with a colleague, attending and taking part in subject enrichment meetings (PLCs), and enrolling with institutions of higher learning to further studies in subjects of specialisation. The category of school-initiated activities requires teachers to attend and participate in various school workshops organised by principals to exchange competencies and skilful practices and to develop the school's organisational culture. The DoE remains responsible for organising the third category of teacher development activities and to invite teachers to attend. However, it is crucial that the department communicate the schedule to schools in time so they can structure their own activities around the departmental activities. This proposed model support teacher development activities to be initiated by the DoE and the institution itself. Teachers should set their own targets after identifying areas of development. However, their activities should be submitted to the principal, recorded, and added to the list of the school's development needs. This will help the school leader monitor the progress the teachers in their development.

7.2.1.3 Incentives

Several researchers (Lave & Wenger, 1991; Latham, 2012; Makhuzeni, 2014) distinguish between incentives and rewards. Incentives are valuable things and objects given to individuals to motivate them to engage in a particular activity. Incentives may be given at the beginning or at the conclusion of the activity. Rewards, on the other side, are offered to deserving individuals after a remarkable and commendable achievement. Rewards

are equal to excellence; they should be distinguished from incentives as they are a level higher. One gets incentives for completing a task, but is rewarded for developing an exceptional piece of work that qualifies to be praised. Education incentive programs (Allan & Fryer, 2011) build a culture of success for principals, teachers, and learners. Schools award certificates to learners to report their performance. Similarly, teachers should get recognition for how much development activities they have done. The education authorities may decide on a program to group activities into numbers or steps, so teachers receive a certificate after reaching a certain number or step. In other words, a series of CPTD activities should be held together by incentives, which serve as motivation to keep attending them. A knowledgeable teacher will possess several certificates. Davis and Edge (2004) and Cheng (2022) hold that performance linked incentives inspire the desired performance and result in enhanced organisational culture with increased innovation and creativity. According to the SLT, individuals learn more when there is a good model to copy (Bandura, 2004). Good models are also motivated through incentives to remain good. Teachers who rapidly improve their skills should be recognised and incentivised, and they can be used as models in workshops to demonstrate that it is possible to move to the top through professional development activities. To motivate teachers, the Australian government introduced a national practice of allowing the community members to nominate teachers who, according to their opinions and experiences, are hard-workers and dedicated to the education of their children. Such teachers are nominated to receive medals called 'The Order of Australia.' Incentives are crucial for the proposed model because Hytter (2007) asserts that there are several factors that influence the retention of employees, including work benefits, the principal's style, career conveniences, and conducive chances to develop specialised skills. The Australian government prioritised the elevation of the teaching profession to make it attractive by introducing better things in the salary and housing affordability as incentives to support continuous career development in teaching (Australian Government, 2022).

7.2.1.4 Use of technology

Christen (2009) posit that the use of technology should become a big priority in schools because it can transform the classrooms into learning environment that are interactive. ICT has brought evolutions and new lifestyles to many people, and digital tools are used from a young age to make life easier (Murati & Ceka, 2017). Similarly, teachers should make their pedagogical duties easier by using technology. Technological classroom instruction is not limited to the use of a computer to prepare lessons but extends to data projectors, PowerPoint presentations, virtual meetings, using smartphones to source information, and using Google Chrome options to store and manipulate information during teaching and learning sessions. Teacher development activities should involve evidence of using technological tools, so all teachers are encouraged to have that evidence before receiving incentives (Tschannen-Moran & Woolfolk Hoy, 2002). DePasquale et al. (2003) encourage teachers to use technology to support their teaching so that learners can also learn the appropriate use of technology, get proper exposure to it, and grow up using the advanced technological applications independently. Several researches indicate the advantages of incorporating technology into daily teaching practices:

Similarly, teachers also reap the same fruit as learners when they use technology on daily basis. There are more advantages when teachers use technological devices during their professional development activities. Tutkun (2011) postulates that teachers get three benefits when schools are supplied with devices of technology. Firstly, teachers will be active during development activities and in that way new information is easily acquired and retained. Furthermore, teachers become independent because they can make more follow-up on their own if they are taught proper operation of the devices. The third advantage is that teachers can produce new learning materials as the use of technology increases levels of innovation and creativity. Similarly, Scalzo (2022) holds a general significance of technology for teachers as a tool that increases teacher efficacy by expanding their learning possibilities and improving teacher efficiency. These benefits are achievable because technology enables teachers to modify their teaching methods to suit each learning concept. Scalzo encourages institutions to empower their teachers and learners by equipping them with the best available technologies.

7.2.1.5 Advantage of organisational dynamics

The organisational culture and climate of schools are not stagnant because environmental factors, such as the enrolment of learners, type of learners enrolled, type of teachers employed, culture of teaching and learning, type of management or leadership style, and availability of resources, often impact the culture and climate. Any change in the organisational culture and climate affects teachers and teaching and learning. It depends on the individuals' interpretation whether the change is positive or negative. In this component, teachers are encouraged to use the organisational changes to their benefit instead of remaining rigid and sticking to the old regime. If this component forms part of CPTD activities, those who positively used the organisational dynamics for development of new skills will be entitled to receive incentives. This will encourage other individuals to find development opportunities where others see difficulties. Chen (2022) encourages principals to communicate any changes in the organisational organogram and reasons attached. This should be followed by creation of a conducive work environment whereby a balanced distribution of work among workers is maintained to avoid stress and unnecessary absenteeism due to fluctuating workloads. Motivated teachers who are given the scenario and reasons for adjustments will always be ready to share the work as they own it. When teachers are motivated, they believe that their combined efforts lead to a shared competitive advantage, success, and high performance to outshine competitors. According to Vestberg (2018), to avoid the negative consequences and imbalances caused by organisational dynamics, managers should investigate about missing aspects. The next step is to check on existing departments for shortages against the envisaged future objectives. Thirdly, the manager should allow each member to indicate their needs and abilities, making suggestions for possible solutions. Lastly, a collective decision which strikes a balance between all needs should be taken to better implement the solutions. However, Borolotti, Boscari and Danese (2015) argue that during organisational dynamics, the institution should enforce and support altruistic behaviour by convincing workers that it is the process and not the manager who caused problems and change of workloads. The bottom line is that there should be an indestructible communication with the workers.

7.2.1.6 Development of human capital

This element talks about acquiring comprehension and proficiency in the teaching community. The economic value of the human resource is referred to as human capital because of the knowledge and skills they possess, such as more knowledge about the subjects and more pedagogical skills for lesson presentations. Human capital is at the centre of all development activities because the aim is to reinforce teachers to make them effective workers. This model fosters planned local and external workshops to work in collaboration with one another for this purpose. Workshops should not operate in isolation. A link between the workshops in terms of the level of learning should be established. As an indication of a developing human capital, teachers should demonstrate possession of deep pedagogic knowledge through the effective academic performance of their learners. Knowledge should be shared within the organisation (Karisson et al. (2009) instead of seen as personal skills owned by few individuals for certain subjects. A combination of acquired knowledge, skills, and experience should contribute toward an excellent picture of the school in Whole School Evaluation.

7.2.1.7 Departmental support

According to the SACE Act (RSA, 2000), CPTD activities are not complete without the third category offered by the education authorities. Principals, as CPTD leaders in schools, should continuously be supported by the department. The support envisaged should include the supply of teaching and learning resources (including technological resources), psychosocial support where necessary, interventions in terms of challenging learner special education needs, the supply of extra teachers in severe cases of overcrowding and overloading, and INSET for principals to deal with management challenges. Teachers, as implementors of CPTD schemes, should also receive non-stop support from the department. The support should include a year plan for development workshops, running development activities or outsourcing accredited companies to do it on the departments behalf, developing a user-friendly system to monitor all teachers for development tasks, consistently issuing awards and incentives to qualifying individuals, and offering scholarships to individuals who wish to further their studies in their field of

specialisation. Gumus (2013) posits that the role of school principals in professional teacher development is significant. However, Gumus emphasises that school managers should be supported and educated on the importance of in-service professional development activities for teachers. The department should also point out the importance of active participation of school principals and teachers in CPTD programmes.

7.2.1.8 Retention

Staff retention shows good human resource management and a healthy organisational culture and climate, which is encouraged for every organisation. The proper and harmonious implementation of all the other CPTD activities accelerate the retention of teaching personnel. The education system will retain human capital if there is no job-related stress, frustrations, and anger. When staff members happily participate in teacher development activities, are supported by their supervisors and assisted by the department, are incentivised for their development achievements, and are supplied with technological resources to supplement the available manual tools, they are likely to develop a love for the profession and for the institution they serve. Jalagat (2016) asserts that job retention is born from job satisfaction, and job satisfaction leads employees to perform and complete their tasks as required without being pushed. The current researcher believes this component should be part of the proposed model because Gorde (2019) claims that all management should take care of the satisfaction of its human resources because they are assets of the organisation. Gorde maintains that if they are satisfied, the organisation is likely to retain skilful and committed workers. Management should establish reasons for the employee movement and do everything possible to overcome that. One of the priorities in Australia's NTWAP is to improve teacher retention by improving issues such as the reduction of unnecessary teacher workload so teachers can focus mainly on the teaching tasks, teacher salary, career structure in teaching, and housing affordability (Australian Government, 2019).

7.3 SIGNIFICANCE OF THE PROPOSED MODEL

The proposed model comprises three main groups, namely (1) recruitment and retention, (2) CPTD activities, and (3) departmental support. The first and third group are crucial

because they encompass all CPTD activities. They serve as the walls of the house in which development activities live. The walls should be reinforced to protect the inhabitants against any external or internal force that might work against them. In other words, all CPTD programmes depend on the life of the two groups to survive. These components are discussed in the following subsections to emphasise their significance to the whole process of teacher specialty improvement.

7.3.1 Recruitment and retention

The study's findings showed that there are indications of stress and demotivation among staff members under the management of most principals. The root of this stress and demotivation is how the teachers were recruited and appointed to the institution. The researcher believes that teachers should be recruited using the following steps to ensure the recruited teacher's specialisation suits the existing vacancy:

- *Step 1:* After realising that a vacancy exists in the institution, the principal must secure a meeting with the School Management Team to discuss it. During the discussion it must be decided whether the vacancy is a permanent or temporary post based on the school's post establishment. Furthermore, the team must share their views about the school's curricular needs, describe the shortage, and agree on the type of skills they need to fill the vacancy. This is done by checking the skills of the available human resources, which should reveal deficit skills.
- *Step 2:* The meeting should agree on the group of skills needed for the post and examine whether the type of stream they agree on exists in the tertiary institutions for student teachers. The management of the school should strike a balance between the skills they possess and ensure teachers are correctly allocated subjects of their specialty before a true vacancy can show itself. The meeting should also agree on prioritised skills when all the required skills cannot be found in a single candidate.
- *Step 3:* The circuit office or district must then be notified about the vacancy through a written post advertisement that clearly indicates the type of post and subjects or skills required. It is important to indicate the type of post in the advertisement to

avoid a situation where the incumbent claims that they were not aware that the post was temporary.

- *Step 4:* All members of the interviewing committee should be specialists in the needed skills area. This step is crucial because during interviews candidates are given opportunities to show their knowledge and skills in the advertised subjects so the best can be selected. If the interviewers are skilful themselves, they will not be deceived. All the candidates were shortlisted because they all have the necessary qualifications and skills, and therefore, the experts should test their verbal knowledge and skills because their work is to teach.
- *Step 5:* The best candidate must be selected based on the panel's opinion that they have the skills required by the school. The procedures to appoint a candidate must be followed with the education department until the candidate is employed.
- *Step 5:* A mentor should be allocated to the newly appointed teacher to orientate them. The orientation should cover, among other things, the school's vision and mission and how the school plans to achieve that; the organisational culture, which is how the school handles its affairs; advice on how the new teacher can improve their qualifications, either through normal CPTD activities or tertiary institutions; and the DBE's policy on the appraisal and development of teachers. The way the mentoring process is handled may decide whether the teacher will be retained at the school. The allocated mentor should act as a mediator between the newly appointed teacher and the other staff members. Mentoring is not limited to a certain period, and the teacher will depend on the mentor for clarity on several issues during their stay in the school. Mentoring and support are the two remedies that facilitate the stay of teachers, and thus, the retention of skilful employees.

Recruitment and retention do not apply only to junior teachers. The component is applicable to all positions, including that of the principal. A study conducted by Gumus in 2013 revealed two significant factors, at school level, that impact teachers' participation in professional development programmes. These elements emanate from the principal's leadership style. Firstly, the level of education of the school principal determines how teachers feel when led by somebody with a higher-level qualification. The factor implies that the principal's level of education affects their personal attitude and that of the

teachers towards professional development. Educated principals motivate their teachers to engage in professional development. The second factor stems from the principal's leadership and management style in terms of accountability. The department of education holds school principals accountable for school activities. Similarly, if principals hold teachers accountable for their work, they will be motivated to engage in professional development to improve their work. The significance of the principal's qualification is evident in that study hence the researcher recommends that, preferably, principals' qualifications should be higher than that of the subordinates (Gumus, 2013).

South African principals, like it is done in Turkey (Gumus, 2013), are appointed not on management qualifications but on the number of teaching years. It is possible to find principals who only has three years teaching diploma but were appointed because of the criterion of years' experience. According to the EEA (RSA, 1998), a minimum required qualification is REQV 13 [Relative Education Qualification Value], which is a diploma in teaching. Principal with only this qualification is likely to be frustrated when challenged by teachers with higher qualifications and who resist some of their policies. The issue of 'one-leg-in' during the teacher appointments is discouraged. If the post needs two subjects, it should be honoured.

7.3.2 CPTD activities

The CPTD activities are the core element of CPTD, and include all the activities that (1) teachers use to develop their didactic skills to improve the effectiveness of learning opportunities; (2) schools use to develop teaching staff members so the school is generally attractive to parents because of its academic progress; and (3) the education department uses to improve the proficiency of the national teaching community to compete globally in teaching and learning.

The model proposes that professional development activities should be conducted coupled with incentives for every stage when the set objectives are achieved. Bandura (1977, 1989, 1999, 2004) emphasises that motivated teachers have high levels of self-efficacy, which drives them throughout the processes of teaching and learning. There should be an incentives plan, which can be simple certificates as the participants of the

study suggested. Where possible, the department can also make monetary benefits available for achievements. The teacher development path should be arranged into groups of activities, and incentives should be allocated for each achievement. For example, when teachers are supposed to be developed in terms of content knowledge, there must be structures for the content knowledge to be acquired, and when the sub-structures are achieved, teachers receive a proof or incentive certificate. The incentives will also serve as a track record for the development process of the teacher. Development on pedagogics should also have structures. Teachers will be motivated to collect the certificates as proof that they possess better knowledge and skills than before. The researcher believes that this will enrich human capital and create knowledgeable and skilled members who contribute to the economic value of their schools. The literature review showed that teachers develop in three main categories, namely (1) knowledge of subject content, (2) didactics skills, and (3) technological skills (Mishra & Koehler, 2006; Altun et al., 2007; RSA, 2009a, 2009b; EDB, 2020). The deep and thorough knowledge of the subject content, combined with the teaching skills, added by the proper and skilful usage of the classroom technology, yield competent teaching staff.

7.3.3 Departmental support

The research findings revealed that some schools seemed neglected by the department in terms of physical upkeep, and this was confirmed by the participants. The model proposes that all schools be supplied with basic technological devices to equitably distribute technology. The support of the department is needed on both sides as illustrated by Figure 7.1. The accessibility of departmental officials will make CPTD a successful programme. The DoE's support is necessary in the two main components discussed above. Among other things, principals will appreciate the following:

- Continuous INSET to enable them to run their schools properly;
- Enforcing only appointing principals who hold management qualifications;
- Communication with principals about the workshops they wish to hold annually to allow principals to budget for teachers' travelling expenses and to organise their own development workshops;

- Ensuring the supply of basic technological teaching equipment for all schools;
- Acting decisively in all instances that principals request intervention and being easily accessible; and
- Facilitating an incentives policy for CPTD.

The researcher believes that if these six components are prioritised by the department and all principals are supported accordingly, teacher development programmes will be connected to the knowledge economy and schools will retain knowledgeable staff who positively impact learners' academic achievement.

7.4 SUMMARY OF THE CHAPTER

This chapter presented the proposed teacher development model for the knowledge economy in the context of school principals in South Africa. The components of the model and how they link with one another were discussed. The anticipated significance of the components of the model were also presented. The next chapter recaps and summarises the research findings against the research questions and outlines the limitations and delimitations of the study.

CHAPTER 8

SUMMARY OF THE RESEARCH FINDINGS, LIMITATIONS, AND DELIMITATIONS

8.1 INTRODUCTION

The proposed knowledge economy teacher development model was presented in the previous chapter. The components of the model and how they connect were explained. The significance of the proposed model and how it will help connect teacher development to the knowledge economy were also presented and discussed. This chapter summarises the findings of the study and presents the study's limitations and delimitations. The aim of this study was to use a literature review and empirical data to address the question: What are South African school principals' perspectives on CPTD for the knowledge economy? The study also aimed to answer the following secondary research questions:

- What are South African school principals' views on contemporary teacher development programmes?
- How do South African school principals connect teacher development to the knowledge economy?
- What challenges do South African school principals face in connecting teacher development to the knowledge economy?
- How can the challenges that South African school principals face in connecting teacher development to the knowledge economy be addressed?
- Which teacher development model can be adopted to connect the CPTD to the knowledge economy?

8.2 SUMMARY OF THE RESEARCH FINDINGS

Ten South African school principals were sampled to participate in the research, and semi-structured interviews, document analysis, and observation of the physical infrastructure of the schools were the data collection tools. The data was analysed using the thematic analysis. The findings, which are summarised in the following subsections, attempted to provide answers to both the main research question and the secondary research questions.

8.2.1 South African school principals' views on contemporary teacher development programmes

The participants described the contemporary CPTD programmes as good and of paramount importance. The principals postulated that the teacher development activities encourage CPD to keep teachers informed about the dynamic changes in their profession. CPTD exercises keep teachers well informed about their profession in terms of content knowledge and pedagogical expertise. According to the principals, teachers should be self-motivated, so they realise their own information gaps and participate in activities to close the gaps. They further asserted that through teacher development activities, teachers get opportunities to interact with other professionals to acquire new skills.

The researcher discovered that one of the challenges principals encounter with CPTD is the lack of proper contribution from the education authorities. Schools lack technological resources and are stressed because in small schools do not have enough teachers to teach all the subjects because of the present teacher provisioning model. Small schools are neglected by the DBE and are seldom visited for support. This negligence exacerbates feelings of frustration in the principals, which obviously affect the teachers.

The principals suggested that the education department should publish an annual plan or schedule for teacher development activities to enable schools to plan their own activities. They believed that local development programmes should form the foundation because teachers do better when they start learning to improve the things they work with daily. The researcher discovered that principals want the CPTD points to benefit teachers in the form of money or opportunities for promotion purposes.

The above findings, as supported by literature, made the researcher believe that there is a communication breakdown between the education authorities and school managers. The current researcher proposes that the department should strengthen their relations with school principals by, firstly, announcing their annual teacher development year plans, and secondly, supporting schools with their development needs.

8.2.2 South African school principals connecting teacher development to the knowledge economy

The principals explained that the only way teachers can acquire knowledge and skills is to be involved in CPTD activities organised by the schools and the DoE. They asserted that school principals should be given opportunities to arrange internal workshops to develop teachers and be supported with the necessary equipment and materials to encourage them. They further wished that teachers be obliged to enrol for tertiary courses to further their qualifications in their fields of specialisation and not in other fields of interest.

The tendency of the DoE to deliver learner-teacher support material late in the year or not at all forces principals to encourage teachers to be innovative so learners do not fall behind because of the delay. The principals believed innovation is important in the manipulation of available resources to create learning and teaching materials that benefit learners, and to look to neighbouring schools and the internet for information.

The participants motivated their teachers to use technology by giving them free access to the school Wi-Fi and establish a timetable for using the few resources like one laptop and one data projector. They also organised school workshops in which someone knowledgeable in technology teach the other teachers. It was evident that the teachers are demotivated by the lack of resources and overloading.

The principals raised their concerns about how the department neglect small schools with low enrolments, which leads teachers to become overloaded as they battle to teach all the subjects enforced by the national curriculum. Most of the teachers become angry and frustrated, and therefore, they become resistant to organisational changes. Instead of being motivated to acquire new skills in the new subjects, they feel that the department does not do its part.

Similarly, some principals explained that their teachers benefitted from the organisational changes and have acquired new knowledge and skills that they enjoy. Some junior teachers who got opportunities to act in vacant promotional posts also acquired

management skills. The researcher discovered that school principals implement teacher development for the knowledge economy despite the serious challenges they encounter.

8.2.3 The challenges that South African school principals face connecting teacher development to the knowledge economy

The participants complained about various issues encountered during the CPTD implementation. Firstly, most teachers are reluctant and resistant to the demands of technological teaching and learning because of the stress of being overloaded with work. Secondly, principals are repeatedly inconvenienced by departmental workshops that were not planned well in time. Small schools use a large percentage of their money to transport teachers to workshops, which are always conducted at distant locations. The researcher believes workshop venues should be circulated so small schools can also benefit from the arrangement.

The participants indicated that teachers are reluctant to further their studies because they are not satisfied with the present incentives program that the department is using. Some teachers also do not satisfactorily engage in development activities because they are not given certificates to track their development progress. The researcher found that teachers need incentives for every development progress for motivation. Therefore, the department should review their incentives program.

Another challenge raised by the participants is that the education department fails to supply them with relevant, necessary materials to curb the demands of the new technological teaching dispensation. Schools struggle with few or no resources, and the department seems to be neglecting their responsibility of supplying the resources. The researcher concurs that there is no basic equitable supply of resources in public schools.

The recent teacher provisioning model that is used to supply teaching posts to schools was also a matter of concern to participants. When the enrolment of schools drops, the department uses the model to transfer teachers out of the school, and this leaves the remaining teachers struggling with overload. Therefore, the department should support small schools by allocating special posts to enable them to share the work of the national curriculum.

8.2.4 Addressing the challenges that South African school principals face connecting teacher development to the knowledge economy

Noting that the education authorities fail to offer reinforcement to principals to motivate them and their teachers, the participants indicated that they use their basic managerial and leadership skills to offer guidance to teachers when they become frustrated. They believed that regularly arranging school workshops bring teachers together. Meetings and workshops bring teachers together to share experiences and strategies. The current researcher believes that local workshops encourage team building and promote mutual relationships among teachers.

The participants noticed that most teachers are demotivated and believed that offering individual psychosocial support to teachers will trigger their intrinsic motivation. When teachers feel that they are essential, they become more motivated to participate in school activities, including teacher development opportunities. Principals motivate their teachers through incentives, which are limited due to their financial disadvantage. The researcher concurs that a motivated staff is a winning staff.

Another strategy reported by the participants is to ensure teachers maximise the use of what they have, while requesting for external supplements. Teachers cannot leave one data projector, for example, to gather dust because it is not enough. Teachers should believe in what they have and hope to make great things. According to Bandura (2004), this efficiency is significant for intrinsic motivation. Teachers can also use similar skills and self-reliance to create innovative materials to supplement what is available. Lastly, principals should tirelessly continue to approach the department for support.

8.2.5 Proposing a teacher development model to connect continuing professional teacher development to the knowledge economy

Participants shared sentiments that the current teacher development model does not successfully connect CPTD to the knowledge economy. The model cannot sustain the continuity of teacher development programmes because of lack of motivation and continuous departmental encouragement to schools. The participants' expectation was that the education authorities should create a strong communication channel with

educational leaders. Principals should be prioritised for a proper teacher development programme because they are responsible for teacher development in schools. They are responsible for the various needs of schools to minimise frustration and stress that accompany teacher development.

The principals believed that teacher enrichment exercises should produce knowledgeable and skilled staff members and increase the possibility of retaining them for a long time. Staff members are retained under auspicious conditions, free of anger and frustrations emanating from feelings of being neglected by their employer. The DoE should support teacher development tasks by supplying resources and incentives. Participants believed that CPTD steps should be recognised in the form of rewards to make teacher development more attractive. These findings led the researcher to propose an alternative teacher development model, which was presented in detail in Chapter 7. This knowledge economy teacher development model sets out what the DBE and principals can do to make CPTD a successful pursuit to connect teacher development to the knowledge economy.

8.3 LIMITATIONS OF THE STUDY

Every study has various inherent constraints, called limitations, that impact the generalizability of the results. This study was limited to 10 principals in one district under the jurisdiction of the Limpopo DoE. This restricted the generalizability of the findings. The findings and recommendations resulted from the analysis of responses obtained from the principals through an interview protocol, supplemented by data collected from documents and observations. The four uncontrollable constraints that impacted the generalizability of the findings are the research design, data construction techniques, method for analysing data, and time factor.

8.3.1 Research design

The qualitative research approach and the case study design, which investigate phenomena in authentic situations, were adopted to conduct this inquiry. The researcher was enabled by the use of the case study design using semi-structured interviews,

observations, and documents analysis, which enabled the researcher to collect data from the principals in their various settings. Through this research design and thematic analysis, the researcher managed to present the findings. The findings showed how the principals perceived contemporary teacher development programmes and how they connect them to the knowledge economy. The choice of a research design is a limitation because research designs channel researchers on procedures to follow in the choice of participants, how data should be collected, analysed and interpreted.

8.3.2 Data construction techniques

The interview protocol used to collect the data enabled the researcher to ask probing questions when the response to the question was unclear. Probing questions assisted with the full understanding of the standpoint of the participant on a subtopic. The responses were recorded on an audio recorder and later transcribed. The research thus used construction strategies that cannot yield generalisable findings because they not everything about the phenomenon was collected.

8.3.3 Data analysis method

The researcher used thematic data analysis. Important themes that defined the phenomenon under investigation were presented. Significant patterns of information enabled the researcher to structure the information from patterns into themes, and further, into subthemes. The interview responses, organisation of data, and analysis focused on the primary and secondary research questions. The analysis method also limited the generalizability of the findings.

8.3.4 Time factor

This study encountered the limiting factor of time. The researcher could not collect data at any time from the participants because the school principals did not have enough time for the interviews. During the teaching and learning sessions, principals had to observe their working hours, and therefore, could only participate after official working hours. Sometimes the researcher arrived at the venue only to find that there is an emergency management meeting or school governing body meeting, and the interview had to be

postponed. The other factor that limited the study was that some principals hesitated to participate because they thought the interviews were a plan to get information to persecute underperforming principals.

8.4 DELIMITATION OF THE STUDY

The researcher established some boundaries to narrow the focus of the study. The three delimiting factors of this study were the research focus, types of participants, and research methodology.

8.4.1 Research focus

All inquiries focus on their unique objectives throughout. This study's focus was solely to explore the perspectives of South African school principals on the implementation of CPTD for the knowledge economy. The literature review was narrowed to focus only on CPTD practices, how principals manage the practices, and how they connect them to the knowledge economy. The study adopted the SLT as the theoretical framework underpinning the research. The focus and theoretical framework delimited the study as it focused only on how professional learning is done.

8.4.2 Research participants

The participants were 10 school principals from one district of Limpopo province. The school principals volunteered to participate. The study was narrowed to include only principals because they are mandated by the latest legislation to manage CPTD and other appraisal programmes. This focus on school principals enabled the researcher to collect rich narratives related to CPTD.

8.4.3 Research methodology

A qualitative research methodology, which restricts the uses of other methods that collect numerical data, was used in this inquiry. The methodology allowed the researcher to collect data while the participants were in their natural settings. The focus was on verbal responses to interview questions. The aim of the study was to explore South African school principals' perspectives on CPTD for the knowledge economy. The qualitative

research methodology dictated the usage of purposive sampling to select participants who have relevant data for the research questions.

8.5 SUMMARY OF THE STUDY

The chapter presented a summary of the research findings, limitations, and delimitations. The aim of this study was to use a literature review and empirical data to determine South African school principals' perspectives on CPTD for the knowledge economy. The summary was done in accordance with the themes that emanated from the secondary research questions. The last chapter discusses the conclusions and recommendations of the study and recommendations for further studies.

CHAPTER 9

CONCLUSIONS AND RECOMMENDATIONS

9.1 INTRODUCTION

The previous chapter presented a summary of the research findings and discussed the study's limitations and delimitations. This chapter presents the conclusions and recommendations of the study, which were drawn from the discussion of the research findings. The chapter concludes by making recommendations for further research based on the achievements of the current study and gaps that still exist.

9.2 CONCLUSIONS OF THE STUDY

The perspectives of South African school principals on CPTD for the knowledge economy were explored in this study. The study investigated how the school principals view contemporary teacher development programmes, and further established how school principals connect teacher development to the knowledge economy. The study explored, on one hand, the challenges that school principals face connecting teacher development to the knowledge economy, and on the other hand, how the principals try to address the challenges. Lastly, the inquiry proposed an alternative model that can be adopted to connect teacher development to knowledge economy.

The study established that the current teacher development programmes, such as the CPTD and QMS, are implemented in the South African schools but cannot successfully connect teacher development to the knowledge economy because school principals encounter several challenges and the DBE does not support them fully to address these challenges. Furthermore, teachers are not motivated to participate in teacher development practices as they do not attach value to them. Teachers' salaries are perceived as low, and they prefer to receive valuable rewards for every task they participate in and accomplish. Rewards are anticipated to be certificates or monetary awards. The literature review contended that incentives motivate employees and encourage them to participate in organisational activities.

Moreover, school principals are challenged by teachers who resist professional development activities, citing reasons such as unnecessary workloads emanating from the transfer of teachers from small schools. South African school principals struggle alone to address the challenges they face because of lack of proper support from the DBE. Literature has attested how international developing and developed countries are handling their CPTD practices, and that more can be acquired from developed countries.

Furthermore, the study concludes that CPTD activities are done in isolation, every school for itself. Literature review argues that the acquired knowledge, skills, and experiences should be shared among local colleagues, and be distributed to other schools for the benefit of the learners and the system. Social learning theory demonstrated how teachers can learn better when they are exposed to social contexts where they interact with peers and colleagues. The SLT has also connoted the importance of incorporating modelled teaching behaviour into professional learning. The pivotal significance of CPTD is collaboration, teamwork, knowledge distribution and usage, and mutual relationships among educational institutions on a broader spectrum.

9.3 RECOMMENDATIONS OF THE STUDY

Based on the summary and recommendations of the findings discussed in the previous chapter, the following recommendations are made by the researcher: Recruitment of qualified teachers into existing posts to avoid resistance to teacher development, introduction of a teacher incentive plan for motivation, publication of a teacher training schedule by the education authorities, the audit and supply of minimum technological devices to all schools, review of the CPTD participation points system, review of the requirements for appointment into principalship posts, and implementation of the proposed model to connect teacher development to the knowledge economy.

9.3.1 Recruitment of qualified teachers into existing posts to avoid resistance to teacher development

The EEA (RSA, 1998) provides that teachers should be appointed or transferred on the operational requirement of schools. Principals should appoint qualified teachers relevant

to the curricula needs of their schools. This strategy will ensure teachers, as far as possible, teach only what they are qualified to teach. A teacher who teaches a foreign subject will be mostly demotivated when they are supposed to be engaged in any professional enrichment activity. The development process should be aimed at developing what is already there, known and practiced, instead of trying to develop skills a subject recently given to a teacher. The recruitment process should include the induction, coaching, and mentoring of new personnel. The department should also introduce a consistent annual plan to induct newly appointed teachers on promotional posts. All induction exercises should focus on CPTD programmes.

9.3.2 Introduction of a teacher incentive plan for motivation

A teacher incentive plan that considers how teachers can be incentivised for their conduct in the teaching profession and development should be introduced by the DBE. The plan should establish a consistent way in which performance rewards are allocated. When teachers are aware of the plan, most, if not all of them, will be motivated to participate in activities to qualify for the incentives. Literature has propounded that developed countries have teacher incentive plans that they utilise to retain teachers in the profession. Plans may comprise, among others, certificates and awards for the achievement of certain standards, monetary benefits, status of being nominated by the parent community, possibility for a recognised internal promotion into established ranks, and a national permission for an interschool team or peer teaching where teachers can display their skills on other platforms. Teachers will not only be motivated to display their skills to other colleagues, but also to collect fame and belongingness, which is one of Maslow's hierarchy of needs (McLeod 2018). Teachers, like other human beings, also have a need to belong to a social group and to be respected and appreciated by others (Trivedi, 2019).

9.3.3 Publication of annual teacher training schedule by the education authority

To curb the inconveniences encountered by school principals, the department should annually publicise a training schedule to facilitate the drawing up of year plans in schools. This will enable principals to plan for their local teacher development activities in advance and to make a budget available for transporting teachers to the training venues. The

timeous annual schedule will also allow principals to interact with the department on this issue in order to make adjustments where necessary. This will ensure everybody participates wholeheartedly. It is also recommended, about this issue, that external training workshops should not be too much to consume the teaching time. Participants complained about it. Training venues should also be rotational because continuous remote venues collapse the budgets of small schools.

9.3.4 Audit and supply of minimum technological devices to all schools

The supply of technological devices will remove some the stress and frustration for teachers in small, disadvantaged schools. Some schools only know about technology on paper. The equitable supply of resources will restore the national equitable trust that principals are supposed to have in the DBE.

9.3.5 Review of the continuing professional teacher development participation points system

The recent point system of CPTD awards certain points for participation in teacher development activities. Since the accumulated points have no clear value, the researcher recommends that the system be reviewed and modified to consider arranging the teacher development activities into groups or levels. A reward or a certificate can be given when a teacher has gone up to a certain level or has managed to do a certain number of group activities. Teachers will be motivated to reach higher levels because the levels are recognised and certificated or rewarded.

9.3.6 Review of the requirements for appointment into principalship posts

South Africa is inconsistent with other developed countries by appointing principals not because they are qualified to be principals but because they have been a teacher for a certain number of years, irrespective of whether they have acquired any management qualifications. A management qualification remains an added advantage instead of a requirement. Principals are often referred to as promoted teachers, but they are not as qualified as managers should be. The qualification will equip incumbents with managerial skills to minimise dependence on the DBE for minor management challenges.

9.3.7 Implementation of the proposed model for connecting teacher development to the knowledge economy

The proposed knowledge economy teacher development model was presented and discussed in Chapter 7. The researcher believes the model will improve CPTD by using eight components to link teacher development with the knowledge economy in South Africa. The discussed components are recruitment, CPTD activities, incentives, use of technology, advantage of organisational dynamics, development of human capital, departmental support, and lastly, retention of the teaching personnel. The ingredients of the model were grouped into three main categories, which were recruitment and retention, CPTD activities, and departmental support. When blended in correct portions, these components will produce balanced CPTD with minimal challenges.

9.3.8 Review of post provisioning model used to allocate teaching posts to schools

The South African posts provisioning model seems blind about the number of subjects allocated in the national curriculum and assessment policy statements (CAPS). In the senior phase, grades seven to nine, there are ten subjects whose work teachers are supposed to share. The model dictates that teachers should be allocated to schools through a ratio of 1:35, for example. When for some reasons the enrolment drops, the department transfers teachers out of the school into other schools, resulting in unnecessary workload to the remaining teachers. This study has revealed that small schools experience a percentage of resistance towards teacher development activities because most teachers are teaching subjects which they are “supposed to assist because there is no teacher.” Some subjects in those small schools end up not properly taught, pushing information gaps to the teachers of higher grades.

9.3.9 Review of admission requirements into the teaching profession

The study has revealed that admission to the teaching profession is no longer rigorous like other professions, such as chartered accountancy. Beaton (2022) defines a professional as somebody who has a specialist knowledge and expertise acquired from

a lengthy exposure into the field of training. The ease with which individuals join the teaching profession contaminate the profession with individuals whose sole aim is to get an occupation and earn a salary, and no longer a call for the *in loco parentis*. In South Africa, individuals who are not successful in their intended professions can easily land into teaching through a one-year certificate called a Post Graduate Certificate in Education [PGCE], the completion of which makes one a qualified teacher. The certificate should be reviewed so student teachers can spend actual years to become professionals. Profession should not have an easy way to join it, and teaching is not exceptional. Susskind and Susskind (2015; 2018) hold that professions nowadays seem to be outdated and inaccessible to those who should be benefitting from their professional services. In other words, most of the professionals forgot that people entrust their lives on them assuming that they became professionals because of their knowledge and expertise.

9.4 RECOMMENDATIONS FOR FURTHER RESEARCH

This study explored how school principals are connecting CPTD to the knowledge economy. Based on the findings, affected by its limitations and delimitations, the researcher makes the following recommendations for further research:

- Conduct another study using a random sampling quantitative research approach to broaden the sample to include all South African school principals. More data can be collected, and the proposed teacher development model can be reinforced with other components for improvement.
- Considering the challenges and confrontations encountered by school principals in this study, research can be conducted on the perceptions of the newly appointed school principals towards management challenges in the Limpopo province and the rest of South Africa.
- An inquiry can be instituted on how the South African DBE conducts the national teaching awards and how this impacts teacher motivation for professional development.

- The focus of future research can be a comparative study between South Africa and developed countries on the significance of managerial qualifications for the appointment of school principals.

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ANNEXURES

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ANNEXURE A
APPLICATION LETTER TO CONDUCT
RESEARCH

Enquiries: Mahlaela M. Abram

P O Box 83

Contact: 082 228 5497

Sehlaqwane

Email: mahlaelama@gmail.com

1047

01 April 2021

The Head of Department

Limpopo Department of Education

Attention Education Management Information and Research

Private Bag X9489

Polokwane

0700

Dear Sir/Madam

SUBJECT: APPLICATION FOR PERMISSION TO CONDUCT RESEARCH IN THE LIMPOPO DEPARTMENT OF EDUCATION

My name is Mphuphuthane Abram Mahlaela and am currently enrolled at the University of Pretoria for a PhD in Education Management and Policy Studies, under the supervision of Prof. Ramodikoe Nylon Marishane. I am intending to conduct a study in some schools in the province and would like to get permission from your office as one of the ethics considerations. The title of my study is: *The South African school principals' perspectives on continuing professional teacher development for knowledge economy.*

The purpose of this study is to examine how the South African school principals view the contemporary teacher development programme (CPTD) in the context of knowledge

economy. The study also involves gaining insight into how school principals develop teachers professionally in the new context and the challenges they encounter in the process.

As part of my study, I have to collect data by interviewing principals in primary and secondary schools, and to use some of their official documents to supplement the information collected. For this reason, I would like to request your permission to conduct the data collection activities in the Sekhukhune South District. The interview, observation and document analysis activities will focus on principals' views on how teachers are developing professionally. The interviews will be held at selected schools and will last for approximately 45 to 60 minutes. In order not to interfere with the principals' normal daily duties, the interviews will be held outside formal school hours.

Participation in this study is completely voluntary and principals are free to withdraw at any time during the course of the interview without fear or providing any reason for doing so. To avoid any possible harm to them and to ensure the privacy of schools, their names will be protected by using pseudonyms or alphabets in place of their names. This will ensure that any information they give will not be linked to their names or those of the schools.

The findings and recommendations of this study will be made available to your office in the form of a thesis upon completion.

Your positive response to this request will be highly appreciated.

Yours Faithfully,



Mahlaela M.A. (Mr)

**ANNEXURE B
LIMPOPO ETHICS APPROVAL FROM
PREMIER'S OFFICE**

CONFIDENTIAL



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

OFFICE OF THE PREMIER

TO: DR MC MAKOLA

FROM: DR T MABILA

ACTING CHAIRPERSON: LIMPOPO PROVINCIAL RESEARCH COMMITTEE (LPRC)

DATE: 08th JULY 2021

**SUBJECT: SOUTH AFRICAN SCHOOL PRINCIPALS' PERSPECTIVES ON CONTINUING
PROFESSIONAL TEACHER DEVELOPMENT FOR KNOWLEDGE ECONOMY**

RESEARCHER: MAHLAELA MA

Dear Colleague

The above researcher's research proposal served at the Limpopo Provincial Research Committee (LPRC). The committee is satisfied with the methodological soundness of the proposed study.

Decision: The research proposal is granted full research approval.

Regards

Acting Chairperson: Dr T Mabila

Secretariat: Ms J Mokobi

Date: 12/07/2021

ANNEXURE C
ETHICS CLEARANCE CERTIFICATE
FROM PREMIER'S OFFICE

CONFIDENTIAL



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

OFFICE OF THE PREMIER

Office of the Premier

Research and Development Directorate

Private Bag X9483, Polokwane, 0700, South Africa

Tel: (015) 230 9910, Email: mokobij@premier.limpopo.gov.za

LIMPOPO PROVINCIAL RESEARCH ETHICS
COMMITTEE CLEARANCE CERTIFICATE

Meeting: 08th July 2021

Project Number: LPREC/53/2021: PG

**Subject: South African School Principals' Perspectives on Continuing Professional
Teacher Development for Knowledge Economy**

Researcher: Mahlaela MA

Dr Thembinkosi Mabila

Chairperson: Limpopo Provincial Research Ethics Committee

The Limpopo Provincial Research Ethics Committee (LPREC) is registered with National Health Research Council (NHREC) Registration Number REC-111513-038.

Note:

- i. This study is categorized as a Low Risk Level in accordance with risk level descriptors as enshrined in LPREC Standard Operating Procedures (SOPs)
- ii. Should there be any amendment to the approved research proposal; the researcher(s) must re-submit the proposal to the ethics committee for review prior data collection.
- iii. The researcher(s) must provide annual reporting to the committee as well as the relevant department and also provide the department with the final report/thesis.
- iv. The ethical clearance certificate is valid for 12 months. Should the need to extend the period for data collection arise then the researcher should renew the certificate through LPREC secretariat. PLEASE QUOTE THE PROJECT NUMBER IN ALL ENQUIRIES.

ANNEXURE D
PERMISSION LETTER TO CONDUCT
RESEARCH FROM HEAD OF
DEPARTMENT



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION

CONFIDENTIAL

Ref: 2/2/2 Enq: Makola MC Tel No: 015 290 9448 E-mail: MakolaMC@edu.limpopo.gov.za

Mahlaela MA
P O Box 83
Sehlakwane
1047

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH

1. The above bears reference.
2. The Department wishes to inform you that your request to conduct research has been approved. Topic of the research proposal: **"SOUTH AFRICAN PRINCIPALS PERSPECTIVES ON CONTINUING PROFESSIONAL TEACHER DEVELOPMENT FOR KNOWLEDGE ECONOMY"**
3. The following conditions should be considered:
 - 3.1 The research should not have any financial implications for Limpopo Department of Education.
 - 3.2 Arrangements should be made with the Circuit Office and the School concerned.
 - 3.3 The conduct of research should not in anyhow disrupt the academic programs at the schools.
 - 3.4 The research should not be conducted during the time of Examinations especially the fourth term.
 - 3.5 During the study, applicable research ethics should be adhered to; in particular the principle of voluntary participation (the people involved should be respected).

REQUEST FOR PERMISSION TO CONDUCT RESEARCH: MAHLAELA MA

Cnr. 113 Biccard & 24 Excelsior Street, POLOKWANE, 0700, Private Bag X9489, POLOKWANE, 0700
Tel: 015 290 7600, Fax: 015 297 6920/4220/4494

The heartland of southern Africa - development is about people!

3.6 Upon completion of research study, the researcher shall share the final product of the research with the Department.

4 Furthermore, you are expected to produce this letter at Schools/ Offices where you intend conducting your research as an evidence that you are permitted to conduct the research.

5 The department appreciates the contribution that you wish to make and wishes you success in your investigation.

Best wishes.



Dederen KO
Head of Department

21/05/2021
Date

REQUEST FOR PERMISSION TO CONDUCT RESEARCH: MAHLAELA MA

ANNEXURE E
REQUEST FOR PARTICIPANTS TO
PARTICIPATE

Dear Principal

REQUEST FOR PARTICIPATION IN AN INTERVIEW FOR A RESEARCH PROJECT

My name is Abram Mahlaela and I am currently enrolled at the University of Pretoria for a PhD in Education Management, Law and Policy under the supervision of Prof Nylon Marishane. The title of my approved research study is: *South African school principals' perspectives on continuing professional teacher development for knowledge economy*. The purpose of this research is to examine how the South African school principals view continuing professional teacher development (CPTD) in the context of knowledge economy. The study involves gaining insight into how school principals develop teachers professionally in a new context and the challenges they encounter in the process.

As part of the study, I have to collect data by interviewing principals in primary and secondary schools. For this reason, I would like to request your participation in an interview session, focusing on your views on developing teachers in your school professionally. The interview will be held at your school and will last for approximately 30–45 minutes. In order not to interfere with your normal daily duties, this interview will be held outside formal school hours. I will also have to take a walk to inspect the surroundings of your schools to note the physical conditions. Furthermore, I will also request some documents from your office in order to complete checklists concerning important information about the school and teacher development is experienced.

Participation in this study is completely voluntary and you are free to withdraw at any time during the course of the interview without fear or providing any reason for doing so. To avoid any possible harm and ensure privacy, your identity as well as that of your school will be protected by using a pseudonym in the place of your real name. This will ensure that any information you give, will not be linked to your name or that of your school. To capture data for subsequent transcription and analysis, the interview will be audio-recorded. All information obtained during the interview will be treated confidentially. For

this reason, only my supervisor and I will have access to the data recorded during the interview.

The findings and recommendations of this study will be made available to your school in the form of a thesis upon completion of this study. I also would like to request your permission to use your data confidentially and anonymously for further research purposes, as the data sets are the intellectual property of the University of Pretoria. Further research may include secondary data analysis and using the data for teaching purposes. The confidentiality and privacy applicable to this study will be binding on future research studies.

Should you be willing to participate in this study, kindly sign the attached form.

Regards

Abram Mphuphuthane Mahlaela



Signature:

Date 01/09/2021

Researcher`s Contact Details Supervisor`s Details

Name: Abram Mphuphuthane Mahlaela

Name: Prof Nylon Marishane

Cell: 0822285497

Cell: 061 523 3871

E-mail: mahlaelama@gmail.com

E-mail: nylon.marishane@up.ac.za

ANNEXURE F
PARTICIPANTS CONSENT LETTER

INFORMED CONSENT FORM

VOLUNTARY PARTICIPATION IN A RESEARCH PROJECT

I, _____, (full name) understand the information given to me and I am willing to participate in the study with the title *South African school principals' perspectives on continuing professional teacher development for knowledge economy*. I understand that my participation in this study is voluntary and that my identity will be protected and remain confidential. I also permit the researcher to use information from the surroundings and from necessary documents from the office.

Participant's signature Date

Contact (optional)

ANNEXURE G
INTERVIEW PROTOCOL

INTERVIEW PROTOCOL	
1	Briefly provide some background to your teaching career.
2	What are your views on Continuing Professional Teacher Development (CPTD) programmes?
3	How do you ensure that your teachers use the organizational dynamics of the school to adapt to changes in the new context?
4	How do you ensure that teachers use available technology tools to adapt to the changes in the new context?
5	How do you motivate teachers to be innovative in their profession?
6	How do you ensure that your teachers acquire knowledge, skills and experience?
7	What challenges do you face in connecting teacher development to the new context of knowledge economy?
8	How do you address those challenges?
9	Please supply any other suggestions regarding teacher professional development programmes.

**ANNEXURE H
OBSERVATION SCHEET**

NON-PARTICIPANT OBSERVATION SHEET	
School's pseudonym or alphabet: _____	
A: Physical appearance	
Aspects observed	Availability and Comments
Buildings (library, science lab, enough accommodation, etc)	
B: Technological tools	
Aspects observed	Availability and Comments
Laptops	
Data Projectors	
White boards	
Interactive boards	
Chalkboards	
Wi-Fi connectivity	
Any other technological device	
C: General Comments (Does the school appear well supported?)	

ANNEXURE I
DOCUMENTS ANALYSIS SCHEET

DOCUMENTS ANALYSIS SHEET		
School's pseudonym or alphabet: _____		
DOCUMENTS	AVAILABLE YES/NO	GENERAL COMMENTS
School IQMS File		
Teachers' individual QMS files		
Minute book or attendance registers for school development workshops		
School's post establishment		
LTSM register		
School's assets register		
General comments (Are the technological tools enabling the school to do teacher professional development? Any overcrowding?)		