

**THE USE OF INFORMATION AND COMMUNICATION TECHNOLOGY TO ENHANCE  
PROFESSIONAL LEARNING COMMUNITIES OF SETSWANA HOME LANGUAGE**

**by**

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## DECLARATION

I, SIBONGILE NOMONDE PATIENCE MODUKA, a student in the Faculty of Education at the University of the Free State, hereby declare that this dissertation, **THE USE OF INFORMATION AND COMMUNICATION TECHNOLOGY TO ENHANCE PROFESSIONAL LEARNING COMMUNITIES OF SETSWANA HOME LANGUAGE**, is my own, independent work, and has never been submitted by me at another university or faculty. I furthermore cede copyright of the dissertation in favour of the University of the Free State.

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SNP MODUKA

2019

## DEDICATION

I dedicate this dissertation to my family, in particular, my husband, Kgosietsile Stephen Moduka. You became a father and a mother to the boys and supplied all their needs when I was travelling the academic journey. Thank you for believing in me and for encouraging me to complete my studies when I became discouraged and lost hope. My two boys, Katlego and Orefemetse, thank you very much for understanding that I was a student, like you, and that I could not always be available for you. Ke a leboga Bakubung!

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## ABSTRACT

This study aimed to design a framework for using information and communication technology (ICT) to enhance professional learning communities (PLCs) of the subject Setswana home language. The 21<sup>st</sup> century requires that learners master new knowledge and skills if they are to proceed to the next level and meet the challenges presented by living in this century. Educational reforms related to the new knowledge and skills also affect teachers, as they also have to know what to teach and how to teach it. In order to keep abreast of these changes, teachers have to engage in intensive and continuous professional development. Communication and collaboration amongst subject teachers is crucial for both teacher development and learner attainment. Establishing PLCs is a collaborative approach to teaching, which involves teachers collaborating in order to empower each other, and sharing their best practices, with the aim of improving learner achievement. The functionality of face-to-face PLCs is, however, affected by a variety of factors, which, in turn, hinder the PLCs from achieving their goals. It is against this background that this research study emerged. This study investigated the challenges that led to the need to design a framework for using ICT to enhance PLCs of Setswana home language, and proposes solutions for the challenges. Furthermore, the conditions under which such a framework could be implemented, and the threats that could impede the implementation process, are reflected upon. The study also reveals evidence of the successful implementation of the framework. Critical emancipatory research was the theoretical framework that drove the study to achieve its aim and objectives, and to address the research question. This study was operationalised by applying the learning theory of connectivism, which takes into account trends in learning about the use of technology and networks. Participatory action research was the research approach used to generate data. The following members formed a team of co-researchers: district ICT coordinator, subject advisors, senior phase teachers, heads of departments, principals, a school governing body member and an administration clerk. Data generated through discussions during meetings and Whatsapp groups was analysed using Van Dijk's critical discourse analysis, which uses three levels of data analysis: textual, social and discursive levels. The co-researchers found that ICT enhanced the assistance provided by PLCs to

teachers, by helping them to communicate and collaborate and meet the curriculum needs of the 21<sup>st</sup> century. Teachers are able to reflect on their practices via ICT resources, they can participate in their own learning in a free environment, and they can elevate Setswana home language as a subject by developing their own, current multimedia texts and other materials, which they can share amongst themselves via ICTs. Lastly, the study recommends that ICT integration in curriculum practice should be supported fully by school leaders.

**Keywords:** Professional learning communities, Information and communication technologies, Setswana home language

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

CAPS	Curriculum and Assessment Policy Statement
CDA	Critical discourse analysis
CER	Critical emancipatory research
CPTD	Continuing Professional Teacher Development
DBE	Department of Basic Education
DTDC	District Teacher Development Centre
FET	Further Education and Training
FSDOE	Free State Department of Education
HOD	Head of department
IBP	Integrated Broadcast Project
ICT	Information and communication technology
IQMS	Integrated Quality Management System
ISPFTEDSA	Integrated Strategic Planning Framework for Teacher Education and Development in South Africa
NCS	National Curriculum Statement
NPFTED	National Policy Framework for Teacher Education and Development
NPPPPR	National Policy Pertaining to the Program and Promotion Requirements
PAR	Participatory Action Research
PGP	Personal Growth Plan
PLC	Professional learning communities
SASAMS	South African School Administration and Management System

SGB	School governing body
SMT	School management team
SWOT	Strengths weaknesses opportunities and threats
UFS	University of the Free State

## **CHAPTER 1: OVERVIEW OF THE STUDY**

### **1.1 INTRODUCTION AND BACKGROUND**

This chapter will present an orientation to the study that was undertaken. It will provide an overview of the entire study by outlining what had motivated me to undertake this study to formulate a framework that uses information and communication technology (ICT) to enhance professional learning communities (PLC) of the subject, Setswana home language. The background of the problems that led to the need for a framework will be outlined. A brief description on the theoretical framework that steered this study will be given. The research question, aim and objectives will be highlighted. Furthermore, the research design and research methodology will be discussed. Lastly, the value of this research, as well as the ethical considerations taken into account and the layout of chapters will be discussed.

Communication and collaboration amongst teachers, particularly those offering the same subject, are crucial for both teacher development and improved learner attainment (Burns & Laurie 2015:69). This study is, therefore, aimed to design a framework to use ICT to enhance PLCs of Setswana home language in Motheo district, Free State province, South Africa. PLCs are defined as opportunities for influential collaboration amongst professionals, where they work together with the aim of learning and sharing knowledge, skills and methods related to their subject matter (DuFour, 2004:3; Lee & Shaari, 2012:457; Nihuka, 2012:14). Setswana is one of the official languages of South Africa, and a school subject is offered mainly at home-language level in the Free State (DBE, 2011a:8). It is offered by schools in three of the province's five districts, with the majority of schools clustered in the outskirts of a small town, Thaba Nchu. For teachers to collaborate, they need to communicate frequently, and ICT is a tool that can be used to facilitate teacher networking and enhance teachers' learning opportunities (Burns, Taylor, Dimock, Snowden & Haynes, 2015:131). ICT is, therefore, defined as technologies arising from scientific and technological progress, which enable users to process, store, retrieve and disseminate valuable information in text, sound and video form. ICT also enhances curriculum delivery and improves the quality of education (Bladergroen, Chigona,

Bytheway, Cox, Dumas & Van Zyl, 2012:107; Mbangwana, 2008:2; Van Wyk, 2015:76). A preliminary literature review, with a special focus on Australia, Algeria, Botswana and South Africa, will be presented in order to achieve the objectives of the study. Where there is a need other countries' practices will also be reported.

The 21<sup>st</sup> century has seen various education reforms that have had a profound impact on what teachers have to teach and the way they impart new knowledge to their learners (DBE, 2014a:1). In South Africa, the effect of these changes has been aggravated by the introduction of the Curriculum and Assessment Policy Statement (CAPS), of which the purpose is to strengthen National Curriculum Statement (NCS). Setswana teachers are expected to incorporate new content into their subject, which means they now have to learn new knowledge, skills and approaches relevant to this subject. If teachers are to keep abreast of these changes, they need support from the employer and from other teachers. The support provided by the employer could take the form of workshops and training, though research has indicated that this approach does not have much impact on teacher learning (DBE, 2014a:2; Steyn, 2013:283). This means that teachers are faced with the challenge of inadequate learning from curriculum workshops. They fail to reap the expected benefits of these workshops, which are actually intended to develop them to adapt easily to the curriculum demands of the 21<sup>st</sup> century. According to Freire (1970:482), if teachers are to benefit from a learning experience, they have to participate and be actively involved. Active participation will lead to a new awareness of self, a new sense of dignity, and new hope. Teachers need a free environment that will promote the principle of active and critical learning, which is cited in the CAPS policy document (DBE, 2011b:4). PLCs are, therefore, meant to provide an environment that promotes active and critical learning; however, the functionality of PLCs is affected by factors related to time, space, teaching workload, etc. (Riverin & Stacey, 2008:43). Teachers, therefore, need a free learning environment that will complement the face-to-face meetings that often take place after a hectic school day (Stoll, Bolam, McMahon, Wallace & Thomas, 2006:240). ICTs have been identified as tools that could facilitate teacher development through PLCs, and establish networks for knowledge acquisition and sharing (Mathipa & Mukhari, 2014:1219). The above-mentioned challenges could be minimised, or even eradicated, if

teachers could receive the support they need from school managers, including the principal; however, research has found that such support is either absent or inadequate (Mestry, 2017:1).

Teachers of Setswana in the Free State also face the challenge of teaching a language that is not one of the designated languages in the province, and which is one of the previously dominated African languages. This poses a challenge for teachers, as Setswana is still underdeveloped regarding computing and internet terminology, hence, it can be labelled as one of the resource-scarce languages described by Von Holy, Bresler, Shuman, Chavula and Suleman (2017:1). Teachers have to empower and elevate this subject by developing their own contemporary multimedia texts, as prescribed by CAPS (DBE, 2011b:13). If PLCs are functional, all the challenges mentioned above can be overcome.

Countries such as Australia face challenges similar to those of South Africa. Teachers are under pressure to learn new skills, update their knowledge and change classroom practices; Botswana is experiencing the same challenge (Duncan-Howell, 2010:324; Eze, Adu & Ruramayi, 2013:26). This pattern is also evident in Algeria, where language teachers need new ways to solve old language problems. Teachers, faced with the challenge of teaching a foreign language, need to network with other teachers through learning communities in order to support their learning and their teaching of a foreign language as a subject (Guemide & Benachaiba, 2012:35). In all these countries there is a common need among language teachers, namely, a better way to learn and collaborate in order to address the demands of the 21<sup>st</sup> century, and to improve learner performance.

To alleviate the challenges that have been identified, numerous strategies have been employed in different countries. In Australia, teacher development takes place either face to face or online, but most teachers still prefer to earn themselves professional development points by attending traditional workshops and conferences presented by the employer, instead of becoming involved in online networking (Duncan-Howell, 2010:326). In Algeria, the situation is different, as the level of ICT integration is at an early stage and is still developing. ICT is mainly used as a delivery tool for online training offered by the National Institute of Educational Development (NIED), not necessarily for networking

amongst teachers (Guemide & Benachaiba, 2012:40). A similar situation prevails in Botswana, where video systems are used mainly to transmit television programmes and information. Though teachers can watch these programmes at their schools, it does not necessarily promote networking among teachers (Eze *et al.*, 2013:27). The Education Labour Relations Council (ELRC) teacher laptop initiative, the National Teacher Development (NTD) website, and Thutong website are among the initiatives of the Department of Basic Education (DBE) in South Africa to encourage the use of ICT for the benefit of teaching and learning (DBE, 2011a:17, 76). Though different countries have implemented different strategies to promote the use of ICT for teacher learning, the trend is mostly to present online courses and to provide materials, with a minor focus on teacher communication and collaboration, to address their teaching needs (Bennett, 2015:1).

For the successful implementation of a framework to use ICT for enhancing PLCs of Setswana home language, certain preconditions for implementation apply. The following are the most important and common conditions cited for Algeria and Botswana: Teachers need to be fully equipped with ICT skills; and good infrastructure is a prerequisite for framework implementation (Eze *et al.*, 2013:27; Guemide & Benachaiba, 2012:44; Leteane & Moakofhi, 2015:163). Duncan-Howell (2010:330) indicates that, for online communities to be meaningful, they require full engagement of all participants; they should also address needs of teachers. The following threats may hinder the successful implementation of a framework: In Australia, Algeria and Botswana, inadequate teacher training on the use of ICT, and in Algeria, the fragility of internet systems, negative attitudes among teachers towards the use of ICT, lack of electricity in some areas, as well as high charges for internet usage (Duncan-Howell, 2010:338, Eze *et al.*, 2013:27; Guemide & Benachaiba, 2012:42; Leteane & Moakofhi, 2015:163).

According to Vescio, Ross and Adams (2008:82), the concept of a PLC rests on the premise of improving learner performance by improving teaching practices. Furthermore, improved communication amongst teachers, locally and globally, and teachers possessing the ability to share strategies and resources using ICT, will indicate the successful implementation of the envisaged framework.

## **1.2 THEORETICAL FRAMEWORK**

This study adopted a critical emancipatory research (CER) approach, which evolved from the critical theory of the Frankfurt School as advocated by Horkheimer and Habermas. CER focuses on empowering individuals and transforming structures, policies and processes that replicate oppression, injustice and inadequacies in society (Brooke, 2002:49; Watson & Watson, 2011:63). This type of research is participatory and collaborative in nature and commits to identifying and challenging unequal power relations within its process (Cohen, Manion & Morrison, 2011:37; Ledwith, 2007:599). I chose to use CER because it transforms the experience of education into a more liberating and emancipatory one (Sullivan, 2006:124). CER can help to emancipate teachers from the hegemony of domination and control that prevails during formal face-to-face workshops, which generally follow a top-down approach.

The study will, furthermore, draw on networking strategies suggested by Siemens (2004:1), who advances a theory of learning that is in line with the needs of the 21<sup>st</sup> century. This theory takes into account trends of learning, the use of technology and networks, and the diminishing half-life of knowledge. The theory of connectivism accounts for limitless pools of knowledge that can be accessed and shared through the internet, social networking and other databases (Guder, 2010:38). Connectivism was, therefore, adopted as a learning theory that supports CER, which is the lens of this study.

## **1.3 RESEARCH PROBLEM AND RESEARCH QUESTIONS**

Insufficient communication and inadequate collaboration amongst teachers of Setswana home language is undesirable, because it impacts negatively on the teachers' professional development and learner attainment in South African schools. In order to address this limitation, this study intended to answer the following question:

*How can we use ICT to enhance PLCs of Setswana home language?*

This question lead to the following research aims and objectives.

### **1.3.1 Aim**

To design a framework for using ICT to enhance PLCs of Setswana home language.

### **1.3.2 Objectives**

- To demonstrate and justify the need for a framework for using ICT to enhance PLCs of Setswana home language;
- To identify the main components of using ICT to enhance PLCs of Setswana home language;
- To anticipate possible threats that may hinder successful implementation of a framework for using ICT to enhance PLCs of Setswana home language;
- To explore conditions conducive to the successful implementation of a framework for using ICT to enhance PLCs of Setswana home language; and
- To monitor the functionality of the framework for using ICT to enhance PLCs of Setswana home language.

## **1.4 RESEARCH DESIGN AND RESEARCH METHODOLOGY**

In order to develop a framework for enhancing the functionality of PLCs, a participatory action research (PAR) approach was selected. PAR will be employed because its fundamental principles are similar to those of CER – PAR will therefore be operationalised through CER, as both approaches seek to empower the co-researchers, to ensure they become active participants in improving their own undesirable circumstances. As a methodology, PAR takes into consideration human dignity, because people are not regarded as mere subjects, but as human beings who must be respected (Tshelane & Tshelane, 2014:288). As Eruera (2010:1) states, “PAR requires active research participation and ownership by people in communities who are motivated to identify and address issues that concern them”.

Through engagement and involvement of a variety of stakeholders, a research team was formed for this study. The team was composed as follows: eight teachers of Setswana home language, the principal researcher (myself), a language subject advisor, a school

principal, an administration clerk, a school governing body (SGB) member, two fellow research students and a district ICT coordinator. This study refers to the research team as co-researchers, because, according to PAR, we all had equal status and all our contributions would be treated accordingly (Jacobs, 2016:49)

Teachers were able to address curriculum issues that concern them in a participatory way, and this promoted ownership of the framework (Kemmis & McTaggart, 2005:273; Mahlomaholo, 2013:4614). Dworski-Riggs and Langhout (2010:216) elaborate by stating that power differences should not be seen as roadblocks to participation, but rather as opportunities for the researchers to refine their methods.

Data was generated through discussions during face-to-face meetings and electronic means (e.g., Whatsapp group, Facebook page, e-mail, etc.), and was analysed using Van Dijk's (2009:88) critical discourse analysis (CDA) approach, which seeks to make sense of the way people make meaning (Rogers, Malancharuvil-Berkes, Mosley, Hui & Joseph, 2005:367). The study used CDA because it is in line with CER, which is the theoretical framework adopted for this study. Furthermore, CDA focuses primarily on social problems and political issues, rather than on discourse structures that are outside social and political structures. Both CER and CDA challenge relations of power or dominance in society (Van Dijk, 2015:467). Extracts from the data were analysed on three levels, namely, textual and spoken word perspective level, social perspective level and discursive perspective level.

## **1.5 VALUE OF THE RESEARCH**

The intention is that the study will contribute significantly to improving communication and collaboration amongst the teachers of Setswana home language in Motheo, and that this improvement will spread to other districts of the Free State. It is expected that communication and collaboration will improve due to teachers' use of ICT to enhance the PLCs of Setswana home language. Teachers will benefit, as they will gain competence in their curriculum delivery, due to the knowledge, skills and methods learned during interaction with other members of the PLCs. An improvement in curriculum delivery and curriculum coverage means improved learner performance will be evident – this benefit

introduces learners as another group of beneficiaries of the study. In turn, if learner performance improves, the DBE is another beneficiary, as it would have reached its primary goal, which is improved learner performance.

## **1.6 ETHICAL CONSIDERATIONS**

I sought clearance from the ethics committee of the University of Free State (UFS), and it was granted. The ethical clearance certificate enabled me to write to the Free State Department of Education (FSDOE) to seek permission to conduct a research study using the two Setswana PLCs in Thaba Nchu; I provided the names of the schools that would be involved. The application for permission also listed the involvement of the following officials in this research study: the school principal, teachers of Setswana home language, a subject advisor, an administration clerk and the district ICT coordinator. I also requested permission for teachers to take part in the study, from the principals of schools affected. I provided comprehensive information about the purpose of research, emphasising informed consent, confidentiality and anonymity. Stakeholders were also made aware that they would not be coerced into participating in this study, and that they could withdraw at any stage of the study without giving reasons.

## **1.7 LIMITATIONS OF THE STUDY**

It will only be possible to implement the framework for using ICTs to enhance PLCs for Setswana home language in schools where there is sufficient network coverage. This study was conducted in the semi-rural town of Thaba Nchu in the Free State province. This majority of the town's schools are clustered on its outskirts, where network coverage is still a challenge. This situation means that not all teachers of Setswana home language will be able to access the internet from school, and this will result in limited or no participation in PLCs of some teachers of Setswana home language. However, schools that are located in areas where there is good internet coverage, and if teachers have access to relevant ICTs and Wi-fi, the framework can be implemented successfully.

## **1.8 LAYOUT OF CHAPTERS**

This thesis follows a structure of six chapters, and the content of each chapter is organised as follows:

### **Chapter 1**

This chapter presented a general overview of the study, including the background of the study, the research problem and research question. The aims and objectives of the study were also presented in this chapter. Furthermore, this chapter announced the theoretical framework, the research design and methodology, as well as that CDA would be the tool used to analyse the data that was generated. Finally, this chapter briefly explained the value of the study, the limitations of the study and the ethical considerations.

### **Chapter 2**

This chapter will present the theoretical framework that couched this study, as well as the learning theory that supported it. The similarities between the two theories will also be outlined.

### **Chapter 3**

This chapter will define the operational concepts relevant to this study and present a review of literature that relates to the five objectives of the study. The organising principles adopted by this study will be discussed, as will the constructs of the study.

### **Chapter 4**

This chapter will present the research design and research methodology, as well as the intervention strategies that were applied.

### **Chapter 5**

This chapter will present and analyse the empirical data using the tool that was adopted by this study to analyse data.

## **Chapter 6**

This chapter will give a brief background of the study and, thereafter, present the findings, recommendations and suggestions for future research. Furthermore, this chapter will formulate and present the framework that emerged from this study.

### **1.9 CHAPTER SUMMARY**

This chapter presented the background of the study and provided an overview of the literature related to the problem being investigated. A brief description of the research problem and research question was provided. The aim of the study, as well as five objectives of the study, were explained. CER, as the theoretical framework that couched the study, as well as connectivism, which served as the supporting learning theory, were both briefly outlined. PAR, as the research methodology used by this study, was explained, as were the reasons why it is regarded as a relevant methodology for gathering data. A brief description of CDA, the method used to analyse empirical data in this study, was given, together with reasons why CDA is regarded as a suitable tool for analysing data. Lastly, the chapter briefly discussed the value of the study, the ethical considerations that applied, as well as the limitations of the study. Lastly, a layout of all the subsequent chapters of the study was given.

## **CHAPTER 2: THEORETICAL FRAMEWORK INFORMING THE STUDY**

### **2.1 INTRODUCTION**

This study aimed to develop a framework for using ICT to enhance PLCs for Setswana home language. This chapter will present an explanation of CER, as the theoretical framework steering this study, and will also justify its relevance for this study. The historical background of CER will be given first, by an explanation of the way it arose from the critical theory of the Frankfurt School in the late 1920s. Furthermore, the objectives of CER will be probed in accordance with the stages of this research. The role of CER in achieving the objectives of this study will be elucidated thoroughly. This chapter will also explore the ontology and epistemology of CER, and how these two concepts assisted the study to achieve its objectives. The role of the researcher and her relationship with the researched will be fully outlined. Lastly, this chapter will explain connectivism, as the learning theory adopted for this study. This learning theory helped to operationalise CER, and its relevance to this study will be explained fully. The link between CER and connectivism will be demonstrated by comparing the four traits of connectivism with the objectives of CER.

### **2.2 THEORETICAL FRAMEWORK**

A theoretical lens that informs a study refers to the assumptions that guide and direct the thinking and actions taken by the co-researchers (Tsoetsi, 2013:25). This study adopted CER as the lens through which it approached the study aim. The study was operationalised further by applying the networking strategies suggested by Siemens in his learning theory of connectivism.

#### **2.2.1 Historical background of critical emancipatory research**

To understand CER and what it stands for, we first have to understand the theory that gave birth to it. Critical theory is the mother of CER and several other critical research theories. Critical theory has its roots in the Frankfurt School of the late 1920s and it emerged in reaction to perceived domination of thinking at the time by positivism. This

theory can also be understood against a backdrop of a post-Enlightenment context. The key thinkers of this theory include Theodor Adorno, Erich Fromm, Max Horkheimer, Jurgen Habermas and Herbert Marcuse (Brooke, 2002:49). According to Wink (2005:25) and Nkoane (2012:99), the word, critical, does not mean bad, or to criticise, instead, it means seeing beyond, it means looking within and without and seeing more deeply, it means revealing hidden ideas and meaning that are taken for granted in texts. Critical perspectives, therefore, involve finding new ways of seeing and knowing. From the above definition of critical it could, therefore, be deduced that critical theories are meant to help stakeholders to see beyond, and to find new ways of seeing and knowing.

According to Alvesson and Deetz (2006:259), critical researchers tend to conduct their studies with a full set of theoretical commitments that help them to analytically shovel out situations of domination and distortion. Hence, this study is committed to discussing CER by first referring to its roots, i.e., critical theory. The scholars of the Frankfurt School mapped a distinction between scientific and critical theories, and pointed out how they differ along three important dimensions, which will be discussed below (Geuss, 1981:65).

Firstly, the differences between scientific and critical theories in relation to their aims and goals reveal how scientific theories aim at the successful manipulation of the external world, whereas critical theories aim at emancipation and enlightenment of its stakeholders. Secondly, the difference in relation to cognitive structure is that scientific theory is not part of the object it describes, whereas, with critical theory, the theory is part of the object being described. Lastly, the difference in relation to evidence required for confirmation is that scientific theories require empirical confirmation through observations and experimentation, whilst critical theories are cognitively acceptable if they survive a process of evaluation and demonstration of being reflective (Geuss, 1981:55-56).

This study is, therefore, geared in the direction of a theory that has at its roots elements of emancipation, enlightenment and empowerment, and a theory that is reflective in nature. It is important to note that the enlightenment (lower case e) referred to in this study is the one that gives way to liberation as advocated by Horkheimer and Adorno – it is not the Enlightenment (capital E) of the 18<sup>th</sup> century, which freed Europe from religion and

myth, even though it failed to achieve its ultimate purpose, by failing to attend to its flaws and weaknesses (Agger, 1998:85).

When adopted in organisational studies, such as schools, etc., the goal of critical theory is to create societies and workplaces that are free of domination, and where all stakeholders have equal opportunities to contribute to the production of systems that meet human needs and lead to progressive development of all (Alvesson & Deetz, 2006:259). These two researchers state that critical theory sometimes has a clear political agenda, which is focused on the interests of specific, identifiable groups; however, in most cases, it focuses on general issues relating to goals, values, forms of consciousness and communicative distortions within organisations. This goal of critical theory is in line with the intention of this study, which is to empower Setswana home language teachers with more opportunities to contribute to their own learning and to the production of meaningful teaching materials that will be useful and meaningful to them and that will lead to improved ways of teaching.

From the above discussions, we can summarise what is included under the umbrella concept of critical theory. The concept has a broad meaning, and includes all work that takes a basically critical or radical stance in relation to the present society; and it is oriented to investigating exploitation, repression, unfairness, unequal power relations (generated from class, gender, race or position), distorted communication and false consciousness (Alvesson & Deetz, 2006:256).

A last feature of critical theory that cannot be ignored in relation to this study is how it activates self-reflection by its stakeholders. By reflecting, stakeholders come to realise that their form of consciousness is ideologically false, and that coercion that they suffer is self-imposed. Once they realise this, the coercion loses its power or objectivity, and the participants are emancipated. Habermas' writing, as cited/reflected in Geuss (1981:61), indicates the following about self-reflection: It dissolves a self-generated objectivity, it makes people aware of their own origins and, lastly, it operates by bringing consciousness to people (Geuss, 1981:61; McCarthy, 1984:88).

It was envisaged that stakeholders of this study would be empowered to the extent that they do self-reflection and become conscious of their origins and the potentials they possess. Through networking, it was expected, teachers of Setswana home language would realise that they, themselves, can contribute to their peers' development and, in turn, benefit from it.

As mentioned above, critical theory gave birth to several critical research theories. To achieve the ultimate aim of this study, CER was the appropriate theoretical framework to use as a lens. It was chosen because its principles of emancipation, social justice, transformation, hope and empowerment are closely linked to what critical theory advocates.

### **2.2.2 Objectives of critical emancipatory research**

Firstly, CER has the agenda of promoting participation and dialogue amongst all stakeholders. According to Brooke (2002:50), any study that has the aim of emancipation should be able to promote participation. Brooke, furthermore, attests that full participation in developing goals calls for a dialogue to take place between equals. Paulo Freire described the culture of silence amongst disadvantaged people, and realised that their silence and their passiveness are the direct results of their situation of economic, social, and political subjugation and of the system of which they are victims (Freire, 1971:25).

This study adopts Paul Freire's view of dialogue. He argues that dialogue presents itself as an essential component of the processes of both learning and knowing. He sees dialogue as a way of learning that happens, not because people like each other, but because they realise the social nature, and not only the individualistic character, of the process of knowing (Freire, 1970:71). Furthermore, dialogue requires an ever-present curiosity about the object of knowledge and developing a better comprehension of it.

According to Nkoane (2009:21), a critical discourse is based on a commitment to freedom and the need for ongoing revision in order to confront new challenges posed by new life circumstances. This study's intentions could only succeed through a series of meetings and discussions, during which all stakeholders felt free to engage in critical dialogue

through which they could learn from each other, share good practices that exist amongst themselves, and keep abreast of educational reforms brought about by the 21<sup>st</sup> century and the introduction of NCS and CAPS. It was envisaged that using ICT would help to promote continuous dialogue amongst teachers of Setswana home language in Thaba Nchu.

Secondly, CER seeks to analyse the power relations amongst people by focusing on control, discrimination and dominance (Nkoane, 2012:99). Ledwith (2007:599) explains that CER commits to identifying and challenging unequal power relations within its processes. It attempts to work “with”, not “on” people, and its processes are aimed at empowering all the stakeholders involved. Power is defined as a network of social boundaries that constrain and enable action of all members. Power imbalances exist when one person or group has more control over the boundaries of their action than others (Dworski-Riggs & Langhout, 2010:215).

According to Cummins (cited in Wink, 2005:115) two types of power relations exist amongst people working in the same environment. The first type Cummins calls collaborative relations of power, and the second one, coercive relations of power. In collaborative relations of power, it is assumed that power is infinite, it grows and generates during collaborative interactions and it is said that in collaborative relations of power, people are able to work more and even better. Conversely, in an environment characterised by coercive power relations, people do less than what is expected of them and they do it with anger. CER seeks to thematise power and ideology, because too much power produces ideologies of superiority and inferiority and, thus, it needs to be confronted and perverted, as it does more bad than good to people subjected to it (Netshandama & Mahlomaholo, 2010:8).

The relevance of this objective to this study cannot be overemphasised. PLCs are seen as platforms from which teachers can freely collaborate and communicate with their peers, either face to face, as it usual in Motheo district, or through the use of ICT, which is seen as a tool to enhance the functionality of Setswana PLCs in Thaba Nchu schools. Formal workshops offered by the employer always involve elements of unequal power relations between the presenters, who are departmental officials, and teachers. Teachers

tend to become passive and just accept what is being presented, without critically engaging with the content presented. Coercive power relations are displayed when teachers do less than what is expected of them, i.e., teaching learners, and they end up being full of anger and resistance, which are among the undesirable outcomes of power imbalances. CER is, therefore, aimed at addressing these situations, by empowering the researched to always be conscious of these imbalances.

According to Bamgbose (2011:1), other imbalances that exist and that affect the teaching and learning of Setswana home language, are those caused by the low status of African languages and their use in restricted domains. These languages are dominated by imported official languages and this, in turn, affects their status as school subjects. This is evident in South Africa, where African languages, including Setswana, are dominated, and even where they are taught at home language level, the first additional language still enjoys higher status, due to it being a language of learning and teaching. It is only through enhancing teachers' communication and collaboration that they will be able to confront this dominance and address power imbalances.

According to Dworski-Riggs and Langhout (2010:215), the theory of empowerment involves the process in which groups or individuals increase control over conditions that affect their lives. It is related to the theory of power, in the sense that gaining empowerment or freedom necessitates understanding power relations. The theory of empowerment also acknowledges that living in social groups requires setting boundaries; however, the goal is not for everyone to have complete control over all the boundaries that affect their lives, instead, they should be aware of the boundaries and ensure that there are no fixed power asymmetries regarding control of the boundaries. When put into practice, the theory of empowerment ensures that all stakeholders have voices in the process of decision-making. In their PLCs, the teachers of Setswana home language will be empowered to recognise imbalanced power relations amongst themselves. It was envisaged that, through this study, teachers would be able to know each others' areas of strengths with regard to the content of their subject, from there they will learn from each other through active participation and communication. The use of ICTs will assist them to extend their PLC engagements beyond the hours of work. Within the proceedings of this

study, there were meaningful relations between the principal researcher and co-researchers, the latter were not made to feel inferior in the presence of the former. Power differences between the two parties were not seen as roadblocks to participation, but rather as moments of opportunity for the co-researchers to refine their methods and challenge existing power structures.

Thirdly, emancipation is another focus of CER. CER has an emancipatory intent, because it acknowledges that an emancipatory outcome cannot be guaranteed, hence, the focus is on process, rather than on outcomes (Brooke, 2002:50). After analysing the power relations that exist amongst community members, those who are dominated need to be emancipated. According to Watson and Watson (2011:68), emancipatory values are especially important when we take into consideration social systems that have enormous inequality of power in relation to opportunity, authority and control. Ryan (1998:60) maintains that, in order to understand emancipation, one has to consider autonomy, which is one of the traits of connectivism, which is the chosen conceptual framework for this study. The object of emancipatory research is, therefore, to eliminate situations that limit freedom. Ryan claims that freedom, in this sense, is conceived as a condition where people are able to determine themselves on the basis of who they are. In this context, collective autonomy is more appropriate than individual autonomy. When people work in groups, they are able to create, legislate and implement their own policies and practices.

This study hopes to contribute to the emancipation of its stakeholders. Teachers of Setswana will be in a position where they will be able to challenge the status quo. They will be empowered to create and implement practices that suit their learners' unique academic needs best. Through using ICT, teachers will be empowered to surf the internet in order to expand their knowledge of how to approach the new content embedded in their subject. They will also be able to share information amongst themselves. The above discussion is clearly summarised by Mahlomaholo (2009:226), who states that CER is empowering, can change people's lives and stations in life, free them from less than useful practices and thoughts, and meet the needs of real-life situations.

### **2.2.3 Stages of applying critical emancipatory research**

Geuss (1981:58) sees emancipation as a social transition, from an initial stage, to a final stage, whilst Mahlomaholo (2009:230) outlines three phases through which research moves, i.e., interpretative, analytic and educative phases.

Geuss (1982:59) describes the initial stage of emancipation as a period of false consciousness, and unfree existence; it is a state of bondage and delusion from which the researched are to be freed. The final stage is described as a state of emancipation, empowerment, and freedom from false consciousness and self-imposed coercion. Geuss argues that this unfree existence is a form of self-imposed coercion, because participants/stakeholders in a society impose coercive institutions on themselves by participating in them and accepting them without protest. The intention of this study is to move with the researched, from the initial stage to the final stage, where all involved will realise that by failing to participate and take a leading role in their own learning and development, they accept and impose coercion upon themselves.

According to Sekwena (2014:13), in the interpretative phase the researcher engages with the community identified for research. The aim of this initial engagement is to determine the community's current operations, as well as their fears, experiences and aspirations. In this phase, the researcher tries to be on the same page as the identified community, with the hope of achieving the roles of reciprocity, relevance and responsiveness. During this stage of the research, I met individually with teachers of Setswana home language (senior phase) to investigate their experiences with regard to teaching the subject, challenges they experience, and how they view learning from their peers through PLCs. I could relate to most of their concerns. Through my experience as a subject advisor, I was already aware of the challenges they experienced in relation to the functionality of PLCs. This awareness led to my intention to design a framework to enhance the already existing but non-functional PLC, through the use of ICT. Despite what I, as the principal researcher, already knew, all the stakeholders had to be involved from the start to the end of the research project. In CER, the so-called researched are not regarded as mere subjects of research, but they are acknowledged, valued and elevated to the status of co-researchers (Tshelane & Tshelane, 2014:288). In this phase, I had to lay a proper

foundation for our new relationships. Stakeholders were assured that, in this project, we would all be equals with a common goal. Our work-related positions should not have any impact on the way the study was conducted.

Sekwena (2014) explains the second phase as the analytic phase. In this phase, research is done through a literature review, in which the principal researcher reads intensively about the problem at hand and discovers what has been done so far, globally and locally. In this study's literature review, I mainly focused on challenges relating to the issue of collaboration and communication amongst teachers, components of the identified challenges, the favourable conditions for implementation, as well as threats experienced. The success indicators of the implementation of a framework were also noted. After the literature review, I returned to the field to compare my findings with those experienced by the co-researchers.

The last phase is the educative phase. In this phase, all the stakeholders were involved in critical dialogue through which every member could learn something, hence, it being called the educative phase. According to Mahlomaholo (2009:230), both parties, i.e., the principal researcher and the co-researchers, need to develop to somewhere beyond where they were before dialogue started. Freire, as cited in Mahlomaholo (2004:15), argues, furthermore, that every person, no matter how ignorant or submerged in the culture of silence, has the potential to look at the world critically in a dialogical encounter with others. This phase provides participants with the opportunity to interrogate the findings of the study; in the process, they learn valuable lessons that lead to empowerment and transformation for the better (Sekwena, 2014:14). This approach is in line with the methodological expectation of CER, which is to counter the dominant discourse and create a space that will enable participants to tell their stories (Nkoane, 2012:102).

Paulo Freire, furthermore, refers to the importance of humility in human conversations. He explains that, without humility, dialogue cannot exist. It is regarded as a prerequisite for meaningful dialogue, which can be interrupted if humility does not exist amongst all the stakeholders (Netshandama & Mahlomaholo, 2010:8). The educative goal of this

phase will not be achieved if one or more team members display elements of pride, arrogance and pretentiousness, which are the opposite of what CER stands for.

#### **2.2.4 Role of critical emancipatory research in achieving the objectives of the study**

CER is an approach to research that has the agenda of bringing equity, social justice, peace, freedom and hope. It is a type of research in which researched parties are very important, and which sees them as having the same status as the researcher; consequently, they are treated with dignity and respect (Mahlomaholo, 2009:225). In this study, the participants were afforded the necessary respect and were never made to feel inferior to the principal researcher. Treating them this way made everyone involved feel free and they participated in the study willingly. The element of respect, which is inherent in CER, took this study to greater heights and geared it to achieve its intended outcomes.

As discussed in Section 2.2.1, CER intends to achieve enlightenment, emancipation and empowerment for the researched. CER is also known for its mission to transform people's lives, by not leaving them as they were before they became part of the research team. In this study, all the members of the research team were enlightened about the way technology can change their lives and make it easier. Stakeholders will all be empowered to use the gadgets they already possess, to access and share information and to learn from their peers. Even people who are not necessarily teaching Setswana would be able to use the knowledge they gained in this study in their everyday lives. Communication is important to everyone, regardless of where the person is located. For example, the principal who is part of this study can use the knowledge gained to network with other principals, with the aim of enhancing their practice and improving learner performance.

Another mission of CER is to analyse power relations, or relations of dominance, discrimination and control (Nkoane, 2012:99). Through this study and the approach it used, co-researchers learned to be conscious and to avoid being subjected to dominance and control. They can only achieve this by being active participants in their learning. Active participation will lead to a new awareness of self, a new sense of dignity, and new hope (Freire, 1970:71). It was, therefore, envisaged that, upon completion of this study,

any learning experiences aimed at developing the teachers of Setswana home language would have been accompanied by teachers' critical involvement.

### **2.3 ONTOLOGY OF CRITICAL EMANCIPATORY RESEARCH**

This study adopted a qualitative research paradigm that focused on the social construction of people's ideas and concepts. Maree (2007:54) states that a qualitative research approach focuses on people, and it seeks to explain why and how they interact with each other, and their motives and relationships. In this paradigm, reality is viewed as a social construction, and it is accepted that the researcher cannot be separated from research (Maree, 2007:54). This writer, furthermore, attests that, in this type of research, research findings are created rather than discovered, and truth is not an objective phenomenon that exists independently of the researcher. Guba and Lincoln (1994:110) assert that this paradigm does not view reality as absolute, instead, they subscribe to the view that there are multiple realities shaped by social, political, cultural, economic, ethnic, gender and disability values.

This study was qualitative in nature and sought to design a framework for using ICT to enhance the PLCs of Setswana home language. The principal researcher was not separated from the research and, together with co-researchers, was equally involved in the process of research. The teachers of Setswana home language were not regarded as mere objects from which information would be drawn, and generalised conclusions made. The dialogue amongst the co-researchers was analysed and findings were created during the research process, instead of being discovered.

### **2.4 EPISTEMOLOGY OF CRITICAL EMANCIPATORY RESEARCH**

The epistemological assumptions of this study involved the view that the world is made up of people with their own assumptions, intentions, attitudes, beliefs and values and that, in order to know reality, the co-researchers' experiences regarding a specific phenomenon should be investigated (Maree, 2007:54). Co-researchers in this study were analysed in terms of what they said and did, and according to their actions, and this yielded a better understanding of how they view the importance of communication and

collaboration amongst themselves in their respective PLCs. Their experiences with regard to the functionality of PLCs and their attitudes towards face-to-face workshops, which, in most instances, follow a top-down approach, were analysed. An interactive relationship between the principal researcher and co-researchers, as well as amongst co-researchers themselves, was acknowledged. The personal experiences of the teachers of Setswana, especially with regard to matters that affect their professional development as a result of their relationships with their peers, are biased and subjective; however, in this study, these experiences were regarded as true, because the co-researchers lived through these experiences. In the paradigm I chose for this study, the stories, experiences and voices of the research team members were the mediums through which we explored and knew reality (Maree, 2007:55).

## **2.5 CONNECTIVISM AS A LEARNING THEORY**

According to Siemens (2004:1), the traditional learning theories of behaviourism, cognitivism and constructivism all hold the view that learning occurs inside a person; even social constructivists, who claim that learning is a social process, believe that a person should be physically present for learning to take place. Research indicates that these learning theories do not address learning that occurs outside people and which is stored and manipulated by technology. Connectivism as a learning theory closes that gap, and is of the view that learning can still happen through learning from other people's experiences, since we cannot always experience everything.

In this study, I chose to use connectivism as a learning theory that will help to operationalise CER as my theoretical framework. CER seeks to emancipate co-researchers from situations that hamper their learning, and connectivism presents them with the opportunity to learn through the use of ICTs. This study sought to improve the communication and collaboration amongst teachers of Setswana home language by using ICT to enhance the PLCs of Setswana home language. Connectivism is seen as a relevant learning theory, as it emphasises the use of technology to store and access vast pools of knowledge as well as form networks amongst peers (Goldie, 2016:1065). The

relevance of connectivism for this study will be discussed by defining it, exploring its four traits and also pointing out how these traits link to the principles of CER.

### **2.5.1 Defining connectivism**

According to Downes (2008:2), the term connectivism describes a form of knowledge and a pedagogy based on the idea that knowledge is distributed across a network of connections and that learning consists of the ability to construct and traverse those networks. This definition is confirmed by Guder (2010:38), who says that connectivism accounts for the huge pools of knowledge that are accessible through the internet, social networking and other databases. Siemens (2004:3) emphasises this, by indicating how the life of knowledge shrinks within a short space of time. In the past, the life of knowledge was measured in decades; today, it is measured in months and years. The concept related to this idea is called the half-life of knowledge, which refers to the time it takes, from the moment knowledge is gained, to the moment it is out of date. Siemens explains that much of what is known today was not known 10 years ago.

This phenomenon is one of the reasons that prompted connectivism theory to be offered as a new learning theory for the digital age (Tschofen & Mackness, 2012:124). The digital age is symbolised by the way learning is facilitated by using technology. Through the use of technology, people, especially those who want to learn, create their own networks of information and make connections where they see fit, not because a centralised figure of authority tells them to do so (Guder, 2010:38). Tschofen and Mackness (2012:125) describe learning in connectivistic terms as a network phenomenon, influenced, aided and enhanced by socialisation, technology, diversity, strength of ties and context of occurrence.

The previous chapter demonstrated the need for a framework that will help teachers to network with their peers with the aim of learning from each other. The 21<sup>st</sup> century and the introduction of CAPS and NCS incorporated new content, skills and approaches into this topic, and all these changes necessitated an improved and convenient way to communicate and learn. The above definition of connectivism indicates that it is a relevant learning theory for operationalising this study and achieving its ultimate aim.

## 2.5.2 Four traits of connectivism

According to Trnova and Trna (2013:142) and Siemens (2006:34), connectivist knowledge networks possess four traits, which were first introduced by Downes: diversity, autonomy, interactivity and openness. In Sections 2.5.2.1 to 2.5.2.4 these four principles will be discussed and contrasted with the objectives of CER.

### 1. *Autonomy vs emancipation*

Autonomy, as one of the principles of connectivism, emphasises that individuals in online learning communities can contribute and interact in their own agreement, and according to their own knowledge, values and decisions (Trna and Trnova, 2013:142). The idea of autonomy is also expressed when stakeholders in a networking community are able to choose among connections and information. It enables them to make attempts to reduce external control by minimising traditional top-down approaches to instruction and in power structures (Tschofen & Mackness, 2012:128). In the previous chapter, a need for a free environment for teachers to participate in their own learning was proposed. This requirement is supported by Paul Freire's idea of active participation and active involvement in a learning experience. Autonomy will be demonstrated practically when teachers who are members of online PLCs contribute and participate of their own accord and not as a result of pressure from other forces. As they participate, they will share their knowledge and good practices freely with their peers. Stakeholders will also have autonomy to choose amongst connections and information they need for participating in online PLCs. Teachers and all other stakeholders will offer their full participation and make sure they do not submit to external control, where they will be instructed what to learn. Online communities of Setswana home language should not be a replication of formal face-to-face workshops, which do not always permit time for teacher participation and meaningful engagements.

Autonomy, as a trait of connectivism, links with CER's agenda of emancipation, with the intention of involving everyone in the process of change. In an autonomous environment, stakeholders are protected from external control, which, in most cases, results into a top-down approach, with stakeholders having no autonomy to choose or decide what they

want to learn, according to their needs. This is also evident with CER, where the researcher and the researched both contribute to the expansion of the others' knowledge (Ledwith, 2007:599) and where power issues are thematised to accommodate everyone involved. Stakeholders are then emancipated in such a way that all those situations that restrict freedom are eliminated, and stakeholders are free to make their contributions in the process of their own learning.

## 2. *Diversity vs politics of difference*

Downes (2009) is of the opinion that education systems and resources should be structured in such a way that they promote and accommodate diversity. The design of such systems should never try to make everybody the same but, rather, to foster creativity and diversity amongst its members. This is reflected when every member in a community represents a unique perspective based on personal experiences and insights (Tschofen & Mackness, 2012:134).

According to Marhan (2006:6), an individual is the starting point of connectivism. Unique personal knowledge feeds into communities and, in turn, it feeds back into the network, and continues to give individuals opportunities to learn. Diversity is evident when members in a networked community possess some of the following features: different points of view, when members make different software selections, access different resources, face different challenges and possess different expertise (Downes, 2009). Downes elaborates, by explaining that, if everyone does the same thing, then nothing new is generated by their interacting with each other, however, if they are diverse, then participation in the network produces new knowledge.

According to Ledwith (2007:602-603), even critical theorists are called to engage with the politics of "difference". She attests that being critical involves being self-critical and empathetic to diversity in those around us. She insists that it is possible to link the personal and the collective without reducing or silencing the diversity of different experiences. From this discussion, it is clear that both CER and connectivism are committed to acknowledging diversity amongst stakeholders.

The Setswana PLC in Thaba Nchu was composed of a diverse team, as some teachers were experienced in teaching Setswana, others were experienced teachers, though Setswana was a newly allocated subject to them, others were novice teachers who still had to learn a great deal in order to gain experience. This also applied to the research team of this study. It was, therefore, envisaged that, in their interactions as a networked team, their unique experiences and knowledge would help to generate new knowledge and offer every member a learning platform.

### 3. *Openness vs social justice and democratic citizenship*

Connectivists view openness largely in the context of sharing resources, ideas and expertise, and communicating and creating new information and insights through networks (Tschofen & Mackness, 2012:136). These two researchers elaborate that openness, as sharing in networks, offers a refreshing change in perspective and is essential as a tenet of connectivist learning. Downes (2009) is of the opinion that, in an open, connectivist environment, information flows freely within and without the network. If the community is open, it is able to sustain a sufficient flow of information and to generate new knowledge; however, if it is closed, this flow stagnates and no new information is generated.

This trait of openness is linked to CER's principle of social justice and democratic citizenship, as advocated by Nkoane (2012). According to him, the focus of democratic citizenship is whether and how people participate in the research process; the contributions they make; the respect they receive, and the extent to which they, therefore, feel that they belong to and have a fair say in the research process or knowledge construction. The promotion of democratic citizenship and social justice in CER is complementary in any research process that investigates living beings (Nkoane, 2012:98).

Membership of an online Setswana PLC will not be confined to teachers of one grade. The community will be open to all the senior phase teachers from Grade 7 to 9. An open environment will be encouraged, within which everybody will be free to participate by

sharing knowledge and also learning from others through their interactions, which will be enriched by ICTs.

#### 4. *Connectedness and interactivity vs participation and dialogue*

Trna and Trnova (2013:142) are of the opinion that knowledge produced in a learning community should be a product of interaction between the members, and not a mere collection of members' perspectives. Downes (2009) suggests that connectedness is evident when knowledge is not merely transferred from one person to another, but is emergent from the communicative behaviour of the whole. Such knowledge is likely to be complex, representing not simple statements or facts or principles, instead, reflecting a community's response to complex phenomena.

The communicative behaviour discussed here resembles CER's objective that emphasises both participation and dialogue. Dialogue is regarded as an integral part of the process of learning and knowing. Paulo Freire maintains that silence and passiveness leads to all kinds of domination. Knowledge presented through ICT devices should not be taken as is, instead, members have the responsibility to interrogate and make inputs to it with the aim of improving it. Learning should not happen with a top-down approach that replicates the traditional workshops, where teachers did not have much influence on what they learned.

In conclusion, the discussion above exposes how an online learning community could be turned into an environment conducive to learning if it possesses the four traits discussed in Sections 2.5.2.1 to 2.5.2.4. A connectivist learning environment, ideally, includes a space for interaction between experts and students, a space for self-expression, debate, dialogue and communication of new information and knowledge, and a space to nurture ideas and test new approaches. This learning environment supports and contributes to informal and lifelong learning (Thota & Negreiros, 2015:2).

## **2.6 ROLE OF THE RESEARCHER AND RELATIONSHIP WITH THE RESEARCHED**

In this study, there was no clear distinction between the roles of the principal researcher and of the co-researchers. The reason for this is that this study adopted an approach that

elevated participants to the same level as the principal researcher; hence, they were called co-researchers or stakeholders, and not participants or subjects. All the stakeholders will be regarded as experts about the phenomena of interest, and the meaning and usefulness of research will be informed by co-researchers' everyday experiences and understanding (Eruera, 2001:1). Active participation in and ownership of research was required of all the stakeholders, including the principal researcher; it was expected they would all be motivated to identify and address issues that concern them. The approach followed in this study is a departure from an approach that considers the principal researcher to be an expert who extracts information from the community and uses it for purposes that might not directly benefit that community.

## **2.7 CHAPTER SUMMARY**

This chapter introduced and explored the theoretical framework through which this study evolved. CER was discussed as the theoretical framework, and it included a discussion of critical theory, as a theory that gave birth to CER. Objectives of CER that are relevant to this study were also discussed. The discussion on CER was finalised by outlining its role in achieving the objectives of this study, among which the intention to bring enlightenment, emancipation and empowerment. It was also explained how important it is for stakeholders to learn to be conscious and to avoid allowing others to subject them to dominance and control, so that the stakeholders could participate actively in their own development. The epistemology and ontology of the study were also explored.

Connectivism was discussed, as the learning theory through which this study was operationalised. Connectivism is regarded as the most relevant learning theory, because it highlights the use of ICT to store and access information as well as the formation of networks for learning. Connectivism was defined, and this definition was linked to its relevance to this study. The four traits of connectivism were linked to the relevant objectives of CER, and the relevance of this link to this study was revealed. Lastly, the role of the researcher and the relationship between the researcher and the researched were explained.

As the second chapter was based on the theoretical framework and learning theory relevant to this study, Chapter 3 will define this study's operational concepts and review related literature.

## CHAPTER 3: REVIEW OF RELATED LITERATURE

### 3.1 INTRODUCTION

The study designed a framework for the use of ICT to enhance PLCs of Setswana home language. This chapter will review the related literature, so as to develop constructs and a contextual basis for this study. It will start by presenting the operational concepts used in the study, then explain the challenges that necessitated the envisaged framework, followed by the main components implied, in the form of solutions for the challenges. The threats facing and the conditions conducive to the development of the envisaged framework will be explained, then evidence of promising practices will be explored, to gain insight in the literature related to the project and to achieve the aim of the study. Finally, a set of reflections will be presented for each case, to provide a summary of the entire chapter and conclude the narratives. This information will have a special focus on four countries, namely, Australia, Algeria, Botswana and South Africa, though reference will also be made to relevant information relating to other countries.

### 3.2 DEFINITION OF OPERATIONAL CONCEPTS

This section will define the operational concepts, which were extracted from the title of this research project. It was deemed important to define these concepts, as they are critical for the operationalisation of the study. These concepts will be defined to help readers understand their meaning and usage, and to achieve the objectives of this study.

#### 3.2.1 Information and communication technologies

Daintith and Martin (2010:440) define ICT as using computers and telecommunications equipment to send, receive, store and manipulate data. Data may be textual, numerical, and audio or video, or any combination of these types. The *Encyclopedia of Science and Technology* (McGraw-Hill, 2007:168) refers to the acquisition, representation, storage, transmission and use of information.

In South Africa, the White Paper on e-Education explains ICT as the combination of networks, hardware and software, as well as the means of communication, collaboration

and engagement, that enable the processing, management and exchange of data, information and knowledge (DoE, 2004:15). Van Wyk (2015:76) explains that technologies include computers, the internet, broadcasting technologies and telephony, which are all regarded as potential tools that can be used for educational change and improvement. Mbangwana (2008:1) and Guemide and Benachaiba (2012:57) confirm these definitions by referring to the dissemination of information in text, sound and video.

Drawing from the above definitions, it seems ICT refers mainly to the “use of information”. The information acquired through the use of these technologies is not only to be stored, though if it is stored, it can still be useful later. Furthermore, an interesting aspect raised by the *Dictionary of Science* is that information that is acquired should be in such that it can be converted to knowledge. The most suitable definition for this study is, therefore, that ICTs are important tools that can be used by teachers to communicate and collaborate by sharing important information and knowledge and store it for later use. This definition is in line with both CER and connectivism, since these theories advocate for participation, dialogue, connectedness and interactivity, which are the phenomena central to this project (Thota & Negreiros, 2015:2; Trna & Trnova, 2013:142).

### **3.2.2 Professional learning communities**

The *Oxford Advanced Learner's Dictionary* (2006) defines the term, professional, as person(s) engaged or qualified in a profession. It also explains that learning refers to the acquisition of knowledge or skills through study, experience or being taught, whilst a community is a group of people living in the same place or having particular characteristics in common.

The *Integrated Strategic Planning Framework for Teacher Education and Development in South Africa* (ISPFTEDSA) (DBE, 2011a:80) defines PLCs as communities that provide platforms of support for groups of subject teachers to participate collectively in determining their own developmental paths. Steyn (2013:278) defines PLCs as all the engagements of teachers that are aimed at improving learner performance. Cifuentes, Maxwell and Bulu (2011:60) explain that PLCs provide social context for meaningful dialogue and experimentation to support teacher growth.

These definitions have two things in common: “groups of teachers working together” and “gaining knowledge and skills through these engagements”. These definitions are endorsed by Jita and Ndlalane (2009:59). These definitions reflect CER’s agenda of promoting participation and dialogue amongst stakeholders; thus, for the purpose of this study, the term PLC refers to a group of teachers who meet regularly to engage in discussions to improve their knowledge and skills, which leads to improved learner performance.

### **3.2.3 Setswana home language**

The *Oxford Advanced Learner’s Dictionary* (2006) describes Setswana as the language of the Batswana people. It is related to Sesotho languages, and is spoken by over 4 million people in South Africa, mainly in the Northern Cape and North West provinces, though other provinces, like the Free State and Gauteng, also have Setswana speaking people. Setswana is one of the official languages of South Africa, and is offered as a school subject. According to the *National Policy Pertaining to the Programme and Promotion Requirements* (NPPPPR) (DBE, 2012b:13), it is compulsory for senior phase learners to be offered at least two official languages, of which one must be offered at home language level, and the other at first additional language level. It is also indicated in the NPPPPR that it is compulsory for learners in the senior phase to obtain Level 4 in the language offered at home language level; this level is regarded as an adequate achievement on the scale of achievement for the NCS for Grades 7–9, and Level 4 ranges between 50% and 59% (DBE, 2011b:17).

The home language level is meant to provide language proficiency for basic interpersonal communication skills required by social situations, and cognitive academic skills essential for learning across the curriculum. The teaching of four language skills is emphasised at this language level, i.e., listening and speaking, reading and viewing, writing and presenting, and language structures and conventions. This level also provides learners with a literary, aesthetic and imaginative ability (DBE, 2011b:8). Like other African languages, Setswana is offered at three language levels, i.e., home language, first additional and second additional levels. These language levels refer to the proficiency

levels required for languages, and not the native (home) or the acquired (as in additional languages) language (DBE, 2011b:8).

Based on the above, this study will adopt the concept, Setswana home language, as a subject taught in South African schools and which is offered at home language level.

### **3.3 REVIEW OF RELATED LITERATURE**

This section will provide comprehensive references to the challenges that necessitate the envisaged framework, followed by the main components, the threats facing the implementation of the framework and the way the threats were mitigated in the literature. The conditions and the context under which the framework was operationalised will also be presented. Promising practices that helped to draw inferences will also be provided.

Various challenges prompted this study to design a framework for using ICT to enhance PLCs of Setswana home language. In the literature review I outlined the importance of PLCs for teacher learning and development, and how their functionality can be affected by various factors. Section 3.3 validates the need for the framework by presenting the challenges explained in the literature. PLC characteristics, as outlined in a guideline for South African schools in relation to PLCs (DBE, 2015:6-8) will be used as organising principles for the literature review.

#### **3.3.1 Inability to adapt to the curriculum demands of the 21<sup>st</sup> century**

The 21<sup>st</sup> century gave birth to various education reforms, which resulted in changes to what and how teachers have to teach. Teachers are under constant pressure to keep abreast of changes, hence, they have to engage in intensive learning and development. One of the characteristic of PLCs is that teachers have to engage in a type of development that is coherent and responsive to changes in practice (DBE, 2015:7). This implies that teacher development should correspond with changes experienced by the profession. According to the *National Policy Framework for Teacher Education and Development* (NPFTED) (DBE, 2007:16), all teachers have to enhance their skills to deliver the new curriculum, they need to strengthen their subject knowledge base, pedagogical content

knowledge and teaching skills. This need is expanded on by Mokhele and Jita (2012:575), who indicate that many countries, including South Africa, have, in recent years, committed to new school curricula, which has resulted in new subjects being introduced and new content being added to existing subjects. These two researchers point out that, for teachers to teach the new curriculum, to incorporate the new perspectives and to cater for diverse learners, teachers themselves have a great deal of learning to do. Forming teacher clusters is seen as one approach that offers opportunities for teachers to learn and keep abreast of the curriculum demands of the 21<sup>st</sup> century; however, if the activities of these clusters lack coherence and are not responsive to change, teachers will remain unable to adapt to new curriculum demands. Vescio *et al.* (2007:80) attest that a nation's reform agenda regarding education requires of teachers to rethink their practices and to teach in ways they have never taught before. This change will only be possible if teachers are willing to learn and to adapt to the curriculum demands of the 21<sup>st</sup> century.

In South Africa, Setswana home language senior phase annual teaching plans expect teachers to expose learners to the four language skills (see Section 3.2.3), and to make sure that language teaching is text-based, communicative, integrated and process oriented. Many transactional texts, which were not part of the old syllabus, are now included in the new curriculum (DBE, 2011b:9). These new developments in the teaching of languages leave language teachers with no choice but to engage in teacher development processes.

Studies conducted in Botswana and Australia reveal that teachers also experience the need to learn new skills and subject content; they have to adapt to change to be relevant, survive and keep up with the pace (Duncan-Howell, 2010:324; Eze *et al.*, 2013:26; Hulela, Rammolai & Mpatane, 2014:610-611). Australia's challenges are deeper than that of South Africa, as Australian teachers are obliged to implement a "borrowed policy" transported from developed worlds, such as the United States and United Kingdom (Ditchburn, 2015:3). It is a challenge for teachers to implement this borrowed policy, as it does not consider local contexts and issues that will impact on its effectiveness. It does not take learner engagement into consideration, rather, it focuses on learner performance (Ditchburn, 2015:4)

This challenge manifests in a different form in Algeria, where teachers are faced with the mammoth task of teaching English, which is a foreign language. Teachers are expected to empower learners to master English, which is seen as a *lingua franca* of the modern world (Guemide & Benachaiba, 2012:35). This means that Algerian teachers have to engage in professional learning to help them to overcome their challenges.

Based on the above discussions, it is evident that different countries experience different challenges with regard to curriculum changes brought about by the demands of the 21<sup>st</sup> century. These challenges demand a type of teacher development that is coherent and responsive to changes in practice. Education systems have to, first, analyse the challenge and decide on a suitable solution that will benefit and empower teachers and improve learner performance – this is what prompted this study to explore the use of ICT to enhance PLCs. Ensuring that there is regular communication and collaboration amongst teachers of Setswana leads to PLCs that are more coherent and responsive to curriculum changes.

### **3.3.2 Inadequate learning from curriculum training and workshops**

One of the characteristics of PLCs emphasise a shared vision and clear focus on ensuring learning. This requires teachers to take ownership of the learning process (DBE, 2015:6). Every endeavour aimed at teacher development must, therefore, ensure that teachers are fully involved and that meaningful learning takes place.

In South Africa, education reforms had a great impact on teaching and learning, of which teachers became the main drivers, as they had to mediate the new curriculum to the learners. Without meaningful training, coupled with continuous support from the DBE, teachers will not be able to take ownership of this commitment. It means, therefore, that there must be a shared vision amongst all stakeholders, and this vision should be translated into a concrete, realistic and useful learning focus (DBE, 2015:6).

A study was done in South Africa to investigate how teachers were capacitated as curriculum implementers, and Björklund (2015:5) reports the following findings: Firstly, teachers indicated that CAPS orientation workshops only lasted for three to five days,

and content for all subjects was compressed into that time. Follow-up workshops were inadequate. Secondly, some teachers were unhappy with the quality of the training, as it failed to address actual classroom practices. Thirdly, according to Phasha, Bipath and Beckmann (2016:69), teachers report that presenters of CAPS orientation workshops are not always sure about the content of the training; all the responses from groups during group presentations were regarded as correct, even though responses differed between different groups.

According to Björklund (2015:19), teachers mentioned that, after curriculum training, it is difficult to acquire help from subject advisors who, in most cases, are trainers in curriculum workshops. The reasons for this difficulty are workload of subject advisors, lack of resources and the many schools that need support. Teachers in Björklund's study acknowledged the help they received from cluster groups. They indicated how fruitful it was to work with colleagues from other schools, and they developed materials together and helped each other with policy interpretation and challenging subject content. However, some of the teachers mentioned how cluster meetings were affected by factors of time, travelling costs to PLC meetings and inadequate support by school managers (Björklund, 2015:20).

Research in other African countries about teacher training found that the challenges are not the same as those facing South Africa. Other African countries are mainly faced with lack of infrastructure and human resources to deliver training (Myalla, 2014:26). Furthermore, Myalla discovered that, due to these challenges, donor support assists with curriculum training; however, due to lack of coordination amongst donors, their involvement often aggravates the challenges, instead of alleviating them.

Another interesting case is that of Botswana, where teachers find themselves in an awkward situation, as they are supposed to function in technology-based classrooms. The only solution to their challenge was training, however, the Department of Education failed to provide them with meaningful training on technology, and the failure to be trained caused challenges to educators (Batane, 2004:387). Batane recommends a more systematic approach to teacher training in Botswana, as this will benefit teachers.

From the above discussions, we can attest that teachers are faced with the mammoth task of improving their knowledge and skills needed to teach learners. It is also evident that the support they receive from training and workshops by education departments is not enough and does not always address actual classroom practices. Teachers, therefore, need to communicate and collaborate with their peers to augment what the department presents to them. By doing this, they will be able to take ownership of their own learning. This study sought to enhance the already existing PLCs with ICT, to ensure continued and sustained communication and collaboration amongst teachers, so that they could share knowledge and skills at times convenient to them.

### **3.3.3 Absence or minimal curriculum support from school managers**

One of the key characteristics of PLCs is leadership, as indicated in the guidelines for PLCs (DBE, 2015:7). The guideline mentions that a supportive school management team (SMT) is a major condition for effective PLCs. SMTs provide instructional leadership to teachers to ensure learning and growth. Heads of department (HOD) who are part of SMTs are directly responsible for providing teachers with curriculum support. This statement is supported by South Africa's *Personnel Administrative Measures*, which states that, as part of their duties and responsibilities, HODs have to guide teachers in their departments on new teaching approaches, methods, techniques, etc. (DBE, 2016:36).

Principals' responsibility is more practical, as they have to provide practical support, such as adapting teacher's timetables for PLC meetings, and providing spaces for PLCs to meet, providing resources to be used during PLC meetings, etc. (DBE, 2014c:11; DBE, 2015:7; Stoll *et al.*, 2006:235).

Research done in South Africa found that teachers do not receive adequate curriculum support from their leaders, hence, they need to seek support from their peers by engaging in fruitful PLCs. According to Mafuwane and Pitsoe (2014:440), circuit managers in South Africa are in constant contact with school principals during service meetings, but seldom meet teachers to discuss matters of development, especially curriculum-related matters. Malinga (2016:6) offers a different perspective: In research done on HODs' roles in

curriculum support, Malinga discovered that HODs in South African schools find themselves in an awkward situation. They head many subjects, even though they do not have the expertise to provide support for some of these subjects. What makes matters worse is that subject advisors do not exert much effort to capacitate HODs, instead, they choose to work directly with subject teachers, leaving the HOD uninformed in matters relating to the subjects they lead. These HODs only monitor content coverage and learners' progress, and do nothing about classroom visits and professional development of teachers (Malinga, 2016:135).

In Botswana, teachers also experience no meaningful curriculum support from their leaders, instead, research done in this country discovered that instructional support that is offered to teachers by instructional leaders is hostile and intimidating. Consequently, teachers are unable to make meaningful impressions on improving teaching standards (Moswela, 2010:70). New Zealand also faces these problems. Timperley (2008:22) indicates the need for active leadership in organising and promoting engagement in professional learning opportunities.

From the above discussions, it is evident that there is a need for school leadership to support teachers in curriculum-related matters. Without this support, teachers will not be able to do what is expected of them. Without support from their leaders, teachers have no choice but to communicate with other teachers teaching their subject to share ideas and knowledge. This study closed that gap, by designing a framework that used ICT to enhance PLCs. Using ICTs promotes engagement and improves communication and collaboration amongst teachers. This communication and collaboration is not bound by space and time, which is the main challenge experienced by face-to-face PLCs.

#### **3.3.4 The need for a free environment for teacher learning**

A guideline for PLCs (DBE, 2015:6) declares that mutual trust and respect is one of the key characteristics of PLCs. The guideline elaborates that, in an environment where there is mutual trust and respect, people are not afraid to talk about challenges they experience in their teaching and feel free to comment critically to others (DBE, 2015:6). Paulo Freire describes a free environment as an environment where people do not hear that they are

good for nothing, are incapable of learning anything, and are unproductive (Freire, 1997:63). Teachers need an environment that is conducive to learning and which is free of elements of power and domination. According to an opinion piece in *The Herald* (2015:Online), a free environment is a platform devoid of both physical intimidation and emotional frustration, and which allows a free exchange of ideas.

In South Africa, teachers usually attend afternoon workshops and holiday training sessions offered by subject advisors. In these workshops, the presenter is the one doing the most talking, while teachers do the listening. The sessions usually follow a top-down approach. Furthermore, teachers do not have a say regarding the training they receive – they do not participate in making decisions on the content of the workshops. This results in teachers being passive recipients of information, and they end up not implementing what they learnt. The environment of these workshops is seldom a free one, as presenters are called curriculum experts and teachers are too intimidated to participate and share their practices (Steyn, 2009:128).

Researchers in Botswana discovered a need for greater autonomy in teacher learning, and a need for teachers to break free of the isolating environment that the teaching profession has imposed on them (Eze *et al.*, 2013:27). In a study conducted in Algeria, teachers indicated that teacher autonomy is never mentioned by any of the authorities, and teacher training sessions were rigid and full of theory and not enough practice (Ameziane, 2009:48).

Australia experiences the same problem. Workshops were reportedly less fruitful than first hoped, and collaborative networks using ICT amongst teachers are recommended (Duncan-Howell, 2010:326). This researcher considers ICT usage to be an attractive feature, as teachers will be able to engage freely and comfortably in addressing their self-diagnosed needs.

It is notable that the absence of a free environment for learning amongst subject teachers leads to them fail to benefit from any endeavour aimed at developing them professionally. Top-down workshops, in which content is presented by an outside expert who did not even research the teachers' needs, leads to teacher passivity, and teachers do not gain

anything. It is, therefore, in the interest of this study to design a framework that will use ICTs to enhance the PLCs of Setswana home language. It is anticipated that, in these ICT-enhanced PLCs, teachers will communicate and collaborate freely with their peers to upgrade their skills and knowledge. Mutual trust and respect amongst those involved will lead to more effective PLCs.

### **3.3.5 The need to empower and elevate Setswana home language**

The guideline for PLCs in South African schools states that one of the characteristics of PLCs is that they take collective responsibility for learners' learning (DBE, 2015:6). Teachers have to function as a collective if they are to achieve objectives set for their subjects. It is recommended by the CAPS document that, amongst the classroom resources used by home language teachers, there must be a variety of media materials, such as newspapers, magazines, brochures, flyers, advertisements, posters and notices (DBE, 2011:13). These texts should be current and should identify with the learners' life experiences and contextual background. This expectation poses a serious challenge for teachers of Setswana home language in the Free State province of South Africa, because Setswana is not one of the designated languages of the province, and this makes it difficult to obtain enough media resources written in Setswana to support the teaching and learning of this language as a subject. The Free State Provincial Government (2013:37) language policy designates three languages, i.e., Sesotho, Afrikaans and English, as official languages of the Free State. The implication is that the media materials mentioned above are produced in the the official languages in the Free State (and not in Setswana). Teachers face the task of translating these resources or developing their own media materials so as to meet the prescripts of CAPS.

According to Bamgbose (2011:1), the colonial legacy means colonial powers imposed their languages in each territory, African languages took a secondary position in status and in domains of use, which affected these languages – also their status as school subjects. According to CAPS (DBE, 2011b:8) it is expected of learners who take a language at home language level to be proficient in that language; it is, after all, a language acquired at home. However, this is not always the case. Due to the lack of

recognition and low status of African languages, parents do not always see the need for their children to be fluent in their home languages (Heugh, 2000:18). This attitude results in teachers having to learn new techniques and approaches to teach these learners.

This low status of Setswana and other African languages affects their development in terms of computing and internet content. According to Osborn (2010:1), when ICTs are not available in a given local language, the opportunity to produce and disseminate educational, administrative and other content on the internet is reduced. Osborn maintains that this makes it difficult for that particular language to develop, as its culture cannot be conveyed or shared easily; linguists and researchers who are interested in studying that particular language find it difficult to access information related to that language.

Botswana experiences a similar problem. Minority languages suffer marginalisation and irrelevance in education. Contrary to South Africa, in Botswana, Setswana is the only language that is favoured by education policies and the constitution. It is used in schools and public and national domains, while San and other minority languages are only used in family and personal domains (Chebanne & Moumakwa, 2012:78).

According to Guemide and Benachaiba (2012:56), Algerian teachers are faced with the task of teaching English, which is a foreign language in Algeria. Consequently, teachers need professional development. In the United States of America, teachers in rural areas find themselves in a difficult situation that requires them to teach English to immigrant learners. These teachers need specialised skills and strategies to understand the cultural and linguistic challenges faced by these learners (Hansen-Thomas, Grosso Richins, Kakkur & Okeyo, 2016:308-309).

We can deduce that teachers in different countries are faced with the task of teaching languages that are not fully developed, or which need specialised skills to be taught. In South Africa and Botswana, the challenge is that some languages are elevated at the expense of other languages, and this results in teachers having to go the extra mile to be able to teach these languages. In the Free State, Setswana has a low status, whereas it is the opposite in Botswana, where it is elevated at the expense of the Khoisan languages.

Teachers in Algeria and other, developed countries, are faced with the challenge of teaching English. In Algeria it is a foreign language, and in developed countries it has to be taught to immigrant learners who do not have an English background. All these challenges result in teachers needing assistance and support to overcome the challenges teachers face in their language classrooms. They have to continually communicate and collaborate in order to sharpen their skills. This study sought to use ICT to enhance communication and collaboration amongst language teachers, specifically Setswana home language teachers.

### **3.4 SOLUTIONS FOR THE CHALLENGES IDENTIFIED**

Various countries, including South Africa, have instituted measures to curb the challenges discussed in Section 3.3, with the main aim of helping teachers maximise learner performance. Section 3.4 will report on literature relating to such solutions.

#### **3.4.1 Adapting to curriculum demands of the 21<sup>st</sup> century**

One of the key characteristics of PLCs is collaboration, which refers to the idea that preparing, teaching and assessing learners cannot be an individual responsibility. Teachers should be in a position to accept any form of assistance from other stakeholders, which will assist them to adapt to the curriculum demands of the 21<sup>st</sup> century (DBE, 2015:6). Furthermore, teachers should be fully engaged in their own learning and avoid the status of passive recipients of information.

As indicated in Section 3.3.1, teachers experience difficulties delivering new content, methods, etc. that accompany the curriculum changes of the 21<sup>st</sup> century. The NPFTED states that, for teachers to adapt to the curriculum needs of the 21<sup>st</sup> century, they need to strengthen their subject knowledge base, pedagogical content knowledge and teaching skills (DBE, 2007:16).

In order to address the curriculum demands of the 21<sup>st</sup> century, the DBE in South Africa drew up plans and strategies to improve learner performance. This endeavour is in line with the country's 2030 Vision, which states that, by 2030, South Africa should be in a

position to access education and training of the highest quality (Mabila, Herselman & Van Biljon, 2016:2). One of the initiatives of the DBE was to introduce Thutong portal, which is mainly aimed at providing information that is pre-loaded and which addresses various curriculum matters, e.g., accessing previous question papers, memos, lesson plans exemplars, etc. Vodacom e-schools, DBE Cloud, and Mathematics Labs are some of the initiatives by the Department of Education to address the curriculum needs of the 21<sup>st</sup> century and to transform learning and teaching through ICT. All these initiatives are in line with the White Paper on e-Education, which is aimed at transforming learning and teaching through ICTs (DoE, 2004:8).

Botswana joined other countries in venturing into ICT usage in a variety of sectors in addition to education. This is highlighted in Botswana's national ICT policy, called Maitlamo (Eze *et al.* 2013:27; Leteane & Moakofhi, 2015:163; Tsayang, Monyatsi & Mhlauli, 2017:150). ICT in education focuses mainly on television broadcasting, smart boards and radio broadcasting. The government of Botswana also ensures full exposure to an ICT environment by providing all government schools with data network connectivity and computers (Leteane & Moakofhi, 2015:165). Tshelane (2015:64) reports that a fully equipped multimedia centre was established in Mochudi, the main purpose of which was to provide opportunities for teachers to sharpen their ICT skills.

Algeria is still at an infant stage regarding exploring ICT use in different sectors, and this affects ICT integration in education (Guemide & Benachaiba, 2012:42). The Algerian government is attempting to improve the status quo by its adoption of the Licence/Bachelor, Master's, Doctorate (LMD) system, and an additional effort to meet the educational demands of the 21<sup>st</sup> century through using ICT. Hence, there has been a notable transition regarding the mode of teaching, which used to be more teacher-centred, to a learner-centred mode (Hanane & Djilali, 2015:129). Furthermore, these researchers also discovered that ICT usage in Algerian schools focuses mainly on mechanical parts of the teacher's work, rather than it being used effectively for improving curriculum delivery (Hanane & Djilali, 2015:136). Nothing is captured about using ICT to improve communication and collaboration amongst subject teachers.

According to Bate (2010:1043), Australia is more advanced in terms of ICT. That country's ICT policy is already in place and functional, however, teachers are still doubtful about its value for meeting the curriculum demands of the 21<sup>st</sup> century. Bate elaborates that, despite ICT usage being more advanced in Australia, teachers still focus on using ICT for administration and preparation, but seldom for student-centred teaching and learning. According to research in Australia, online communities already exist to assist teachers with professional development; however, teachers are still resistant and prefer face-to-face courses (Duncan-Howell, 2010:331, 337).

Based on the above discussion, there are indications that most countries have already joined the race to integrate ICT in education with the aim of improving learner performance through improved curriculum delivery. In all the countries discussed, ICT policies exist, what differs is the degree of their implementation. In South Africa, Botswana and Algeria, the main focus of ICT use is accessing information that is already stored. This approach does not promote active participation of teachers in creating their own knowledge. Another focus is on learners' learning, and teaching methods have shifted from being teacher-centred to being learner-centred. In the three countries, ICT policies are silent about ways ICTs can be used to promote communication and collaboration amongst subject teachers. Australia has explored using ICTs to establish online communities for teacher professional development. Although these Australian online communities yielded educational gains in terms of teacher development, there are still some areas to be improved, e.g., membership and discussion topics. This study seeks to explore ways of using ICT to improve communication and collaboration amongst teachers, with the aim of promoting teacher's learning and, ultimately, improving learner performance.

### **3.4.2 Maximising knowledge gained at teacher training and professional learning community meetings**

The PLC guidelines for South African schools depict reflective inquiry as one of the key characteristics of PLCs (DBE, 2015:6). The guideline elaborates that, through reflective inquiry, teachers can have thorough conversations about their teaching and learning.

Furthermore, teachers can examine one another's practice through mutual observation and case analysis, joint planning and application of new ideas and information (DBE, 2015:7). Theoretical knowledge gained during curriculum training and face-to-face PLCs can be maximised through reflective inquiry, where teachers have in-depth conversations about their actual teaching practices (DBE, 2015:7, Taole & Van Wyk 2015:187). The guideline recommends using electronic devices to reduce the need for face-to-face sessions and their inherent challenges. Reflective inquiry was also explored by Barth-Cohen, Little and Abrahamson (2018:83), who reveal that video recordings of lessons can be very fruitful for reflective inquiry. Teachers are afforded the opportunity to reflect on their actual classroom practices, as they apply theoretical knowledge gained during curriculum workshops and PLC meetings.

In South Africa, reflective inquiry in teaching practices is evident at the University of South Africa, where pre-service teachers are afforded the opportunity to reflect on their classroom practice through a weblog or blog (Taole, 2013:123). Teachers are expected to use blogs as online journals, in which they reflect by sharing their classroom practice experiences with their peers and mentors, and receive feedback from them. This practice is still unfamiliar in the education field, and teachers do not seem to know what reflective practice is all about. Teachers who managed to post their entries were too descriptive and haphazard, and reflections were more like a diary entries than a reflective tool. The University of the Free State, South Africa, formed partnerships with the Department of Education to use their ICETISE facilities to record lessons via an Integrated Broadcast Project (IBP) – though the video recordings are actually meant for learners, not for reflective inquiry by PLCs. The challenge is that, in some subjects, IBP only focuses on the further education and training (FET) phase, that is, Setswana home language in the senior phase is not included in the IBP programmes.

Research in some affluent countries found that teachers blogged video-recorded lessons and shared them online for reflective inquiry purposes (Mcfadden, Ellis, Anwar & Roehrig, 2014:460). Video recordings afford a good opportunity for reflective inquiry by both the presenter and peers, unlike blogging journal entries, which are too descriptive and haphazardly entered. Ciampa and Gallagher (2015:883) report that there is not much

research on the efficacy of blog use in supporting collaborative inquiry for both pre-service and in-service teachers. Blogging is still a relatively new phenomenon, which needs to be researched further.

From the above discussions, it is clear that theoretical knowledge gained during curriculum training and PLC gatherings can be maximised by performing a reflective enquiry. Teachers are afforded the opportunity to reflect on their classroom practices through video recordings and blogging. The South African approach, of blogging journal entries, results in descriptive and haphazard entries, because teachers are not yet familiar with this concept. Few teachers participate in blogging, as participation is not compulsory or structured. Active participation of teachers to ensure collaboration and communication is, therefore, not guaranteed. Teachers in affluent countries also blog video recordings, which provide better opportunities for reflection. In all the countries mentioned, not enough research has been done about blogging of journals and videos to promote communication and collaboration. This study, therefore, sought to provide a framework that will assist PLCs to use ICT to maximise their knowledge.

### **3.4.3 Collaborative environment amongst all relevant stakeholders**

For teaching and learning to be fruitful, teachers need to be supported by all stakeholders. However, some HODs and other school leaders are not empowered to meet the curriculum needs of teachers, therefore, teachers have to engage in powerful discussions with their peers and share good practices. This recommendation is supported by Salleh and Laxman (2014:352), who indicate that senior managers, i.e., principals and deputy principals, and middle managers, i.e., HODs and grade heads, all have the responsibility to support subject teachers. Senior managers provide transformational leadership, whilst middle managers provide instructional leadership to develop the teachers' capacity in ICT integration.

South Africa's guidelines for PLCs indicate leadership as one of the key characteristics of PLCs. Principals, as school leaders, need to provide practical support to PLCs by providing time, space and resources. Technological devices should be included among the resources availed by principals for the smooth running of PLCs, because the

guidelines recommend using electronic communication to reduce the need for face-to-face sessions (DBE, 2015:7). The White Paper on e-Education (DoE, 2004:21) recommends that school managers themselves should be provided with the necessary support to enable them to manage the introduction of ICTs and the related change processes. This implies that school managers who are not conversant with ICTs will not be able to see the need to support PLCs with ICT-related matters (Tshelane, 2015:62). Nkula and Krauss (2014:253) maintain that school leadership has the ability to either impede or support the integration of ICTs in curriculum practice.

Various countries have recommended solutions to ensure that school leaders are empowered with ICT skills so that they can support their teachers with ICT-related matters. In South Africa, principals are encouraged to enrol for advanced certificates in education that are structured in a way that accommodates ICT development content. The aim of this qualification is to empower principals with ICT integration skills, so that they can, in turn, influence teachers to use ICT in their curriculum practices (Tshelane, 2015:64).

In Botswana, there is conflict regarding curriculum leadership between principals and school inspectors. Tshelane (2015:46) explains how Botswana's principals are tasked with ensuring that teaching and learning takes place, but that all the processes involved lie with school inspectors. This also means that the ICT policy in this country is silent about the role of principals in integrating ICT in schools, and does not set out the role principals should play when it comes to ICT integration in schools.

A study in Nigeria reveals that using ICT is mainly targeted at improving relations between principals and teachers (Adeyanju, 2015:217). The study reports that principals who are ICT compliant gain a deeper understanding of their staff, and are able to recall information that will help to solve problems related to the school, with the aim of improving academic performance (Adeyanju, 2015:218). The suggestion is that using ICT will improve relations amongst members of the school community, among whom the principal and parents, and less attention is paid to improving communication and collaboration amongst subject teachers.

Salleh and Laxman (2014:350) conducted research in a developed country about the role of principals in ICT integration. They found that this topic is not always attended to when theorists and practitioners discuss the unfulfilled promise of ICT in education. An initiative called Whole School ICT Development (WSID) was launched to promote and foster creative and innovative learning in education. This initiative was meant to bring principals, teachers and learners together to promote a culture of ICT in schools (Salleh & Laxman, 2014:349-350).

The discussions above indicate that different countries have different approaches to the ways school leaders can be involved in the integration of ICT to promote curriculum delivery in schools. In both Algeria and a developed country, principals' roles in ICT integration are almost similar, as both countries use the principals' leadership role mainly to promote relations within the school community, and to bring members of the school community together. In Botswana, the expected role of principals is not clear, as school inspectors play a more important role in curriculum delivery processes than the school leaders themselves do. South Africa approaches the principal's role from a different angle, as principals are encouraged to enrol for further education that includes ICT in its curriculum. This approach implies that, without ICT knowledge, principals will be reluctant to support teachers to integrate ICT into their curriculum practices, including networking with their peers. Despite some of the researched countries already having principals and school leaders who are familiar with ICT, they still use ICT for building and improving relations amongst leaders and their subordinates, and fail to use ICT for teacher development purposes, which could involve using PLCs to communicate, collaborate, share good practices and improve teachers' knowledge of the subject. This study, therefore, aimed to develop a framework that would involve school leaders to support the use of ICT to enhance PLCs.

#### **3.4.4 Promoting a free environment for teacher learning**

The NCS is based on the principle of social transformation, which promotes equality in education, and in all sections of the population. Furthermore, it recommends active and critical learning, as opposed to rote and uncritical learning (DBE, 2011b:4). This implies

that every initiative that has learning, including teacher learning, as its ultimate goal, should be in line with these principles. South Africa's guidelines for PLCs cite the challenges of support and constructive critique as one of PLCs' characteristics. This means that, for PLCs to be successful, members should be free to challenge each other with questions and ideas; however, all this should happen in a constructive way (DBE, 2015:6). Skaalvik and Skaalvik (2014:69) refer to teacher autonomy as an integral part of a free learning environment in which teachers are free to choose goals, teaching methods and educational strategies that are in line with their personal educational beliefs and values.

In South Africa's higher learning institutions, student teachers are already exposed to using ICT in learning; however, at this level, the goal is mainly to improve methods of assessment, not necessarily to create a free learning environment. V-drive and Blackboard are used to paste assignments and projects. Online assessment reduces paperwork and makes marking more manageable (Adu & Galloway, 2015:246). These researchers also report that, if they are used correctly, these methods can promote critical and communication skills.

In a study conducted in Botswana, it was discovered that Facebook groups were created mainly to help students communicate and interact freely while they performed group activities. In this study, 80% of the learners opted to use Facebook, whilst 20% chose to do their group work in the traditional way (Magogwe, Ntereke & Phetlhe, 2014:1312). Using Facebook to create a free environment for learning was used to benefit learners; however, using the same tool to improve teacher learning and development still seems to be overlooked.

Teachers in a Brazil used groups on Facebook to improve communication between themselves and their students (Cunha Jr, Van Kruistum & Van Oers, 2016:228). This research reveals that participants in these groups became partners in learning, and used Facebook groups regularly in a free and autonomous way (2016:229). This practice is proposed as one of the solutions to improve learner performance; however, subject teachers' communication and collaboration to share good practices and learn from each

other was not catered for, as these groups were formed for a particular subject and consisted of subject teachers and their subject learners.

Australia demonstrates an approach that is closer to creating a free learning environment for teachers. Different types of online spaces, e.g., Twitter, blogs, real-time chat software and other mediums, were created to support an online collaborative space in which teachers communicated and collaborated on how to deliver and improve technology-based lessons. Membership was open for every teacher who wanted to be part of generating content on how to incorporate ICT in their classrooms (Tondeur, Forkosh-Baruch, Prestridge, Albion & Edirisinghe, 2016:113). This is still a partial solution, because it was not subject based, therefore, content-based challenges and good practices could not be shared amongst subject teachers.

Teacher communication and collaboration is, thus, still overlooked, as using ICT methods and online communication mainly focuses on learners, and less on teachers. Developed countries display better ways of promoting teacher communication and collaboration, though the focus of online groups seems to be more on how to use ICT to improve classroom practices, and less on ways to address subject content challenges. Hence, these groups have open membership, and are not restricted to school subjects. South Africa and Botswana use online groups to improve assessment methods. Tests and assignments are posted online and can be easily accessed and marked. Not much focus is on teacher development activities. This is why this study envisaged developing a framework to use these ICT methods to help members of PLCs to share and learn from each other in a free learning environment, in which teachers are free to be critiqued constructively.

### **3.4.5 Elevating the status of Setswana home language**

The requirement of the NCS is that equal educational opportunities are provided for all sections of the population (DBE, 2011b:5). Furthermore, the NCS requires of teachers to explore a text-based approach to teaching, through which learners are exposed to different types of texts and through which learners acquire the four language skills of listening and speaking, reading and viewing, writing and presenting, and language

structures and conventions (DBE, 2011b:9). Due to the limited availability of spoken, visual and written texts in Setswana, especially in the Free State province, where Setswana is not one of the designated official languages (see Section 3.3.5), Setswana PLCs could play a vital role in promoting a shared vision that ensures learning for all learners. If PLCs can play this role, they will be in line with one of the characteristics of PLCs, which is that teachers should take ownership of their learners' learning and make it their focal point (DBE, 2015:6). PLCs are expected to be in a position to develop and share the different types of texts needed to teach and learn the four language skills.

In South Africa, the processes of elevating the status of African languages are still in its initial stages, and face inherent challenges. The government, especially the Department of Arts, Sports and Culture and some universities, took the initiative to develop electronic corpora for all previously disadvantaged African languages that had experienced marginalisation due to the hegemony of English (Khumalo, 2015:22). Khumalo explains that these corpora are made up of a large body of naturally occurring spoken and written texts of each official African language, which are stored and accessed by means of computers and which are meant to be used by people who own and speak these languages (Eiselen & Puttkammer, 2014:3698; Khumalo, 2015:23).

In contrast to South Africa, where Setswana is one of the marginalised languages that still needs to be developed and elevated, Botswana used all it has to maintain and develop Setswana as the country's national language, and English as its official language. Setswana is covered in education policies and the constitution, and it is the only language that benefits from the socio-cultural developments of the last three decades (Chebanne & Moumakwa, 2012:78).

Algeria took the strong stance of promoting English, which is a foreign language in this country, because it realised the benefits of promoting English despite it being a foreign language. Research recommends the development of an e-learning website for English language teachers in Algeria, as has been done in other African countries, such as Namibia, and Malaysia (Guemide & Benachaiba, 2012:39).

Studies conducted in developed countries reveal that, in order for English teachers to gain more knowledge about teaching English, they engage in teacher development activities via iPads and other mobile devices. Teachers accessed professional development resources via mobile devices, which assisted them to develop pedagogical knowledge and English language proficiency (Baran, 2014:27).

From the above discussions, we can deduce that the strategies used in Algeria and in developed countries are similar, as both use mobile technologies to access materials that will assist in the teaching of English. In Algeria, an e-learning website was recommended, and, in a developed country, iPods and mobile devices were used. In South Africa, the government tries to elevate previously marginalised African languages by developing electronic corpora that will promote the teaching of these African languages. Botswana maintains its national and official languages by including them in education policies and the constitution. None these strategies refer to communicating and collaborating via PLCs. Based on these findings, this study explored using ICTs to enhance communication and collaboration amongst PLC members.

### **3.5 CONDITIONS CONDUCIVE TO DESIGNING THE FRAMEWORK**

The following conditions are conducive to designing the framework to use ICT to enhance the PLCs of Setswana home language.

#### **3.5.1 Teachers' attitudes and beliefs about ICT as a condition to adapt**

South Africa's guidelines for PLCs (DBE, 2015:7) require that teachers improve learners' learning through collective responsibility. The guideline also indicates that, through collaboration, working in silos will be reduced, as teachers will work together and share the responsibility of preparation, teaching and assessing learners. By working together, teachers will be able to challenge the curriculum demands brought about by the 21<sup>st</sup> century. According to Bate (2010:1044), if teachers believe in collaboration, they will explore the transformative potential of ICT and use the communicative opportunities that ICTs present.

In research conducted in South African schools, Hart and Laher (2015:3) discovered that teachers' beliefs about and attitudes towards educational technologies cannot be separated from each other. Teachers who did not believe that ICTs would help them to improve their curriculum practices, were teachers with negative attitudes towards ICT. This research also discovered that teachers who were not competent using computers did not believe in the power of technology to help them adapt to curriculum demands. These teachers cited reasons such as lack of money and time for failure to attend computer courses (Hart & Laher, 2015:2). Mathipa and Mukhari (2014:1218) discovered that, in South Africa, teachers who experienced technophobia, especially older teachers and those who lack digital skills, lacked the confidence and positive attitude needed to integrate ICTs in their curriculum practices. In Botswana, primary school teachers believe that technology has advantages, but they also feel that they lack basic skills needed to use computers (Leteane & Moakofhi, 2015:167). Australian teachers also believed that their attitudes towards and level of confidence regarding ICTs are determined by their level of competency; as a result, research revealed that there is a relationship between teachers' attitudes and their level of competency (Prestridge, 2012:457).

The discussion above reveals that, in South Africa, Botswana and Australia, teachers' beliefs and attitudes about integrating ICTs in their curriculum practices are determined by their level of competency. Teachers tend to be negative and refuse to believe in the benefits of technology if their digital skills are low or absent. Despite their lack of basic computer skills, Botswana teachers still displayed relatively positive attitudes towards technology in education. In short, teachers' beliefs and attitudes towards ICTs is a condition for the envisaged framework to succeed.

### **3.5.2 Provision of proper infrastructure**

In accordance with South Africa's guidelines for PLCs (DBE, 2015), teachers have to continuously engage in thorough conversations about their curriculum practices. Furthermore, PLC sessions and curriculum workshops can be followed up with electronic communication (DBE, 2015:7). Baran (2014:26) mentions that using technological devices allows practicing teachers to reflect on their own and their peers' learning in a

quick and efficient manner. For effective electronic communication to take place, access to ICT infrastructure is a condition that is supported by the White Paper on e-Education (DoE, 2004:22). The white paper indicates that the end users need to have access to hardware, software and connectivity.

In South Africa and Botswana, research indicates that the efforts of the governments to integrate ICT in schools are supported by parastatals and non-government organisations. Research has found that this support is based more in urban schools than in rural areas, due to good infrastructure in urban areas. Rural schools still experience electricity problems, a lack of telecommunication infrastructure and inadequate storage facilities (Dzansi & Amedzo, 2014:344; Leteane & Moakofhi, 2015:171). Algeria also found that infrastructure can be a hindrance to integrating ICTs in education. In its initiative to exploit ICT and e-learning for teacher development through using the internet, Algeria discovered the fragility of their systems, which led to Algerians reverting to their traditional scope of printing materials and using regular mail (Guemide & Benachaiba, 2012:42).

Based on the discussion above, it is evident that challenges with infrastructure can be a hindrance to integrating ICTs in education. It is also clear that, compared to rural schools, urban schools in South Africa and Botswana enjoy the benefits of using ICTs in education due to good infrastructure in cities. Algeria ventured into using ICTs for teacher development, but due to poor infrastructure, this initiative failed. Good infrastructure is, therefore, a crucial precondition for implementing the envisaged framework.

### **3.5.3 Support and involvement of school leaders**

South Africa's guideline for PLCs (DBE, 2015:7) lists supportive school management as a major condition for functional PLCs. The guideline indicates that principals have to provide practical support to PLCs, including resources. For teachers to be able to communicate and collaborate with their peers on subject-related matters, the school should be at least supportive, and willing to meet teachers halfway, as PLC-related activities contribute to teacher development and improve learner performance. This statement is confirmed by Salleh and Laxman (2014:349), who indicate that principals have a significant responsibility in relation to teachers' use of ICT in support of curriculum

practices. If management does not appreciate the results of ICT adoption, and display a negative attitude towards ICTs, teachers will be reluctant to actively explore what ICT has to offer in education (Bladergroen *et al.*, 2012:109, Nkula & Krauss, 2014:254). This view is summed up by Kundi and Nawaz (2014:156), who assert that top management support is a critical factor in the success or failure of any ICT-related projects. They maintain that, if the government takes an interest in ICTs, then top management's commitment and involvement should make a difference.

In research conducted in rural areas of South Africa, Nkula and Krauss (2014:254) found that, in schools where school leaders and SGBs showed interest and supported their teachers in every ICT project offered to their schools, the projects yielded positive results in ICT integration, as opposed to schools where principals showed no interest. Totolo (2007:106) discovered that, in Botswana, like in South Africa, some principals are still struggling to adopt ICTs due to reasons such as fear, lack of skills and time constraints, which were barriers to adoption, and which resulted in teachers also lacking enthusiasm about using ICTs. In Malaysia, research revealed that principals are called technology leaders, because they work hand in hand with teachers and support them to use ICTs in their curriculum practices. This yielded positive results in terms of ICT usage in that particular state (Wong & Khadijah, 2017:162). Unlike in South Africa and Botswana, where some principals still display fear and doubt about ICTs, Papaioannou and Charalambous (2011:357) found that there are some principals who hold very positive attitudes towards ICT, setting a good example for teachers to follow suit.

From the discussion above we can deduce that, if the principal and other leaders of the school are supportive and have positive attitudes towards ICT, it influences teachers to adopt and also explore different ways in which ICTs can benefit them as they implement the curriculum.

Research done in South Africa and Botswana reveals that there are still principals who fear using ICTs and, as a result, they provide little or no support for teachers' use of ICTs. Studies done in an African country and a developed country indicate that the principal's attitudes and support contribute positively towards the teachers' use of ICT for curriculum

matters. It is, therefore, evident that school leaders' support of using ICTs in curriculum practice is a condition for the envisaged framework.

#### **3.5.4 Training on ICTs**

Training teachers on ICTs is regarded as a condition necessary to ensure the smooth implementation of a framework that uses ICT to implement PLCs for Setswana home language. This statement is confirmed by the guidelines for PLCs, which identified District Teacher Development Centres (DTDCs) as being responsible for providing teachers with training on ICTs (DBE, 2015:9). Furthermore, the White Paper on e-Education recommends a programme that addresses the competencies of teachers regarding ICT use. This programme should be integrated in pre-service training of teachers and in ongoing professional development of practicing teachers (DBE, 2004:22). Another research study that investigated why teachers were not using technology reports an absence of appropriate training as one of the reasons (Hedayati, Reynolds & Bown, 2018:1128).

In order to ensure that teachers in Australia obtain appropriate training on ICTs, standards have been set and operationalised to ensure that both pre-service and practicing teachers demonstrate appropriate ICT competencies. Increased capacity and leadership on ICTs were identified by the Australian Professional Standards for teachers as one of the things that teachers must possess (Lloyd, Downes & Romeo, 2016:21).

In African countries, the demand for computer/ICT literacy is increasing, as employers realise that ICTs can enhance efficiency. Many employees realise that the only way to secure their jobs is to be trained on using computers/ICTs (Matthew, Joro & Manasseh, 2015:65).

A study conducted in South African schools to determine teachers' readiness to use tablets in their curriculum practices, revealed the following: Teachers indicated that they needed more and proper training; they felt that, without adequate training, using ICTs was overwhelming. The study concluded that the use of digital technology will depend on teacher competencies regarding ICTs (Msila, 2015:1973).

Based on the discussion above, we can deduce that training on ICTs is a condition for the successful implementation of a framework that uses ICTs to enhance PLCs for Setswana home language. In studies performed in Australia, South Africa and another African country, the results are the same. Teachers who are supposed to use ICTs pointed out that, without proper and enough training, it will be very challenging for them to integrate these technologies.

This condition refers to CER's objective of empowerment. Teachers are supposed to be empowered with all the skills they need to ensure they are in a position to implement the curriculum effortlessly. This condition also relates to connectivism's trait of diversity, which emphasises that people are different, and they have different knowledge and experiences. Teachers are also different – even their knowledge on ICTs varies. Therefore, training should be based on their needs, and not take on a one-size-fits-all approach.

### **3.6 THREATS TO SUCCESSFUL IMPLEMENTATION OF THE FRAMEWORK**

#### **3.6.1 Teachers' lack of confidence and negative attitudes towards ICT**

The White Paper on e-Education (DBE, 2004) mentions four key elements that underpin the use of ICTs in education. One of the four elements is capacity building. Most teachers grew up in environments that were limited regarding electronic technology, and this makes their adaptation to working with ICTs more difficult (DoE, 2004:22). This challenge is eliminated by the White Paper's recommendation of capacity building through pre-service training of recruits and extensive ongoing professional development for practicing teachers.

Research conducted in South Africa revealed that teachers who are competent in using ICTs have a more positive attitude towards ICT integration than teachers who are not competent in ICT (Chikasha, Ntuli, Sundarjee & Chikasha, 2014:13). In order to improve teachers' attitudes towards ICT, findings suggest that teachers' ICT usage should be increased; this will be possible if teacher training programmes could include a form of e-learning that will slowly familiarise teachers with ICT usage and improve their attitudes

thereto (Chikasha *et al.*, 2014:13). In an African country, research found that most teachers display a relatively positive attitude towards using ICT; however, the researchers also mention factors that impede increased use of ICTs in curriculum practices, among which lack of skills to use ICTs (Shah & Empungan, 2015:214). In an effort to address the the challenge pertaining to teachers' lack of confidence and their negative attitudes towards ICTs, Ekanayake and Wishart (2015:184) report how a sequence of workshops provided opportunities to change participants' attitudes on the use of mobile phones in their curriculum practices. They also realised that providing professional development that is more practical than theoretical is important in introducing new technologies to teachers.

Drawn from the discussion above, we can deduce that lack of competence in ICTs results in teachers losing confidence and developing a negative attitude towards ICTs. The pattern is common in the three countries mentioned, although teachers in an African country demonstrated a more positive attitude, which was the result of increased competence in using ICTs. In a developed country, where teachers were exposed to practical training, teachers' attitudes improved.

### **3.6.2 Limited resources and infrastructure**

As mentioned in the White Paper on e-Education (DBE, 2004:22), access to infrastructure is one of the four elements that underpin using ICTs in education institutions. The impact of using ICTs depends on the extent to which end users (learners, teachers, administrators and managers) have access to hardware, software and connectivity. This means that a lack of these basic ICT resources poses a threat to integrating ICTs in curriculum practice.

In a study conducted in South Africa, it was discovered that there is a disparity between urban and rural schools' access to resources (Dzansi & Amedzo, 2014:343). The former has sufficient infrastructure and resources, which makes it possible for their teachers to use ICTs in their curriculum practice. The latter experiences a different situation, as some of these schools are still faced with electricity blackouts, lack of telecommunications infrastructure, inadequate storage facilities, poor internet connections, etc. As part of the solution to address this threat, rural teachers, who realised that the government was slow

in providing solutions, encouraged their SMTs and SGBs to solicit donations from insurance companies, private entrepreneurs and other private institutions. In some instances, they not only received computers, but internet connections too (Dzansi & Amedzo, 2014:343). Another option explained by Dzansi and Amedzo (2014:345) is that some schools can opt for wireless systems. Though these systems are not cheap, service providers such as Vodacom, Cell C, MTN and Telkom can be approached to negotiate affordable fees.

Botswana experiences similar problems with regard to lack of resources and poor infrastructure. Like in South Africa, rural schools, and primary schools in particular, are the most affected; they have greater problems than schools around Gaborone, which is more urban (Eze *et al.*, 2013:27; Leteane & Moakofhi, 2015:171). To minimise these stumbling blocks, the Adopt-a-School campaign was introduced in Botswana, of which the aim is to enable businesses and organisations to help teachers and schools with ICT resources and infrastructure, so that teachers can integrate ICTs in all the endeavours that are necessary to implement the curriculum.

Another obstacle common in African countries is the localisation of content in African languages on the internet. Internet content is mostly available in “imported” languages, such as English and other languages that enjoy a higher status than local languages (Eze *et al.*, 2013:27; Osborn, 2010:10). This should not be a permanent obstacle, as Osborn (2010:10) indicates that there are discussions and action in this area, and he indicates that weblogs and Wikipedia offer potential for expanding African languages. A recent study conducted in Australia revealed that the same problem experienced in South Africa and Botswana prevails in Australia, despite it being a developed country. Australia also experiences a digital divide between rural and urban areas (Park, 2017:399). Park indicates that remoteness is a strong negative predictor of internet and broadband connectivity.

The discussion above paints a picture of how limited resources and poor infrastructure can influence ICT integration in curriculum practices. All the countries mentioned, i.e., South Africa, Botswana and Australia, have limited resources and infrastructure, particularly in rural schools. The discussion also reveals that, due to eagerness to

integrate ICTs in their curriculum practices, rural schools try other means to minimise these threats, e.g., running campaigns requesting outside companies and organisations to assist with basic ICT resources and internet connectivity. Service providers also help minimise the problems by negotiating affordable rates for wireless connections.

### **3.6.3 Negative attitudes and change resistance of school managers**

The key characteristics of PLCs (DBE, 2015:7), as mentioned above, prescribe that supportive school managers are a major condition for effective PLCs. Managers have to assist PLCs with the support they need, including resources, so that they can share their good practices and learn from each other through structured communication and collaboration.

The White Paper on e-Education indicates how some educational leaders still find it difficult to appreciate the benefits of using ICTs in education institutions (DBE, 2004:21). This poses a threat to the framework this study envisages; however, the White Paper provides a solution, by indicating that education leaders at all levels of the system will be provided with the necessary support to enable them to manage and provide support using ICTs at their institutions (DBE, 2004:21).

A study conducted in Botswana indicates how some principals rejected the adoption of ICTs in their schools, due to time constraints, phobia, and lack of skills and training. The study suggests that, to alleviate that problem, principals' ICT training should incorporate strategies that will assist them to overcome their fears (Totolo, 2007:105). A study done in a developed country reveals how a high level of ICT adoption by principals encouraged teachers to also adopt and use ICTs in their curriculum practices (Salleh & Laxman, 2014:361).

From the above discussions it is evident that principals' level of ICT adoption, and their attitudes, determine the extent to which their teachers will integrate ICTs in their curriculum practices. Both South Africa and Botswana reported having principals who still doubted the benefits of ICTs; however, through support and training, as indicated in the White Paper on e-Education (DBE, 2004), their fears were alleviated.

### **3.6.4 Limited training on ICTs**

As discussed in Section 3.6.4, training in ICTs is one of the conditions necessary for PLCs to implement the envisaged framework. This condition means limited or no training on ICTs poses a threat to the successful implementation of the framework. This view is supported by researchers who discovered that, despite teachers having Bachelor's and Master's degrees in education, they still lacked the ability to integrate ICTs; they considered themselves to be poorly prepared and not motivated to do so (Khokhar, Gulab & Javaid, 2017:2305). The teacher in this study proposed solutions that would help to reduce or even eradicate the threat that could prevent schools turning into technology-friendly schools; the solutions involved professional development of teachers and implementation of support mechanisms.

From the above discussion it is clear that teachers are aware of the challenges they face, and they suggest solutions to eliminate the threats they face in integrating ICTs in their curriculum practices. This finding is in line with what Habermas, one of the pioneers of critical theory, advocated. According to this philosopher, stakeholders should engage in self-reflection, which will assist them to become conscious of their own origins and potentials, which will help them seek solutions to the threats they face (see Section 2.2.1).

### **3.7 EVIDENCE OF SUCCESS**

The functionality of the framework and its success will be monitored by studying the link between learner performance and participation in online PLCs. According to Vescio *et al.* (2008:82), the concept of a PLC rests on the premise of improving learner performance by improving teaching practices. Furthermore, improved communication amongst teachers, locally and globally, and teachers being able to share strategies and resources using ICTs, will signal the successful implementation of the framework. Improved infrastructure and internet accessibility by all Setswana home language teachers will promote the successful implementation of the framework. Riverin and Stacey (2008:54) mention that, if teachers have adjusted well to using technology to communicate and collaborate with their fellow colleagues, it will automatically influence teachers to extend ICT use to their classrooms for teaching their learners.

### **3.8 CHAPTER SUMMARY**

This chapter defined the three operational concepts relevant to this study. The first concept is ICT, which refers to tools that can be used by teachers to communicate and collaborate by sharing important information and knowledge, and store it for later use. The second concept is PLC, which refers to a group of teachers who meet regularly to engage in discussions to improve their knowledge and skills, which leads to improved learner performance. Setswana home language was defined as the third concept relevant to this study, and it refers to a subject taught in South African schools which is offered at home language level.

The five objectives of the study were used to review related literature. Firstly, the need to design a framework in which challenges that prompted the study to consider designing a framework to use ICT to enhance PLCs, was explained. Secondly, various solutions that have been attempted by several countries, including South Africa, were discussed and gaps identified. Thirdly, conditions conducive to designing the envisaged framework were revealed, as were threats that may hinder the successful implementation of the framework. Next, measures that could possibly mitigate the identified threats were unfolded. Lastly, the chapter outlined how the functionality of the framework will be monitored by noting evidence of success. The literature review was based on four countries relevant to this study, i.e., South Africa, Botswana, Algeria and Australia. The chapter used the key characteristics of PLCs as the organising principles that guided and shaped the discussions.

Chapter 4 will provide more information on the research design and methodology applied in this study.

## CHAPTER 4: RESEARCH DESIGN AND METHODOLOGY

### 4.1 INTRODUCTION

This study aimed to formulate a framework for using ICT to enhance the PLCs of Setswana home language. This chapter will focus on the study's research design and the research methodology adopted in pursuit of the aim and objectives of the study, with the intention of answering the research question:

*How can we use ICT to enhance PLCs of Setswana home language?*

This chapter will be divided into two sections. The first section is theoretical, and I will reveal the research design that was applied to this study. PAR was the research method selected for this study. I will explain its origins by showing how it emerged from Kurt Lewin's action research, and I will discuss PAR's prominent attributes. The ontology and epistemology of PAR, the relevance of PAR to this study and the advantages and limitations of PAR will all be outlined in the first section.

The second section is more practical, and it will reveal the intervention strategies followed using the PAR approach. The section will start analysing the situation, by discussing conditions prior to commencement of the intervention and the plan developed for the way forward. Thereafter, I will explain how the team was created, and I will report on the briefing meeting where the topic, objectives and overall design of the research study were presented. The chapter also reveals the contents of subsequent meetings, where the following issues were addressed: issues of anonymity, informed consent, development of ground rules for the team, SWOT (strengths, weaknesses, opportunities and threats) analysis, and strategic planning. Lastly, data generation and data analysis procedures will be outlined and ethical considerations declared.

### 4.2 RESEARCH DESIGN

Given (2008:30) explains that research design involves investigative strategies and approaches to the communication of research findings. Other researchers refer to research design as strategies of inquiry that provide specific direction for procedures in a

research study. Furthermore, Given reveals that designs have developed over the years, and researchers are at liberty to select designs that suit the methods they chose for their studies best. This study was qualitative in nature and used PAR as a research approach. Kemmis and McTaggart (2005:297) reveal that the process of PAR is one of mutual inquiry aimed at reaching intersubjective agreement, mutual understanding about a situation and unforced consensus about what to do. PAR initiates communicative, social action, which is collaborative in nature and which results in people reaching mutual agreements. In this study, the research team engaged in discussions during meetings and group chats, using technological devices. An audio recorder was used, and extracts were drawn from recordings and analysed. Van Dijk's CDA was used to analyse the extracts drawn from the data generated. The co-researchers engaged in discussions using the language that helped them to express their views and share their experiences of the issue under discussion best. Extracts will be presented, in their original language, and English translations will be provided.

### **4.3 PARTICIPATORY ACTION RESEARCH AS A RESEARCH METHOD**

A research methodology is a strategy or plan that influences our choices and links them with desired results (Baum, McDougall & Smith, 2006:854). These researchers indicate that PAR, as a research approach, draws on the paradigms of critical theory and uses a range of qualitative methods; it differs from conventional research in three major ways. Firstly, it focuses on research whose purpose is to enable action; secondly, it pays careful attention to power relationships and, thirdly, it does not remove the researched from the research process (Baum *et al.*, 2006:854.)

#### **4.3.1 Origins of participatory action research**

To trace the origins of PAR, we have to understand the history that led to its birth. In the 1940s, Kurt Lewin, a German social psychologist, introduced a new approach to research called action research (Loewenson, Laurell, Hogstedt, Ambruso & Shroff, 2014:16; Kindon, Pain & Kesby, 2008:90). These researchers explain that Lewin's approach focused on people who were affected by a problem and needed a solution to their

problem. Cohen, Manion and Morrison (2008:297) describe action research as a tool for change and improvement at the local level; furthermore, they reveal how action research is intended to change the lives of disadvantaged people in terms of housing, employment, prejudice, etc. Action research gained resonance because traditional scientific research methods were of limited help in solving practical problems experienced in the world (Loewenson *et al.*, 2014:16). By the late 20<sup>th</sup> century, many scientists were dissatisfied with research approaches that organised interventions mainly around individual problems, rather than focusing on organisational risk levels. Kemmis and McTaggart (2005:276) refer to other issues, such as limited dialogue among practitioners and an increased interest in research that is more participatory in nature. These limitations of action research led to the birth of community-based participatory research (Loewenson *et al.*, 2014:16), an approach to research that recognises the community as a unit of identity and aims to establish collaborative partnerships between the researcher and the community throughout the research process. However, despite the collaborative and community-inclusive intentions, this approach failed to shift control of research to the community (Loewenson *et al.*, 2014:16).

PAR emerged as a research approach distinct from the above approaches. It has its roots in liberation theology and neo-Marxist approaches to community development and it is distinguished from conventional research by the attributes of shared ownership of research projects, community-based analysis of social problems, and an orientation to community action (Kemmis & McTaggart, 2005:273). The proponents of PAR indicate their commitment to social, economic and political development that focuses on the needs and opinions of ordinary people, as opposed to those of conventional social research, which claims to value neutrality whilst it serves the ideological function of justifying the position and interests of the wealthy and powerful (Kemmis & McTaggart, 2005:273).

Another major influence in the development of PAR was the work of a Brazilian adult educator, Paulo Freire: his theory of conscientisation, his belief in critical reflection for individual and social change, and his commitment to the democratic, dialectical unification of theory and practice (McIntyre, 2008:3). The following subsections will elaborate what

PAR stands for and how its features are closely related to those of CER, as discussed in Chapter 2 of this study.

#### **4.3.2 Objectives of participatory action research**

The following subsections will discuss the objectives of PAR, as an approach suitable for this study due to its people-centredness and its close link with CER, which is the theoretical framework that is most suitable for driving this study towards achieving the objectives that were set for it.

##### *5. Participatory action research values lived experiences*

PAR stands in contrast to the idea that the real properties of things are only those that can be measured, counted and quantified (Baum *et al.*, 2006:856). PAR emphasises the importance of experience, because a human cannot describe objects in isolation from the conscious being experiencing those objects, just as an experience cannot be described in isolation from its object (Baum *et al.*, 2006:856). This argument is supported by Cohen *et al.* (2008:298), who describe this approach as research that works on and tries to solve real, practitioner-identified problems of everyday practice. Kemmis and McTaggart (2005:564) concur, by indicating that PAR involves investigation of actual practices and not abstract practices; it involves learning about particular practices or experiences of particular people in particular places.

This study engaged with teachers and referred to their experiences on professional development. Their experiences regarding the establishment and dysfunctionality of PLCs were used to work hand in hand with them to design the envisaged framework. We also drew on the experiences and knowledge of co-researchers who were not directly involved in the teaching of Setswana home language. This was justified by the approach adopted for this study, as it values local and indigenous knowledge and experiences of marginalised groups, which form the basis for revolutionary actions that can improve the lives of people (MacDonald, 2012:36; Tshelane, 2013:416). This view is endorsed by McIntyre (2008:4), who emphasises that PAR is a multidimensional approach that intentionally integrates the participants' life experiences into the research process. He

claims that other research projects ignore cultural, religious and community beliefs that are particular to specific groups of people.

#### 6. *Participatory action research is emancipatory*

Zuber-Skerrit in Cohen *et al.* (2008:303) argues that this research approach is emancipatory, as it not only aims to achieve technical and practical improvement and to understand participants better, but it also aims to achieve transformation and change within existing boundaries. Above all, it aims to change the system itself, or those conditions that hinder desired improvements in the system or organisation (Cohen *et al.*, 2008:303). PAR is emancipatory, as it helps people to recover and free themselves from oppressive social structures that limit their self-development and self-determination (Kemmis & McTaggart, 2005:567). With PAR, people are actively involved in the process of releasing themselves from constraints of wider social structures.

From this description of PAR, we can realise how PAR and CER are related, as both have an emancipatory nature. In this study, the envisaged framework will help Setswana home language teachers to become actively involved in their own learning and development. Through continuous communication and collaboration within their PLCs, and with the help of ICT, teachers will be emancipated, from being passive recipients of knowledge, to constructing and producing that knowledge.

#### 7. *Participatory action research requires active participation by co-researchers*

According to Eruera (2010:1), PAR is an approach to research that requires active participation and ownership of people in communities who are eager to identify and deal with issues that concern them. McIntyre (2008:15) reveals that there is a difference between “participation” in PAR and “involvement”. According to his distinction, participation involves participants sharing in the way that research is conceptualised, practiced and brought to bear on the life world. Involvement in research differs from participation, as it does not involve ownership of a project. This study adopted PAR, and all the co-researchers actively participated in dealing with problems that affected them in their practices. Participants in this study were directly or indirectly affected by the research

problem and they actively participated by sharing their experiences and knowledge and helping to design the framework envisaged by this study. Active participation by all co-researchers represents a departure from the type of research that involves experts who draw information from the community and use it for purposes that might not directly benefit that community (Eruera, 2010:1). This approach is endorsed by Kemmis and McTaggart (2005:282), who mention that PAR is participatory in the sense that people can only do PAR “on” themselves individually or collectively, it is not research done “on others”.

This study involved teachers of Setswana home language who participated as a collective, together with other team members who also stood to benefit from this study. Their participation ensured that, at the end their lives, their practices would be transformed for their own benefit. Everybody in this study was placed in a situation where they realised how ICTs improve communication and collaboration within the community.

#### 8. *Participatory action research challenges power imbalances*

The relatedness of PAR and CER is confirmed by both being aimed at challenging power imbalances and at empowering the research participants. Dworski-Riggs and Langhout (2010:215) suggest that, in research, power differences should not create stumbling blocks for participation, instead, they should rather be used as opportunities to challenge existing power structures. McGuirk (2012:142) suggests that PAR is a research approach that is designed to share power and return value to the research participants of a research project.

PAR aligns with a non-positivist approach to research, as it creates a free environment where matters can be critically discussed without fear and where the marginalised and oppressed can be listened to as they express their opinions on issues that affect them on daily basis, and are about them (Tsoetsi, 2013:142). In this study, the research team was made up of teachers of Setswana home language, a school principal, a subject advisor, a district ICT coordinator, an SGB member (parent component) and an administration clerk. All team members possessed a certain amount of power based on their positions at work, but that power did not hinder participation by other team members. Power was shared amongst all participants without isolating any one member. Tsoetsi (2013)

endorses this approach, by indicating that the usually unheard but important voices of the marginalised and the oppressed are an important component of the collective in PAR.

In most workshops that are meant to develop teachers, the approach is usually top-down, with the presenters displaying enormous power due to the expertise they possess in the areas presented. Consequently teachers become passive recipients of the content, which leads to failure to impart knowledge successfully. Paulo Freire (1970:71) emphasises the importance of active and critical involvement in the learning process, and how it can yield positive results. This study adopted an approach to research that demystified excessive power of team members in a way that made us all feel as part of the group, and set us free to make inputs and share with fellow team members.

This study undertook to make sure that the line of power that existed between myself, as the researcher, and the researched was blurred to such an extent that the researched became the researchers, hence, they are called co-researchers. Under no circumstances were the participants referred to as objects; instead, they became partners in the whole research process. They were fully involved in data collection, data analysis and deciding what action should happen as a result of the research findings. The research process was geared to achieve empowerment of the team, including myself and other team member. Baum *et al.* (2006:854) describe empowerment as a shifting quality of power relations between two or more people, which happens in such a way that the relationship tends towards equity by reducing inequalities and power differences in access to resources.

#### **4.4 ONTOLOGY OF PARTICIPATORY ACTION RESEARCH**

PAR adopts a view on the nature of reality that assumes that the social world we live in is co-created, context bound, relational and situated (Ozanne & Saatcioglu, 2008:425). PAR methodology also shares the assumption of critical theorists, that social reality is socially constructed. Specific historical interests drive current social practices, and society is a human construction that is to be critiqued and changed to accommodate more inclusive interest. Ozanne and Saatcioglu (2008) indicate that participatory action researchers seek to expose how powerful social discourses constrain human potential to

envision new social arrangements. In this study, the co-researchers' history, lived experiences and contexts played a major role in constructing reality. This research was, therefore, conducted in an inclusive, power-sensitive and reflective way.

#### **4.5 EPISTEMOLOGY OF PARTICIPATORY ACTION RESEARCH**

PAR assumes that knowledge is not fixed and can be revised from time to time, depending on the context, and the knowledge we have today can be revised tomorrow (Ozanne & Saatcioglu, 2008:425). According to Loewenson *et al.* (2014:20), knowledge is built out of comparing the subjective experiences of reality by a group of people who are commonly exposed to and have first-hand experience of that reality. The extent to which information emerges from lived experiences and is collectively endorsed, constitutes the measure of reality. As mentioned in the previous section, PAR values lived experiences, and, thus, this study aligns itself with the epistemology of PAR, which values the experiences lived by the research team. The team was afforded the opportunity to tell their stories and of their experiences with the aim of constructing reality. PAR's view of knowledge is in line with that CER stands for. Loewenson *et al.* (2014:21) indicate that CER also views knowledge to be subjective, value-laden and context-specific.

#### **4.6 RELEVANCE OF PARTICIPATORY ACTION RESEARCH FOR THIS STUDY**

This study chose to use PAR as an approach to research as PAR seeks to empower teachers of Setswana home language to use ICT to improve their communication and collaboration in PLCs. Active participation promoted learning from each other, thereby presenting every member with an opportunity to be empowered. We adopted PAR, as it has the same agenda as CER, which also seeks to empower the stakeholders involved in a research project.

Geuss (1981:58) identifies empowerment as one of the attributes that characterises the last stage of CER, together with emancipation and freedom from false consciousness. Geuss's description of the last stage of CER coincides with Dworski-Riggs and Langout's outline of PAR. PAR is a method that allows researchers to put empowerment theory into practice; it ensures that everyone who has a stake in the outcome of the partnership has

a voice in the process of decision-making, hence, the participants are referred to as stakeholders or co-researchers (Dworski-Riggs & Langout, 2010:216). PAR is, furthermore, considered to be a qualitative approach to inquiry that is democratic, equitable, liberating and life-enhancing. It is different from other qualitative methodologies because of the roles played by the co-researchers (MacDonald, 2012:35).

The philosophical underpinnings of PAR are in line with the postmodern tradition, which embraces a dialectic of shifting understandings, whereby objectivity is impossible and multiple and shared realities exist (MacDonald, 2012:36). This approach actualises the idea that local people have a right to determine their own development, and participate meaningfully in the process of analysing their own solutions, over which they share power and control, in order to achieve sustainable development. This stance is in line with CER, which emphasises that the agency for change rests with the people in the community, who work side by side with the researcher to achieve the goal of social transformation (Tsotetsi, 2013:6).

I cannot overemphasise the relevance of PAR to this study. Co-researchers worked hand in hand with the aim of coming up with a framework that sought to transform the present situation, where communication and collaboration amongst the teachers of Setswana home language was inadequate due to the restricting factors discussed in the literature review of this study. Insufficient communication amongst the teachers of Setswana made it difficult for them to be actively involved in their own learning and development. With this methodology, the teachers were empowered, as the expertise and inputs of other co-researchers in this team were utilised to make sure that the envisaged framework worked to the benefit of all stakeholders involved in the study. ICT creates a free environment for learning and sharing of good practices, and in this study, the principal researcher worked with (as opposed to on) participants to create this conducive environment, as suggested by Netshandama and Mahlomaholo (2010:111).

PAR, as a research approach, was used to pursue the objectives of the study. The needs of this study, which were clearly outlined in the first chapter, were addressed in a participatory manner using PAR as an approach.

#### **4.7 ADVANTAGES OF PARTICIPATORY ACTION RESEARCH**

According to Walter (2009:50), PAR is applied research, because its problem-solving nature shows that it has practical outcomes and causes positive change. PAR's tendency to involve the community affected by the problem helps to produce practical outcomes that are workable. Another advantage of PAR is that, because it fully involves the community of interest, it is easy to access the understanding, knowledge and experiences of that community (Walter, 2009:50).

#### **4.8 CHALLENGES OF PARTICIPATORY ACTION RESEARCH**

Ozanne and Saatcioglu (2008:434) identify factors that pose challenges to PAR and which leads to it being criticised. The majority of criticism is centred on inappropriate application of methods, which is related to inadequate training of co-researchers, inadequate time in the field, weak research relationships and shallow participation by co-researchers.

In the same vein, Loewenson *et al.* (2014:24) cite prerequisites for a PAR environment that pose challenges if not adhered to: There should be enough time for participation, an enabling context and the communication skills necessary to build sound relations between researchers (myself and community members). Another major challenge is related to power relations. It was discovered that researchers from outside the community may find it difficult to surrender power to the community and give them the latitude to take control of the PAR process (Loewenson *et al.*, 2014:24). Research reveals that these types of co-researchers might even go as far as directing the community to support their own ideology. According to Loewenson *et al.* (2014:25), the process of transferring power to members of research teams might not be as easy as we think. In some instances, co-researchers are from social groups that had, previously, been marginalised and might still feel inferior and lack the necessary confidence to take control in the research environment.

## **4.9 PRACTICAL INTERVENTION OF PARTICIPATORY ACTION RESEARCH**

The previous section was mainly theoretical, as it outlined the research design and PAR, which was the research approach chosen for this study. This section is more practical, and it reveals the intervention that was followed after discussing the situation that led to the need to intervene.

### **4.9.1 Situation analysis**

The FSDOE's restructuring of schools into primary (Grades 4-7) and secondary (Grades 8-12) schools resulted in some subjects and phases lacking subject advisors who could render curriculum support to teachers. According to CAPS, the senior phase comprises Grades 7-9, however, due to restructuring, Grade 7 teachers of Setswana found themselves isolated, as Grade 7 remained in primary schools with the intermediate phase, whilst Grades 8 and 9 were moved to secondary schools. Teachers of Grade 7 felt neglected, as they lacked any type of support, as there are no subject advisors responsible for supporting Grade 7. Teachers yearned for support, as the subject advisor who had been responsible for Grades 4-9 had moved with Grades 8 and 9, leaving a void in primary schools.

This is when I realised the need for strong and functional PLCs, through which teachers can engage with each other and eliminate the curriculum challenges facing them. For example, Grade 7 teachers can join teachers of Grades 8 and 9 and form a PLC in which they share good practices and learn from each other. The already established PLCs for the senior phase could still be utilised as a means of support and development to assist Grade 7 teachers who do not receive any curriculum support from the district, and also Grade 8 and 9 teachers who still need to develop and hone their teaching skills.

### **4.9.2 Planning**

During this period, I started having informal meetings with senior phase teachers of Setswana who had repeatedly indicated that they need more development on CAPS implementation, especially on challenges related to subject content; some of these

challenges had emerged with the introduction of the new curriculum. As we discussed these issues, we came to the conclusion that, as teachers, we all have areas of expertise, as well as grey areas, where we need each other for curriculum support and development. One teacher indicated that, in the past, the education department used to send them for in-service training, where they met with other teachers from different provinces. At these training events they used to share good practices and learn from each other. According to this teacher, they benefited a great deal from such engagements.

After hearing their concerns and challenges we all agreed that subject clusters (PLCs) could be helpful for promoting teacher communication and collaboration. However, we were also aware that these PLCs are established annually in our subject, but do not always yield expected results. This failure is due to the inherent challenges associated with face-to-face PLCs. We all agreed that PLCs need to be strengthened for them to yield better results. During our quarterly subject meeting, the issue was raised again, and I introduced my study to the teachers and invited them to a forum where the research team was formulated (see Appendix A for invitation). The whole cluster showed interest in the study and attended the forum. From this forum, a group of seven teachers volunteered to form the coordinating committee. Other members of the forum also showed interest in the study and offered their inputs, if needed. Van Malderen, De Vriendt, Mets and Gorus (2016: 220) indicate that, for an organisation to be engaged in continuous quality improvement, its members should be involved in identifying the problem and collecting and analysing data relevant to their situation. This participation is vital for strategising on ways to improve their present situation, and it was evident that forum members were willing to participate.

#### **4.9.3 Formulation and profiling of the team**

According to Kemmis and McTaggart (2007:309), PAR projects are more meaningful and yield desired results when they involve people who are involved and also affected by the problem that has been identified. Since the problem identified in this study is about inadequate communication and insufficient collaboration amongst teachers of Setswana home language, we decided to invite other people who are indirectly involved with the

problem, but who are relevant in solving it, to participate. Teachers themselves are directly involved, but there are other stakeholders whose participation in this study was crucial for improved results. The following people were contacted and agreed to be part of the research team.

9. *Setswana subject advisor*

I contacted the Setswana subject advisor who is responsible for Grades 10-12 in our district. Her participation in the study was essential, because, due to her expertise as a subject specialist, she would be able to guide and advise regarding content and curriculum-related matters. Research done on the role of a subject advisor reveals that it involves assisting schools to improve the quality of teaching and learning (Rasebotsa, 2017:18). Due to her experience in FET grades, she would be able to help us to bridge the gap that exists between senior and FET phases, so that learners in the senior phase are adequately prepared for the next phase.

10. *The school principal*

Fullan (2007:159) spells out that, in the past, principals were neglected in the formulation of strategies for reform. It is only after researchers revealed the importance of the principal in leading change activities that policymakers began to incorporate the role of school leaders for leading these activities.

The principal was incorporated in this study to ensure that we drew from his expertise as a leader, especially in areas of provision and accessing of resources for teacher development purposes. His school already had Wi-fi connectivity, therefore, his presence in this research educated team members from other schools about that aspect. His membership in this team also impacted positively on his school and the cluster at large, because he was able to share the information with other principals about how PLCs can be enhanced through using ICT.

Principals' responsibility in teacher development programmes is cited in the Employment of Teachers Act (RSA, 1998:Sub-section 4.2), which states that principals are responsible for the professional development programmes of staff, both school-based, school-

focused and externally directed, and that they have to assist teachers, particularly new and inexperienced ones, to develop and achieve educational objectives in accordance with the needs of the school.

#### 11. *Heads of departments*

Two HODs were invited to be part of the research team. The first one was incorporated because he also taught Setswana home language, Grades 9, 11 and 12. He was very experienced in the subject and in marking Grade 12 papers. He was also a chief marker at the marking centre. His involvement in this team was crucial, because he offered his knowledge and experience to develop teachers who were novices in the teaching profession.

The second HOD headed all languages, but was not involved in the teaching of Setswana – he was an English teacher. He was also an experienced teacher and HOD. He was drawn into this research because we wanted to gain deeper knowledge from him on how to manage a subject that one is not teaching. He would be the researcher who would show us how functional PLCs can help with teacher development in subject content, as his teachers were getting minimal content development from him as an HOD. He was very helpful during the study, as he was employed at the very school that hosted this research project. His knowledge on using projectors for PowerPoint presentations was particularly useful. The school allowed us to utilise the maths lab for our research meetings and this HOD was very resourceful. He was also an expert in the South African School Administration and Management System (SASAMS).

#### 12. *Senior phase teachers of Setswana home language*

Senior phase (Grades 7-9) teachers of Setswana home language formed a larger group in the research team. This group of teachers represented a combination of experienced and novice teachers. They were drawn into this research project because they were the teachers who were directly affected by the research problem: *Lack of communication and inadequate collaboration amongst the teachers of Setswana home language*. They were the teachers who faced the challenge posed by lack of functionality of the face-to-face

PLCs. These teachers were expected to return to their schools and implement knowledge gained from this research study.

The framework, as stated in previous chapters, would be about using ICT to enhance the PLCs of Setswana home language. Morales (2016:159) indicates that involvement in PAR is centred on those upon whom the problem has the greatest effect. PAR engages them in planning, carrying out and applying the results of the research project.

13. *Administration clerk*

One administration clerk from the hosting school was also invited to be part of the research team. She contributed by bringing her knowledge of ICT and we also used her inputs regarding the way teachers and clerks can work harmoniously in utilising ICT resources that are already available at the school. At her school she was responsible for receiving and sending emails, typing question papers, using SASAMS for marks, etc. She usually assisted other schools with SASAMS challenges.

14. *School governing body member*

According to the South African Schools Act (RSA, 1996), the legal duty of SGBs include the promotion of the best interests of the school, striving to ensure its development through the provision of quality education for all learners and supporting the principal, teachers and other staff in the performance of their professional functions. A governing body of a public school must take all reasonable measures within its means to supplement the resources supplied by the state in order to improve the quality of education provided by the school to all learners at the school (RSA, 1996). Based on these roles of the SGB, we requested an SGB member to be part of this research team. The purpose of inviting her was to draw on her knowledge and power for recommending other resources, such as ICTs that have positive impact in promoting teaching and learning. Fullan (2007:198) is of the opinion that SGBs are crucial agents for school improvement, and he recommends that SGBs themselves should be engaged in self-improvement activities. The SGB member also benefited from the study, as she was part of the endeavour to empower teachers with ICT skills.

15. *ICT coordinator*

The district ICT coordinator, who was based at the DTDC, was also invited to be part of the research team. His role was to assist the team with regard to ICT-related activities. He gained knowledge and insight about the needs of teachers with regard to ICTs and the functionality of PLCs.

16. *Research students*

Two fellow research students were invited to join the team. Their role was mainly to assist with PAR-related issues, as they were also using PAR as an approach to their own research. They were actually outsiders who are not affected by the research problem, however, the aim was to tap in to their knowledge and experience of research. Sekwena (2014:52) supports this approach, by indicating that research conducted in silos will lack the stimulation of immediate feedback and debate of differing opinions. The aim of involving the research students was also to assist them with their own studies, as they gained better and deeper understanding of how other research projects work. They also benefited from ICT-related empowerment offered by this research project.

#### **4.9.4 Research meetings**

Invitation letters to the first formal meeting were sent to all the stakeholders, who all confirmed their attendance. After the briefing meeting, a number of planning meetings were held; these meetings levelled the ground for the actual data generation process. The contents of the briefing meetings and other planning meetings will be discussed below.

17. *Briefing meeting*

The purpose of this formal meeting was to brief the research team about this research project. The importance of this briefing meeting is described by Arthur and Nazroo (2003:133), who explain that, because not all members were part of the initial forum, there was a need for a full briefing meeting at which the whole team was introduced to the topic, objectives and the overall design of the research study (see Appendix B for minutes).

A PowerPoint presentation (see Appendix C) was delivered by the principal researcher and a fellow research student. The first section, which was about the title of the study, the research problem as well as the research question, was presented by the principal researcher and the second part about the methodology and approach was presented by the fellow research student. This section unpacked PAR as an approach to the research. It was clearly described as collaborative and participatory in nature, because it strives to move away from an idea of an “outside expert” who examines, theorises and proposes solutions (Walter, 2009:2).

Team members were assured that, with this approach, people would be empowered using their own knowledge and, most importantly, this approach seeks to challenge power imbalances amongst team members (Cammarota & Fine, 2010:3). Thirdly, team members were given an opportunity to indicate that they bought into the research project. During this session, members were all given the opportunity to say something and they all indicated how ready they were to be part of this research project. The ICT coordinator, in particular, showed a great deal of interest in the type of study and the PAR approach; he had never been exposed to this type of a research approach. One of the teachers showed interest in using ICT to improve communication amongst teachers of Setswana, by saying:

*Re itumelela research eno thata jang gone e bua ka technology, rona re sa ntse re le mo lefifing la tiriso e e tseneleng ya technology mo thutong mme ke bona re ta ithuta sengwe fa. [We are happy about this research, especially because it is about technology, some of us are still in the dark when it comes to integration of technology in our practices. I think we are going to learn here.]*

In short, this teacher envisaged empowerment from using technology. Some of them are still benighted and desire to be enlightened. The coordinating team members were given an opportunity to introduce themselves and to explain briefly how they relate to the study. Lastly, I made the team aware that I had applied to conduct this research, and had been granted permission by the FSDOE (see Appendices D and E) to conduct the study, and had obtained ethical clearance (see Appendix F) from the UFS. The date for the next meeting was agreed upon and it was suggested that we hold our meetings on

Wednesdays after working hours. I drafted letters, requesting principals to give permission that their teachers participate in the research project, which I sent to relevant supervisors (see Appendices G and H).

Co-researchers were made aware that, in order to continue with the study, they all had to read and sign informed consent (see Appendices I and J), which serves as evidence that they had not been forced to participate in the study, but that they did it voluntarily. This requirement is attested by Ritchie, Lewis, Nicholls and Ormston (2013:92), who state that, in any research project, participants should sign informed consent after being provided with information about the purpose of the study, how data will be gathered and used, time required, and so on. Ritchie *et al.* (2013:92) also emphasise that voluntary participation should be emphasised in cases where there is a professional relationship between the researcher and the participants. In this study, the participants, especially the teachers of Setswana and HODs, were not supposed to feel obliged to participate because the researcher was their subject advisor.

During this process, the research participants were also reassured of their anonymity and the confidentiality of information they would provide. According to Ritchie and Lewis (2003:66), anonymity refers to hiding the identity of those taking part, whilst confidentiality refers to the act of not linking comments to any participant. Hence, in this study, participants were reassured that they would be assigned pseudonyms, instead of their real names, in the process of gathering and analysing data. Their comments and contributions to this study were made in a general way, and I guarded against compromising their anonymity by not linking a comment with a particular participant.

#### 18. *Planning meetings*

After the briefing, subsequent meetings (see Appendices K and L) engaged in the following activities: Firstly, the team was faced with developing a mission statement for the research group. The purpose of this activity was to develop a statement that would guide the activities of the team. It was agreed that the statement should be based on the research problem, so that every activity that the group engaged in should reference the research problem, namely, *insufficient communication and inadequate collaboration*

*amongst teachers of Setswana home language.* The team decided that the mission statement would serve as a declaration of their core purpose and focus, and that it would remain unchanged throughout the research period. It was, therefore, agreed that the mission statement for this team would be, *Creating improved communication and collaboration amongst PLCs through the use of ICT.* The importance of developing a mission statement for the group of people working together is cited by King (2013:9) to be to define a common goal for the team, and to indicate the direction the team is headed. Team members completed an attendance register at every meeting (see Appendix M).

Secondly, the team engaged in the activity of developing a code of conduct for the research team. At this stage, the team had calmed down and were more relaxed; they felt free to work as a team that was heading towards the same goal. Ritchie and Lewis (2003:175) reveal that, at this stage, members of a team are in a position to determine social norms that will guide their activities, in line with socially acceptable behaviours. In this research, members agreed about the venue for holding research meetings, the day of the week and the time to start meetings. The frequency of meetings was also agreed upon. The team discussed how meetings would be conducted and they concluded that we should take turns chairing and scribing during meetings. General behaviour of team members during meetings was discussed. To sum up, respect towards one another became the umbrella concept. General issues, such as punctuality and sending an apology for inability to attend a meeting were also mapped (see Appendix N).

Thirdly, the team conducted a SWOT analysis (see Table 4.1 below), which provided direction to the activities of the team and guided their activities towards solving the research problem, based on the skills, knowledge and resources that were already in the pool (Sekwena, 2014:56). One of the research students (see Annexure G) who was part of the team was requested to present and conduct the SWOT analysis activity, and the presentation (see Annexure O) highlighted that, with this analysis, each member would realise self, others and their environment. The outcome of this activity is reported in Table 4.1.

**Table 4.1: SWOT analysis**

<b>ELEMENTS OF SWOT</b>	<b>OUTCOMES</b>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Team members have different skills and experience, e.g., ICT coordinator, teachers, principal, research students, etc.</li> <li>• Well-equipped venue for meetings.</li> <li>• Resources – Most members had access to cell phones, laptops, etc.</li> <li>• Research students will greatly assist the team with PAR proceedings.</li> </ul>
<b>Weaknesses</b>	<ul style="list-style-type: none"> <li>• Some members repeatedly arrived late.</li> <li>• Principal's busy schedule resulted in him not always being available.</li> <li>• Lack of time-consciousness in discussions.</li> <li>• Reluctance by some team members to open up and take a leadership role.</li> </ul>
<b>Opportunities</b>	<ul style="list-style-type: none"> <li>• Members saw this research project as <ul style="list-style-type: none"> <li>○ A means to elicit further studies;</li> <li>○ A means to learn and be empowered with regard to the subject; and</li> <li>○ A great opportunity to improve use of technology by Setswana teachers and other team members.</li> </ul> </li> <li>• Using technology to teach the subject would be made possible through the knowledge gained here.</li> <li>• The status of a marginalised and indigenous subject, like Setswana, can be elevated through the use of technology.</li> <li>• This research can provoke increased access to computers and Wi-fi at the schools.</li> <li>• The presence of Grade 12 teachers and markers, subject advisors and HODs for languages provided a great opportunity for learning by novice teachers who are also part of this team.</li> </ul>
<b>Threats</b>	<ul style="list-style-type: none"> <li>• Time to hold meetings and time to conduct research was very limited.</li> <li>• Availability of data bundles, Wi-fi, smartphones, laptops.</li> <li>• Access to school computers was limited to clerks only.</li> <li>• Transport problems were faced by some members, as the study took place in Thaba Nchu, while some team members lived in Mangaung. This resulted in some team members being apprehensive during meetings, as they had to travel home by bus.</li> </ul>

After performing a SWOT analysis, the team members were in a better position to know who they were, their potential, and factors that could hinder the activities of the team. According to Tshelane (2015:100), SWOT analysis is a tool that can help the coordinating

team to identify and overcome obstacles that might contribute to the team failing to reach their objectives. The team also explored what they already have at their disposal and that might help them to realise their ultimate goals. As we considered impediments, we worked to preserve and maintain our strong points.

#### 19. *Strategic planning*

This was the stage of PAR where the research coordinating team realised what they wanted to achieve, and that this was the time where the team had to become actively involved in proposing ways and means to achieve the objectives they had set. Walter (2009:3) indicates that those who are affected by the problem must decide what the problem is and that they need change. Walter elaborates that the action part of PAR is situational, in that resolving the problem identified is the responsibility of the very community that is experiencing the problem. Therefore, neither the problem nor ways to resolve it can be imposed on the community of interest, instead, they themselves must be actively involved in the journey of resolving the problem. PAR is said to be collaborative in nature, as the research team, which is also a community of interest, work together and contribute to discovering and developing the conditions and actions needed for sustainable change (Wimpenny, 2016:4).

The coordinating team managed to devise a strategic plan (see Table 4.2), which clearly indicates how we prioritised our activities to bring about change and empower ourselves.

**Table 4.2: Strategic plan**

PRIORITIES	ACTIVITIES	RESOURCES NEEDED	DURATION OF THE ACTIVITY	PERSON(S) RESPONSIBLE	PERFORMANCE INDICATORS
1. Exploring the use of ICT for group communication	A practical session on <ol style="list-style-type: none"> <li>i. Downloading Whatsapp application</li> <li>ii. Creating email addresses</li> <li>iii. Creating a Whatsapp group</li> </ol>	Smartphones and tablets	45 minutes	IT specialist/ICT coordinator	Attendance register
2. Sharing a lesson video via Whatsapp	Analysing a poem via Whatsapp video recording	Smartphones/ Tablet	30 min	Teachers of Setswana senior phase	Written feedback drawn from Whatsapp video recording.
3. Roles and responsibility chart	<ol style="list-style-type: none"> <li>i. Drawing a chart</li> <li>ii. Brainstorm duties of :               <ul style="list-style-type: none"> <li>- SGB</li> <li>- Administration clerks</li> <li>- Subject teachers</li> </ul> </li> <li>iii. Brainstorm content of school Wi-fi policy</li> </ol>	Pens and paper Laptop	30 min	The whole team of co-researchers	Responsibility chart
4. Setswana website	Creation of Setswana website	Smartphone	30 min	Outside expert	Subject website
5. Basic computer skills	Four modules course on computer literacy, covering the following aspects: <ol style="list-style-type: none"> <li>i. Introduction to technology</li> <li>ii. Word processing software</li> <li>iii. Presentation software</li> <li>iv. Spreadsheet and drawing software</li> </ol>	20 computers and a facilitator	8 hours divided into 4 afternoons	A facilitator from Pearson Publishers	Attendance registers and attendance certificates for participants

*a) First priority*

The coordinating team concluded that it is important to make sure that we all had at least one ICT tool that would enable us to communicate and share with each other. After a thorough survey amongst ourselves, we realised that all of us were in possession of smartphones, though not all of us were using them optimally. For example, three of the team members did not have the Whatsapp application downloaded on their cell phones, not all of the team members had email addresses, and not all had Facebook accounts.

We, therefore, concluded that this priority would be realised by performing three activities that would enable team members to communicate with each other: i) Downloading Whatsapp and Facebook applications to our smartphones; ii) Creating email addresses for those without, and iii) Creating a Whatsapp group and Facebook page with the coordinating committee as members. A Whatsapp group was created immediately, and communication amongst the team members was kick-started. The district ICT coordinator was identified as the relevant person to facilitate the process and the administration clerk ensured that the process ran smoothly by availing the necessary resources that were available at the school.

*b) Second priority*

Co-researchers concurred that they usually obtain theoretical knowledge from workshops; however, they did not always get enough opportunities to present lessons in the presence of other teachers, so that they could practice what they had been taught. We, therefore, decided to work on a poetry lesson as a group, and to use Whatsapp video recording to capture lesson presentations. Thereafter, we would share it with the group, to distribute their inputs and comments with the aim of developing the presenter, and also to develop the other team members, so that we could all learn from that activity. This type of activity is regarded as beneficial, as it saves time and enables teachers to maximise theoretical knowledge gained in workshops and face-to-face PLCs.

*c) Third priority*

After deliberations, we concluded that school leaders have to be at the centre of support to teachers regarding needs related to ICT integration. Co-researchers identified the need for data or Wi-fi to make communication and collaboration amongst PLCs possible. They indicated that they would be willing to use their own data, as they would also benefit from the conversations. They suggested that the school assists teachers, by giving them access to Wi-fi during school hours. We decided to assist principals on managing this. All stakeholders' roles were brainstormed in relation to suggestions for what the policy should contain. School leaders could use the suggestions as a guide, and it can be expanded, based on a school's needs.

*d) Fourth priority*

The co-researchers also prioritised the creation of a subject website for the purpose of sharing materials and knowledge. The website was regarded as the safest and most reliable means to store information. It was prioritised, because a website can be accessed easily from any device. The co-researchers decided to seek the advice of an outside expert to assist them in this regard.

*e) Fifth priority*

The team also realised that a basic computer course was needed, because the knowledge gained would smooth the process of sharing information using computers. I was tasked by team members to research how team members could be empowered in this regard. The DTDC head was contacted and he immediately referred us to a publisher who was offering basic beginners' courses on computer skills. The publisher was more than willing to assist a group of 20 teachers, hence, focus group members were identified to increase the members of the coordinating committee to 20.

The publisher offered four modules. One module was to be presented in two afternoons. In total, the duration of the course was eight afternoons from 14:00 to 16:00. The participants were provided with attendance certificates, which will also provide Continuing

Professional Teacher Development (CPTD) points. A letter was drafted to the chief education specialist for education district support, to request permission to use the facilities of DTDC for this purpose (see Appendix P). The following modules formed part of the course:

- Introduction of technology as a teaching and learning tool
- Word processing software as a teaching and learning tool
- Presentation software as a teaching and learning tool
- Spreadsheet and drawing software as a teaching and learning tool

Table 4.2 presents the strategic plan that indicates the priorities and its activities, resources needed, duration of the activity, who was responsible, and performance indicators.

After developing the strategic plan, team members suggested that the plan needed to be implemented. The implementation phase commenced, and the need to monitor progress was acknowledged. We agreed to conduct reflection sessions after each priority had been implemented. The administration clerk suggested that the reflection sessions need not be face to face, but that we could use our Whatsapp group to reflect and put forward our inputs. The team agreed to the suggestion.

#### **4.9.5 Data generation procedures**

##### *20. Research setting*

The school that had been identified to host research meetings is situated in a semi-rural town of the Free State province, in Motheo district, called Thaba Nchu. The school is labelled as intermediate, because it offers tuition from Grade R to Grade 9. In line with the province's restructuring policy, the school is gradually phasing out Grades 8 and 9, to become a pure primary school (Grades R–7). It was used as a venue for research meetings because it is centrally situated and could be reached easily by all members. The principal, HOD, administration clerk and Grades 7–9 Setswana teacher at this school were members of the research team. The reason they volunteered to host our research

meetings is that the school's role had declined drastically in the previous years, therefore, they promised to offer a conducive and well-resourced class that we could utilise for research purposes. Ritchie and Lewis (2003:70) are of the opinion that, when choosing a venue for research meetings, the members of the team should be involved, and that the venue agreed upon should not expose members to harm. For example, if transport is required, members should be protected from having to travel long distances to reach stops for public transport. As mentioned, this school was easily accessible and not far from the bus stop, and the venue offered was conducive for productive meetings as it was equipped with electricity, a projector and screen to use for PowerPoint presentations. This class was well resourced, as it was a mathematics lab, though it was seldom used for that purpose.

#### 21. *Data generation process*

As stated in Section 4.2 above, this study was qualitative in nature, and PAR was used as an approach to conduct research to generate data. PAR employs various methods to generate data, and the research team had to decide which method suited the study best (MacDonald, 2012:41; Wimpenny, 2016:6).

In the initial meetings of this study, PAR was presented to the team, and we reached consensus that, out of all the available methods to generate data, we would explore the focus group approach. The focus group technique is one of the most fruitful qualitative methods for studying ideas generated by a group of people who are experiencing the same problem, but who have different experiences and knowledge (Fusch & Ness, 2015:1410; Gelo, Braakmann & Benetka, 2008:273). Ritchie and Lewis (2013:171) indicate that the focus group approach is a process that is quite different from interviews, as data is generated by interaction between the team members when they present their views and experiences, though they also make room to listen to others. Furthermore, focus groups do not always follow the same procedure as group discussions and sharing of experiences. In some instances, group meetings will be in the form of workshops and activity sessions. In this study, the team members attended workshops, which were, in most instances, conducted by team members themselves. Team members decided to

utilise technology, because the study itself needed to enhance PLCs through using ICT, therefore, some of the activities, such as discussion of content matters, happened via Whatsapp. Doing so helped to save time that could be used for face-to-face meetings.

After reading and analysing a poem using the process approach, one teacher presented the poetry lesson in class, recorded the lesson and sent it to the group via Whatsapp. Feedback was rendered via Whatsapp voice recordings, and was later transcribed to text. The lesson remained in the group chat and can be accessed at any time. The above-mentioned activity is supported by Ritchie and Lewis (2003:173), who indicate that advances in technology mean that a research team does not need to meet physically. They also report that focus groups can decide to make their chats synchronous, which means that the research team can log on at the same time and exchange ideas. Alternatively, chats can be asynchronous, meaning that focus group members can log on and make comments at different times that suit each one. The co-researchers were allowed to use the language of their choice, and their contributions were later translated into English for analysis purposes.

## 22. *Instrumentation*

As indicated in previous chapters, this study was grounded in CER, used PAR as an approach to research, and also drew on Siemens's theory of connectivism. Tshelane (2015:118) reveals that this type of research is creative and involves new procedures and inventions. It is on this basis that we decided that, for data generation, we would use a voice recorder, and later draw extracts from the recordings. Whatsapp chats by smart phone were used to share and disseminate content-related information, and minutes of meetings were used to augment recorded voices. Furthermore, email was used to forward important information needed before the next gathering. Because some of the team members had indicated that they did not have their own email addresses to access information, the team decided to use their schools' email addresses in the mean time. The team also decided that information that would be sent via email should be reminders of next meetings and content activities. It was not safe to send other information via school email addresses, as team members had been assured confidentiality and anonymity.

### 23. *Data analysis*

It has been indicated that data would be generated by means of the focus group approach, and the instruments that would be utilised were explained under data generation processes (Section 4.9.5). A huge amount of data was generated through voice recordings, from which extracts were drawn. The pool of data generated only made sense after it was analysed.

The researchers and co-researchers adopted Van Dijk's CDA, which enabled us to make meaning of the enormous amount of data generated during the process of data gathering. The word discourse, when described at micro level of social order, refers to everyday conversation in the sense of "talk" or "speech" (Bladergroen *et al.*, 2012:109). Speech at a macro level of social order is characterised by power, dominance and inequality. CDA, therefore, focuses on the way discourse structures enact, authenticate, legitimate, imitate or challenge relations of power and political dominance in society, and this level is called the meso or intermediary level. Furthermore, Bladergroen *et al.* reveal that discourse is not a nebulous or formless mass – it has both structural and conceptual patterns and readers, as well as hearers, use both in a framework of contextual information and for interpreting the text.

CDA is a technique used in studies where researchers aim to show how social power is abused, where dominance and inequalities are enacted, reproduced and resisted by text and talk in the social and political context (Tshelane, 2015:120). CDA was appropriate for analysing data in this study, because CDA and CER, which is the vehicle driving this study, both seek to analyse power relations amongst people, and which focuses on control, discrimination and dominance (Nkoane, 2012:99).

In this study, we analysed data using Fairclough's three levels of analysis. Mahlomaholo (2009:229) indicates that, at the first level, the spoken word, namely, the text, is used to confirm or refute a fact or a finding. The discursive practices level, which is the second level, is used to unearth those less obvious moments that inform and ground particular utterances and behaviours. The third level is where the social structure is used to get to the bottom of meaning-making, and to understand the text on an even deeper level.

Mahlomaholo indicates that this process is not a uni-linear process, because in some instances the meaning will be obvious, sometimes the meaning will have to be extracted by reading between the lines, and in other instances analysts have to recreate the story and the meaning on the basis of circumstantial evidence, and researchers' findings may differ from that of other analysts.

#### **4.10 ETHICAL CONSIDERATIONS**

According to MacDonald (2012:45), several ethical principles must be considered by researchers when they conduct PAR. Firstly, all the relevant permissions must be sought before data generation processes are commenced. In this study, I applied for ethical clearance from the ethics committee of the faculty, and it was granted with the clearance number UFS-HSD2015/0651. An application to conduct research was also sought from the FSDOE, and it was granted. The district director of Motheo was provided with a copy of the permission letter. Permission was requested from all the principals of schools listed in the FSDOE permission letter.

Secondly, all relevant persons, committees and authorities must be considered, and principles guiding the work must be accepted before the research starts. In this study, a forum made up of relevant persons was organised, and the purpose of the study was explained. From the forum the coordinating committee was elected. No one was forced to participate, as I indicated clearly that participation was voluntary. Team members were required to sign informed consent forms, which clearly indicated that participation was entirely voluntary and that members were under no obligation to take part in the study. They were also assured of anonymity, and that their identities would be protected and confidentiality maintained. One of the co-researchers suggested that we all sign a declaration of secrecy (see Appendix Q), in which we all vowed to refrain from divulging any of the Whatsapp group discussions. All members agreed to this suggestion and another member suggested that, to ensure confidentiality, the Whatsapp group should mainly focus on sharing subject-related matters and disseminating important information regarding the group, e.g., dates of meetings. We all concurred with this suggestion, as the member provided reasons for her suggestion.

#### **4.11 CHAPTER SUMMARY**

This chapter presented PAR as the approach used to generate data in this research project. The chapter unfolded in two sections, the first section is more theoretical, as it gave a detailed account of PAR, how it originated and its objectives. The ontology and epistemology of PAR, its relevance to this study as well as its advantages and limitations were all explained. The second section, which is more practical, gave an account of the interventions of PAR in this study. The situation before the commencement of the research study was analysed, and planning for the research process was explained by a discussion of how the team was formulated and profiled. The intervention also included a series of meetings, held for different purposes, e.g., a briefing meeting, and meetings in which a mission statement and constitution, a SWOT analysis and a strategic plan were developed. Data generation and analysis procedures were also outlined, as were ethical considerations. The next chapter will focus on data presentation and analysis using Van Dijk's three levels of analysis.

## CHAPTER 5: PRESENTATION AND ANALYSIS OF DATA

### 5.1 INTRODUCTION

This study designed a framework to use ICT to enhance the PLCs of Setswana home language. To achieve the aim and objectives of the study and answer the research question, the data generated by the research team will be analysed and interpreted, whilst the findings will be presented and discussed. Data, in the form of voice recordings and minutes of meetings, will be analysed in line with the five objectives of the study.

Firstly, data justifying the need to design the above-mentioned framework will be analysed and discussed. The challenges that led to the need for the emergent framework will be discussed comprehensively, one by one. I will start by discussing each challenge based on the key characteristics of PLCs, as the organising principles of this study. I will then use the relevant literature and policies to discuss the challenge further. Thereafter, I will cite relevant extracts from the empirical data to demonstrate how the challenge manifested. I will analyse extracts in the context of CER, as the theoretical framework of the study, which seeks to analyse power relations amongst people and to demystify it (Ledwith, 2007:599; Nkoane, 2012:99). Data will be analysed in the context of connectivism, which is the supporting learning theory and which accounts for the huge pools of knowledge accessible via the internet (Guder, 2010:38; Siemens, 2004:3). CDA, by Van Dijk, which is aimed at analysing the spoken text at textual, discursive and social levels, will be used to analyse empirical extracts, in order to help to unfold the challenges that led to the need for a framework to use ICT to enhance PLCs of Setswana home language (Mahlomaholo, 2009:229). I will then conclude the analysis and discussion of that particular challenge by relating findings to the literature reviewed in Chapter 3 of this study. This will assist in justifying the need for the emerging framework.

Secondly, I will analyse and interpret data and present and discuss the findings in respect of the components of the solutions for the challenges identified. Each solution will be presented and discussed in response to the corresponding challenge; the same procedure will be followed for discussing the components of the solutions. I will also discuss the conditions under which the emerging framework was implemented, as well

as the threats that the emerging framework had to grapple with and overcome. Finally, I will present and discuss the indicators of success achieved by the emerging framework in response to the challenges discussed earlier in the chapter.

## **5.2 CHALLENGES THAT JUSTIFY THE FRAMEWORK**

This section will focus on challenges that prompted the need to design a framework to use ICT to enhance the PLCs of Setswana home language. People who are directly involved in the teaching of the subject revealed the challenges they experience, which made them identify with the research problem, which is that insufficient communication and inadequate collaboration amongst teachers of Setswana home language is undesirable, because it impacts negatively on professional development and learner attainment. This challenge also induced the desire to respond to the research question, which asks: How can we use ICT to enhance the PLCs of Setswana home language? The following challenges will be discussed in relation to the literature reviewed in Chapter 3: Inability to adapt to curriculum demands of the 21<sup>st</sup> century, inadequate learning from curriculum training and workshops, absence of or minimal support from school managers, the need for a free environment for teacher learning, and the need for Setswana home language to be empowered and elevated.

### **5.2.1 Inability to adapt to curriculum demands of the 21<sup>st</sup> century**

One of the key requirements of PLCs is that they should be coherent and responsive to changes in practice (DBE, 2015:7). Changes to the South African curriculum were prompted by the scale of changes in the rest of the world, as well as the demands of the 21<sup>st</sup> century in general. There is also a need for the curriculum to reflect new values and principles (DBE, 2015:4). Since teachers are at the centre of implementing these changes, they need to be actively involved in the process of enhancing their skills, so that they can deliver the new curriculum and also to strengthen their subject knowledge and teaching skills (DBE, 2007:16).

New subjects have been introduced and the content of existing subjects was modified to meet the new demands. Teachers who were already in the system found themselves

having to mediate the new curriculum and adjust to new methods of teaching. Co-researchers, especially those who were faced with this situation, had the following to say:

**Kgosi** (teacher) (clapping hands):

*Ijoo ke simolla go iphitlhela ke sa itse ke tswa le kae e sa le ke na le 20 yrs ke le morutabana. Tlhobaboroko ke diphetogo tse re itemogelang tsone le dikgwetlho tsa tsone. Ke batlile le go leboga tiro. [(Surprised) in my 20 years experience as a teacher it's for the first time finding myself not knowing how to get out of a situation. What gives me sleepless nights are these changes in curriculum as well as their challenges, I even felt like resigning.]*

**Thusi** (HOD):

*Nna ke simololla go ruta Setswana sa senior phase,ke fitlhela re tshwanetse go ruta bana go kwala dilo di tshwana le lekwalo la boswa, molaotheo, pholisi jalojalo. Mo godimo ga moo re tshwanetse go latela go ruta ka dikgato, go ja nako e ntsi le lefapha le solofetse di level 7 gone e le Puo ya gae. [I am teaching senior phase Setswana for the first time, now I find myself having to teach the writing of transactional texts like will and testament, a policy, constitution, etc. On top of that we have to follow the new process approach to teaching, which is time-consuming. The Department is also expecting us to produce Level 7s in home languages.]*

**Gape** (teacher) (both hands supporting his jaws):

*Ke gopola fa re simolola go ruta, re ne re isiwa Soshanguve moo re neng re tsenela dithutano mme re boela kwa diphaposing ka boitshepo. Fa e le di level 7 tsone ba di lebale, e seng ka bana ba ba fetisitsweng ba. [I remember when we started teaching, we were taken to Soshanguve where we were trained and shared good practices. We used to return back to our classes with confidence. They must forget the Level 7s not with these progressed learners.]*

### **Analysis at textual and spoken word level**

The extracts above register the teachers' frustrations about implementing curriculum changes. Kgosi sounds discouraged and hopeless, and this is justified by "Not knowing

how to get out of a situation”, “sleepless nights”, and “felt like resigning”. The interjection, “*Ijooo*”, and the clapping of hands provides evidence that she is in a bad space and is astonished about not knowing what to do, after 20 years’ experience of teaching. These utterances show how the speaker has lost hope in the teaching profession, and in the teaching of Setswana, in particular.

Thusi and Gape’s utterances in relation to their experiences of the new content of Setswana as a subject, reveal a lack of empowerment and support. Thusi mentions content areas that pose serious challenges for him – not only the new content, but also the new teaching approaches required by the new curriculum. He refers to the process approach that must be followed when teaching languages, which poses a problem because it is time-consuming. This clearly shows that, during the implementation of the new curriculum, there was no clear mediation of new language teaching approaches, or indications of how they will benefit teaching and learning. If teachers participate in and are given autonomy during curriculum design and mediation, such utterances would not be the response.

Speakers also indicated that the Department of Education expects them to produce learners who attain Level 7s, not considering the type of learners they teach. Gape’s gesture, by which he held his jaw with both hands, is a non-verbal cue that confirms his concern about the current situation. The use of the pronoun “they” instead of “we” indicates that he distanced himself from producing Level 7s. It also shows that there are outside powers that impose targets without considering the teachers’ circumstances.

### **Analysis at social perspective level**

Traditionally, teachers are the masters of their subjects. Society expects teachers to be the experts when it comes to teaching. Kgosi’s utterances indicate that things have changed, as teachers also have areas where they need to be empowered. Without this empowerment and sharing of practices, teachers are left in the dark, hence, they lose hope and end up leaving the profession. Thusi’s comment shows that he is an experienced teacher in this subject, but now the new content and approaches leave him powerless. Gape tells how they used to attend teacher development sessions at

Soshanguve, which empowered them with the content and methods of teaching; according to him, they used to come back with the confidence needed to approach the content. His comment indicates that he needs empowerment in certain areas and strongly believes in the power of collaboration.

### **Analysis at discursive perspective level**

Gape mentioned that producing learners who obtain Level 7s is not possible if you are teaching learners who actually did not qualify to be promoted but were progressed to the next grade, so-called “progressed learners”. His labelling and attitude towards these learners do not show signs of hope about their transformation. The NCS expects teachers to equip learners with the knowledge, skills and values necessary for self-fulfilment. The challenge is that, if teachers themselves are not empowered to impart these skills to their learners, learners could be discriminated against, and not treated with dignity and respect, and this will provoke feelings of inferiority in the learners.

### **Reflection**

Based on the above discussions, we can deduce that teachers face challenges that affect the smooth implementation of the curriculum. They do not feel empowered in their practice and, as a result, they do not have hope for the future. They blame the education department for failing to support them in the way it used to be done in the past. What is interesting is that teachers are aware that they need each other, and that they need ways and means to communicate and collaborate with their peers if they are to manage and improve the situation. Surprisingly, the co-researchers’ views on implementing the new curriculum effectively concurs with the literature reported in Section 3.4.1. What is surprising is that teachers already link their professional development to learner attainment; they indicated that Level 7s are not possible if they themselves do not participate in professional development that is coherent and responsive to changes in curriculum.

### 5.2.2 Inadequate learning from curriculum training and workshops

A shared vision of and clear focus on ensuring learning is one of the key characteristics of PLCs (DBE, 2015:6). This implies that, to ensure quality learning, all stakeholders should have a shared vision and clear focus on the learning process. For the new curriculum to be implemented in a meaningful way, teachers need extensive training that will enable them to deliver the curriculum in their classrooms. Research conducted in South Africa and other countries reveals that training and continuous support from education departments is always inadequate and superficial, and leaves teachers facing many challenges in their classrooms (see Section 3.4.2). Challenges are related to the subject content, methods of teaching, approaches and assessment. According to Björklund (2015:19), teachers complain about the quality of curriculum training they receive prior to implementation, about the post-training workshops, and the amount of curriculum support and monitoring they get from the education department. From the literature it is clear that teachers need more support and development. To add to the above findings, the DBE's guideline for PLCs (2015:4) also reveals that much professional development is still organised as isolated and once-off training, and lacks a coherent strategy, monitoring and follow-up. The guideline also emphasises the importance of working together, as a cornerstone of effective professional development.

During meetings with the co-researchers the following comments were registered:

**Puleng** (teacher):

Nna ke tsenetse katiso ya CAPS ya 2013 mme re simolotse go e tsenya mo tirisong ka 2014. Se se gakgamatsang ke gore e ne e rutiwa ka puo ya English fela re ile go ruta bana ka puo ya Setswana. *[I attended CAPS training in 2013 for 2014 implementation, what amazed me was that we were trained in English but expected to implement in Setswana.]*

**Thusi** (HOD):

Bathong, bathong, bathong, goreng lefapha le sa tthatlhobe pele gore tlhoko e kae? Dikatiso di tshwanetse go fitlhelela moo re tlhaelang gone, e ka re ba ka re botsa pele gore re batla go rutiwa eng. Go kile ga tokafala ka nako ya "menu

training” fa o ne o na le tlhopho, e seng go latlhelwa jaaka dinku mo lesakeng le le lengwe. *[People, people, people, why does the Department not assess first what we need to be trained on? Training should address our needs, we should be asked first what we need to be trained on. It was better during the times of “menu training”, you had a choice of choosing from different topics what you need to be trained on, these days they throw us into a kraal like sheep.]*

**Gape** (teacher) (looking astonished):

Nna ke lela ka nako ya di afternoon workshops, ga ke bone re rutega go le kalo, nako nngwe re ema ka fa ntle pele re emetse sekolo se tswe, fa se tswa barutwana ba fiela diphaposi pele, re iphitlhela re simolola workshop ka metsotso e ka nna some a le mararo morago ga nako, a re tla tlhola re utlwa se se buiwang? le eseng gone re setse re naganne bese e e boelang gae. Bothata bo bongwe ke gore nako eo ya motshegare ga go bonolo go tsaya karolo gone letsapa le iphile matla. *[I am mainly concerned about time, I don't see us gaining that much because we begin late, as we have to wait for the children to get out of classes, sweep first and find ourselves beginning about 30 minutes behind schedule. This disturbs us because we are concerned about transport to go back home and we are also tired as we are from work.]*

**Thusi** (HOD):

Nna ga ke rutege monate fa ke sa tseye karolo *[I do not learn much if I do not participate]* these workshops becomes so boring sometimes as we have to listen to the presenter and really there is no time for active participation. We only become happy if they give us some handouts so that we can read for ourselves.

**Itseng** (subject advisor):

*As a curriculum specialist I understand the teachers' frustrations but we also find ourselves between the devil and the deep blue sea. There is not much communication and collaboration between curriculum section and teacher development section, as a result we are not familiar with what teachers indicated in their PGP's [personal growth plans] during their IQMS [Integrated Quality Management System] and at the same time our job descriptions expect of us to train teachers. In that case what will I do?*

### **Analysis at textual and spoken word level**

Puleng's comment on the quality of Setswana CAPS training for the senior phase expresses her dissatisfaction, because they were trained in English but are expected to teach in Setswana. Thusi recalls how workshops do not always meet their needs, as teachers are never consulted on what their needs are. He use a repetition technique (*bathong, bathong, bathong*) to emphasise his frustrations. He thinks so-called "menu training" was better, as they could choose topics to be trained on, depending on their needs. Gape registers her dissatisfaction with afternoon workshops, as teachers do not gain much, due to limited time, lack of active participation and fatigue. These feelings of teachers reflect lack of autonomy, which is one of the traits of connectivism (a supporting learning theory used in this study, see Section 2.5). In an autonomous environment, teachers are free to choose what they need to be trained on, and they become active participants in the learning process.

### **Analysis at social perspective level**

Puleng was surprised to be trained in English whilst being expected to implement in Setswana. This was surprise for the teachers of Setswana, as this had not been the case in the old system. They felt belittled and undermined by the Department of Education. This also represents unfair treatment, compared to teachers of other subjects. This training approach resulted in teachers experiencing challenges mediating the curriculum. It also indicates an element of discrimination against Setswana teachers, as other subject teachers enjoyed being trained in the language they use in the classroom.

### **Analysis at discursive perspective level**

The expectations vested in subject advisors leads to them to experience feelings of ineffectiveness, as they are not made aware of teachers' PGPs (personal growth plans), so that they can plan training based on teachers' needs. Thusi's use of the phrase "thrown into a kraal like sheep" indicates how teachers feel about a one-size-fits-all workshop – the phrase indicates feelings of being voiceless and hopeless.

## **Reflection**

Based on the above discussions, it is evident that teachers are not happy with the type of training they received during training for implementing the new curriculum. The training they are undergoing now, in afternoon workshops, does not necessarily yield the expected results, as time is limited and they end up as passive listeners. The worst part is that the content of these workshops does not necessarily address their curriculum needs. The subject advisors feel the same way, and blame lack of communication and collaboration between different sections of the Department. The South African Council of Educators seminar on PGPs and developmental needs of educators indicated that one of the challenges teachers face is lack of support for PGPs by subject advisors (DBE, 2014a:21). This finding confirms the importance of communication and collaboration amongst all stakeholders, as indicated by Itseng.

It is interesting that the discussions above confirm reports by the literature, i.e., curriculum training and workshops do not always cater for the needs of teachers (Tsoetsi & Mahlomaholo, 2015:46-47). What is surprising is that the subject advisors, whom we thought were the cause of this inadequate training, were also frustrated, as they also lack full reports from teacher development sections, or Integrated Quality Management System (IQMS) sections on the needs of teachers, especially with regard to curriculum-related matters. In conclusion, both teachers and subject advisors agree that knowledge gained at curriculum training and afternoon workshops is not adequate, therefore, it should be strengthened. PLCs could be useful, but due to the inherent challenges PLCs face, they need to be enhanced by ICT.

### **5.2.3 Absence of or minimal curriculum support from school managers**

One of the key characteristics of PLCs relates to leadership. The management of a school should play a vital role in supporting the teachers' curriculum needs, and take a leading role in establishing and sustaining the PLCs at school level (DBE, 2011a:81). The ISPFTEDSA recommends that teachers at all schools should be encouraged and supported to establish new or strengthen existing PLCs. The framework also recommends the establishment of an ICT platform to assist teachers with their own

development (DBE, 2011a:82). In this research, the research participants commented as follows:

**Gape** (teacher):

Tlhogo ya lefapha kwa sekolong sa rona ga e rute Setswana mme ga go thuso epe ya serutwa e re e bonang go tswa go ena. Re tshwanela go emela mogakolodi wa serutwa yo le ene a tsayang nako a sa iponagatse. Motho o tswella fela ka tlhogo e ntsho. *[My HOD does not teach Setswana, therefore, there is absolutely no subject help or development we receive. We have to wait for the subject advisor who seldom visits our school. One just teaches with a blank head.]*

**Thusi** (HOD):

Nna ke tlhogo ya lefapha mme ke ikarabelela mo dirutweng di le thataro (indicating with fingers) mme tse dingwe ga ke di rute. Hei selo gatwe ke staff establishment, ke yone e re bolayang e re tlhokisang barutabana. Palo ya bana fa e fokotsega dirutwa tsone ga di fokotsege. Nka se kgone ruri, ke thusa tseo ke di itseng fela. *[I am an HOD at my school and my workload is unbearable. I am heading six subjects (indicating with fingers) and some I am not teaching. This thing called staff establishment kills us because it makes us loose teachers. When the number of learners goes down, the number of subjects still remain the same. I really won't manage, I assist with the subjects I know.]*

**Moruri** (principal):

Jaaka Mogokgo ke rotloetsa barutabana ba ka go dirisa di PLC go ithuta moo ba tlhaelang gone. Le ga le, di PLC di matsapa gonne ga ba kgone go di tsenela ka metlha, e ka re go ka nna le tsela e nngwe e e ka dirisiwang. Di PLC tsa Maths 1+9 di a thusa gonne they are more structured and well-coordinated. I wish all subjects can follow that route because we as management we are more into other management issues than curriculum issues. *[As the principal I encourage my teachers to participate in PLCs so that they can get support where they lack, but PLCs have some challenges, so teachers cannot attend them always, I wish there was another way to conduct them. Maths 1+9 PLCs are much better, as they are more structured and well coordinated.]*

### **Analysis at textual or spoken word level**

The above extracts depict how teachers feel about the curriculum support they receive from their supervisors. HODs are not empowered to support all subjects, due to their own heavy workloads. The HOD's indication of the number six with his fingers is a way of emphasising how overloaded he is. He sees staff establishment as an unfair labour practice, as it allocates posts according to the number of learners, not according to the subjects. That's why he indicates that, when the number of learners decreases, subjects do not decrease, so the workload remains the same even though some teachers are redeployed to other schools. This leads to frustration on the part of the HOD.

### **Analysis at social perspective level**

Under normal curriculum practices, HODs are school-based curriculum experts; however, in this case, HODs are not empowered to do what is expected of them. Principals, as leaders, are expected to maintain a balance between curriculum, management and their other roles, but, in this case, the principal wants to abdicate his responsibility as a school leader. He is aware that the Mathematics 1+9 PLCs are functional but he does nothing to encourage the PLCs of other subjects.

### **Analysis at discursive perspective level**

The principal's use of the term, "My teachers", suggests a sense of power and control over the teachers – this is the power that CER seeks to demystify in working environments, and to create societies and workplaces that are free of domination. The principal instructs teachers to participate in PLCs, but he does nothing to support and monitor their involvement. He sounds distant from activities that support the curriculum; he indicates that he is more concerned with management issues.

### **Reflection**

Based on the analysis above, we can conclude that teachers do not always receive enough curriculum support from their leaders, from the HOD upwards. It is interesting that what the participants are saying concurs with the literature (see Section 3.4.3). Subject

teachers do not receive adequate curriculum support from their leaders. What surprised me is that HODs have their own version of the story, which is that they are dominated and treated unfairly, as they are expected to support subjects that are not their areas of specialty. Furthermore, the principal is aware that PLCs can be helpful in these situations, but does not do much to support the functionality of PLCs. This study sought to design a framework to use ICT to enhance PLCs. This framework will be useful in situations like the one described by Thusi (an HOD), who is unable to support some of the subjects in his department. He expects the affected teachers to seek support from their PLCs, which, in this case, will be enhanced by ICTs.

#### **5.2.4 The need for a free environment for teacher learning**

One of the key characteristics of PLCs describe a free environment as an environment characterised by mutual trust and respect, where people are not afraid to talk about challenges they experience in their teaching, and where they are free to share their ideas on learning (DBE, 2015:6). According to Lee (2016:81), a free learning environment is a type of environment that is autonomous in nature, in which individual learners are able to take charge of their own learning. It has been realised that there is a need for greater autonomy in teacher learning, and that teachers need to break loose from the isolating environment that the teaching profession has imposed on them (Eze *et al.*, 2013:27) (see Section 3.4.4). Several researchers reveal how technology has made learning much easier in this digital age. Guder (2010:38) (see Section 2.4.1) indicates that people who want to learn, create their own networks of information and make connections where they see fit, not necessarily because they are told to do so by a centralised figure of authority. This way of learning creates a free environment of learning, where those who are supposed to learn, do it freely and without any type of dominance.

The following extracts reveal what the participants have to say about this topic.

**Puleng** (teacher):

Mo serutweng sa ka, kopano ya PLC e ntse e itshwana fela le katiso nngwe le nngwe. Nako e nnye mme Lf e ntse e le yone e di etelelang kwa pele. LFs decide what and how to learn. Ga ke bone re gololesegile go le kalo gonne

tshedimosetso e tla ka mokgwa wa top down gape. *[In my subject, PLC meetings are the same as ordinary workshops. Time is very limited and the LF (learning facilitator) takes full control. They decide what and how to learn. I do not see any form of a free learning environment because knowledge is presented in a top-down approach.]*

**Kgosi** (teacher):

Wa bona di PLC fa di ka tswelera ka mokgwa wa go dirisa technology jaaka bo di Whatsapp, ke a le bolelela re ka ithuta go le gontsi ka mokgwa o o gololesegileng go feta fa re dutse re reeditse mme re se na botsaakarolo bo bo kalo. *[You see, if PLCs can be conducted with the aid of technology like Whatsapp groups, etc., I am telling you, we can learn a lot and be free to participate in our own learning, unlike when we just sit and listen without much participation.]*

**Thusi** (HOD) (interrupting):

Ke a go utlwa morwarra, fela jaanong fa o bua ka technology o e pota gosele, o nagana Serutwa sa rona se ka bona tshegetso e e tlesetseng jaaka Maths? Karabo ke Nyaa o mogolo. Kana bona ba thusiwa ke bo Kagiso Shanduka trust le UFS mentors, thata mo dikgannyeng tsa go dirisa technology le di PLCs. *[I hear you, man, but when you talk about technology you are losing it. Do you think our subject can get enough support like maths? The answer is a big no. Remember they get support from external stakeholders like Kagiso Shanduka and UFS mentors, especially with the intergration of technology in PLCs.]*

**Itseng** (subject advisor):

Nako nngwe re dirisa tshono eno ya di PLC go kopona le barutabana gonne dikolo di dintsi ga re kgone go di fitlhelela tsotlhe. Le bone barutabana ba palelwa ke go ikopanya fa Mogakolodi a seyo. Jaanong re tla dira eng gonne lefapha lone le batla go bona attendance register ya PLC? *[Sometimes we use PLC meetings as an opportunity to meet with our teachers. There are many schools and we cannot reach all of them during school visits. Again, teachers are unable to meet on their own if the subject advisor is not there. What shall we do, because on the*

*other hand, the Department wants attendance registers as evidence of PLC meetings?]*

### **Analysis at textual or spoken word level**

Puleng's view is that face-to-face PLC meetings are the same as ordinary workshops organised by subject advisors, as they are both conducted in the same way. From her input, we can deduce that not much learning takes place, as teachers are still subjected to a top-down way of transmitting knowledge. Kgosì believes in the power of PLCs, but only if they can explore other ways of learning, including using technology. Thusi became concerned at the mention of technology, as he already anticipated challenges, especially with regard to support needed to make sure technology-enhanced PLCs are functional. He compares their subject to maths, which receives enough support from other stakeholders. His use of a question and answer in his statement, "*Do you think our subject can get enough support, like maths? The answer is a big no*" emphasises how he fails to see any possibility of getting support to use technology-enhanced PLCs. Itseng does not deny that she also runs PLCs as workshops; her reason relates to compliance, as subject advisors have to produce evidence that PLCs are functional. She does not want to rely on teachers to conduct these PLCs, because, in most cases, meetings do not take place.

### **Analysis at social perspective level**

From the social practice perspective, it has become the usual practice that mathematics is given support at the expense of other subjects, and the teachers do not see any possibility of getting support for their PLCs to be functional. This is an indication that teachers have lost hope in their own development, and they do not have inner peace, as their needs are being ignored compared to that of mathematics teachers. Another utterance, "*In my subject, PLC meetings are the same as ordinary workshops*", indicates that it has become a usual practise that any form of support that is provided is offered through a top-down approach. Teachers feel dominated and without power regarding the way PLCs are managed. When subject advisors take full control of PLCs, they threaten the creation of a free environment in which teachers can learn and share good practices. Teachers become passive recipients of information, in contrast to connectivism's trait of

connectedness. Downes (2009) suggests that connectedness is evident when knowledge is not merely transferred from one person to the other, but is emergent from the communicative behaviour of the whole.

### **Analysis at discursive perspective level**

“*Nyaa o mogolo*” [ a big no], from one of the above extracts, means that teachers have lost hope and are frustrated due to the inequality that exists between the teachers of Setswana and mathematics. They feel that all subjects are equally important and one subject should not be elevated at the expense of other subjects. By saying, “*teachers are unable to meet on their own*”, strong language is used to describe teachers. The implication is that teachers are irresponsible, which is in opposition to CER, which advocates that people should be treated with dignity and respect. Key characteristics of PLCs, which can serve as the organising principles of this study, also advocate for environments that are characterised by mutual trust and respect.

### **Reflection**

The discussions above reveal how participants long for a conducive learning environment that is free of domination and is characterised by mutual trust and respect. Teachers are not happy with the type of curriculum support they receive, as they are not given the opportunity to take the lead in their own learning. The current practice is not in line with CER, which indicates that active participation leads to new awareness of self, a new sense of dignity and new hope. Even PLCs do not always serve their purpose, because they are usually conducted as afternoon workshops through a top-down approach by subject advisors.

What was discovered during our discussion confirms what the literature reveals. Teachers need an environment that is free of domination by outside experts, in which teachers can communicate freely and collaborate with their peers in order to upgrade their knowledge. What was more surprising, is that the so-called experts themselves (subject advisors) are being blamed. The subject advisors, in turn, are of the opinion that teachers themselves are not playing their role when it comes to ensuring the functionality of face-to-face PLCs.

At the same time, the employer expects subject advisors to provide evidence that their PLCs are functional, hence, subject advisors end up conducting PLC meetings in the same fashion as they do afternoon workshops.

### **5.2.5 The need for Setswana home language to be empowered and elevated**

Collective responsibility for learners' learning is captured as one of the key characteristics of PLCs. Paragraph 3.4.5 explained how teachers have to work as a collective to achieve the objectives set for their subjects. The section also indicates how teachers of Setswana in the Free State province are faced with the task of teaching a language that is not one of the designated languages of the province, and how this results in the language lacking enough oral, written and media texts to support teaching and learning, as indicated in the CAPS document (DBE, 2011b:13). This challenge is aggravated by limited development in terms of computing and internet content (see Section 3.4.5).

The participants commented as follows:

**Kerileng** (teacher) (astonished):

*Ijooo! mo Foreisetata ga go bonolo go ruta Setswana gonne le tshwanetse le dule le fetolela sengwe le sengwe . O ka se bone lekwalodikgang kana makasine o o kwadilweng ka Setswana. E le kae nako? [In the Free State it is not easy to teach Setswana because you have to translate everything from other languages. It is not easy to find any newspaper, magazines, notices, etc., written in Setswana. Time to do translations is also a challenge.]*

**Kgosi** (teacher):

*Ga go nnete e e fetang eo, fa re tlhama dipampiri tsa dipotso re tshwanela ke go segolola dipapatso, dikhathunu mo dibukeng kana makwalodikgang a seesimane, go tloga foo re a fetolela, re a tlanya. Jaanong fa o le le BBT jaaka nna o tla ikutlwa? [That is absolutely true, when we develop question papers, we have to use English adverts, we translate, type and scan the picture. Now when you are BBT (born before technology) like myself, how are you going to feel?]*

**Motshidisi** (administration clerk):

Barutabana ba ba sa itseng go dirisa khomputara ba a tshwenya, o tshwanetse o tlanye diphetoletlo, o scane dikhathunu le dipapatso tsa bona gonne re tlhoka Pdf converter. Fa o re ba di google go a tshwana gonne di kwadilwe ka English, re ntse re tshwanetse go ba thusa gore di nne mo Setswaneng. *[Teachers who cannot operate computers are a nuisance, as you have to help them translate manually, type and scan their cartoons and adverts thereafter. When you help them Google, it does not help much as they are still in English, you still have to translate to Setswana.]*

**Kerileng** (teacher) (expressing discouragement):

Haekhona go sa itse sepe ka dikhomputara go jesa maswe, rona clerk ya rona ke MoXhosa fa a tlantse dipampiri tsa rona ke diphoso fela. E ka re re ka itse go itlanyela le rona re kgone le go refosana seo re nang le sone mo di PLCs tsa rona. *[Being computer illiterate is not nice, our clerk is a Xhosa, she makes lots of mistakes when she types our question papers. It would be nice if we can type our own papers and exchange with others in PLCs.]*

**Thusi** (HOD):

Seo se ne se ka re thusa bobele, kana mabogo dinku a a thebana. *[That will be helpful because people have to help each other.]*

### **Analysis at textual and spoken word level**

The extracts above express how teachers feel regarding the teaching of Setswana in their province. Kerileng's use of an interjective "Ijoo" is an indication of her exasperation about having to teach Setswana in the Free State. The teachers find it difficult to implement the curriculum, as they cannot expose learners to the different types of texts required by their annual teaching plans. This is the result of the low status of Setswana in the Free State. Teachers have to translate texts from other languages; retype and scan these texts due to lack of Pdf converters then insert them back in their question papers. To do this is a challenge, as they have to be assisted by clerks, because some of them are not computer literate. They cannot use the internet to Google what they need for their learners, furthermore, little Setswana content is available on the internet. The general feeling is that they need to work together collectively and share what they have managed to put

together. They can do this in their PLCs, but they need to be more computer literate to manage the whole process. By using a Setswana proverb "*Mabogo dinku a a thebana*" [people have to help each other], Thusi indicates that she realises the power of working together in PLCs.

### **Analysis at social perspective level**

Teachers are expected to be experts at preparing lessons, teaching and assessing their learners. These requirements pose a challenge, as teachers lack the necessary resources and skills to assist them to deliver quality knowledge to their learners. There are circumstantial factors that prevent teachers from improvising in the way that is expected of them. "*In the Free State it is not easy to teach Setswana because you have to translate everything from other languages. It is not easy to find any newspaper, magazines, notices, etc., written in Setswana. Time to do translations is also a challenge*". This utterance by Kerileng portrays frustration and a feeling of helplessness. Teachers are expected to teach this subject, but it takes a lot out of them. She uses a rhetorical question to indicate time as a factor that contributes to her frustration: "*When you are a BBT (born before technology) like myself, how are you going to feel?*". Kgosi's statement indicates a feeling of powerlessness and a limitation in the area of technology.

### **Analysis at discursive perspective level**

In her statement, Motshidisi reveals how they run out of patience when helping teachers who cannot use technological devices. "*Teachers who cannot operate computers are a nuisance as you have to help them type and scan their cartoons and adverts. When you help them Google, it does not help much as they are still in English, you still have to translate to Setswana.*". Nuisance is a strong word, which indicates that teachers' dignity is dented, which could lead to feelings of inferiority – this is probably why Kgosi referred to them as "*BBT*". This term is belittling, as it points out to lack in a person.

## **Reflection**

Based on the discussions above, it is clear that the low status of Setswana in the Free State province results in teachers facing challenges in mediating the curriculum, and it makes teachers feel helpless. Searching for texts on the internet does not help much, as texts still need to be translated into Setswana, and visual texts which are saved on pdf need to be adapted manually due to lack of Pdf converters then be scanned back. This adds another challenge for the teachers, as some still lack technology skills. The discussion above also indicates that teachers of different languages are not presented with equal opportunities to contribute to the production of systems that meet human needs. This situation is the opposite of what CER stands for (see Section 2.2.1).

What is revealed by the discussions above corresponds with the literature's findings. Other countries also experience the situation in which minority languages suffer marginalisation and irrelevance in education. What surprised me is that the research team revealed areas where they need to be empowered in order to elevate their language as a subject. They need to access and translate visual and media texts from other languages, and share it amongst the PLC members. It is in relation to these findings that the co-researchers agreed on a framework to incorporate ICT to help the PLC to minimise or even eliminate their challenges.

## **5.3 COMPONENTS OF THE FRAMEWORK**

The preceding chapters unceasingly elucidated how this study was aimed at formulating a framework to use ICT to enhance the PLCs of Setswana home language. The previous section discussed the challenges that prompted the need for the framework; the discussions were based on the co-researchers' perspectives. The challenges identified are the inability to adapt to the curriculum demands of the 21<sup>st</sup> century, inadequate learning from curriculum training and workshops, absence of or minimal support from school managers, the need for a free environment for teacher learning, and the need for Setswana home language to be empowered and elevated. The aim of the study could be achieved only if the participants succeeded in overcoming these challenges. This section will identify and discuss the following components necessary to overcome the challenges:

adapting to curriculum demands of the 21<sup>st</sup> century, maximising knowledge gained at curriculum workshops, school managers creating a supportive environment, promoting a free environment for teacher learning, and elevating the status of Setswana home language.

### **5.3.1 Adapting to the curriculum demands of the 21st century**

Collaboration by subject teachers was identified as one of the key characteristics of PLCs (see Section 3.5.1). According to Bennett (2015:3), collaboration between teachers takes many forms, of which a PLC is one example. For PLCs to adapt to the curriculum demands of the 21<sup>st</sup> century, teachers need to grow professionally, and this growth depends not only on new ways of teaching, but also on opportunities to practise, be observed, and enter into dialogue and reflection (Bennett, 2015:5). This statement relates to the problem statement of this study, which indicates that lack of collaboration and inadequate communication amongst teachers of Setswana is undesirable and impacts negatively on learner performance. The following extracts reveal how the co-researchers brainstormed and came up with solutions that will assist them to come to terms with the curriculum demands of the 21<sup>st</sup> century. The solutions mainly focus on improving communication and collaboration.

**Maki** (teacher):

Bagaetsho nna ke re re a tlhokana jaaka barutabana ba Setswana, a re netefatseng gore re nne le mokgwa wa go buisana gangwe le gape ka maikaelelo a go tshegetsana le go thusana ka diteng tsa serutwa. A re se lebaleng gore sedikwa ke ntswa pedi ga se thata. *[Our people, I am saying as teachers we need each other, let us make sure we have a way to communicate from time to time with the aim of supporting each other and helping each other with the content of our subject. Let us not forget that any task becomes lighter when people do it together.]*

**Thusi** (HOD):

Seo ke nnete, kana tlabologo e re leretse dilo di tshwana le diemeile, go ka nna jang fa re ka ithuta go tlhaeletsana ka tsone jaaka di PLC? *[That is very true,*

*civilization brought us things like emails, how about PLCs using them for communication?]*

**Kgosi** (teacher):

Ke tlhagiso e ntle fela o se ka wa lebala gore di clerk di owner di computara le di emeile tsa dikolo, nna ke lapisitswe ke go nna mokopakopa. *[That's a good idea but remember our clerks own computers, even schools' emails. I am tired of begging.]*

**Chaka** (ICT coordinator):

A utlwagetse, go dirisa technology go ka re tswela mosola ga re nolofaletsa tiro. A ke dirise kitso yame go thusa ba ba senang di emeile mo megaleng ya letheke go nna le tsone, re be gape re simolole setlhopha sa Whatsapp gore re buisane kgapetsakgapetsa ka diteng tsa serutwa. Fa re tlhoka go gatisa re ka dirisa di USB. *[I heard you, using technology will make our job much easier. Let me use my knowledge to help those who do not have emails on their cell phones to create them. We will also open a Whatsapp group so that we communicate on a regular basis about the content of our subject. If printing is needed, a USB cable can be used.]*

**Thusi** (HOD):

Ke ananeela tlhagiso eo, megala eno ya letheke a re e dirise go godisa serutwa sa rona thata go godisa kitso eo re setseng re na le yone. *[I welcome the idea, lets use our cell phones to develop our subject but also add to the knowledge we already have.]*

### **Analysis at textual and spoken word level**

Teachers realised that they need to communicate and collaborate continually in order to share good practices amongst themselves. They acknowledged that they had access to technological devices that can assist them to keep in touch with each other. As the team consisted of people with different fields of expertise, as indicated in Chapter 4 (see Section 4.9.3), the ICT coordinator volunteered to assist participants to create email addresses, download Whatsapp and create a Whatsapp group for the members.

Teachers did not have access to the school's computers, but now, with email apps downloaded on their smartphones, they could receive and send emails. They could even use a USB cable to connect their smartphones to the school's computer for printing purposes. This suggestion was welcomed by all.

### **Analysis at social practice perspective level**

At most schools, it is an accepted practice that clerks do all the administrative work for teachers, and this impeded most teachers' development in terms of ICT usage. From Kgosi's utterance we can deduce that this arrangement causes a great deal of frustration on the teachers' side, as they find themselves begging for help. This results in teachers losing dignity and respect. They feel inferior and powerless, as they have to depend on the clerks to send and receive emails. With these developments, they will gain a new sense of dignity, and new hope. This was indicated when one of the participants said:

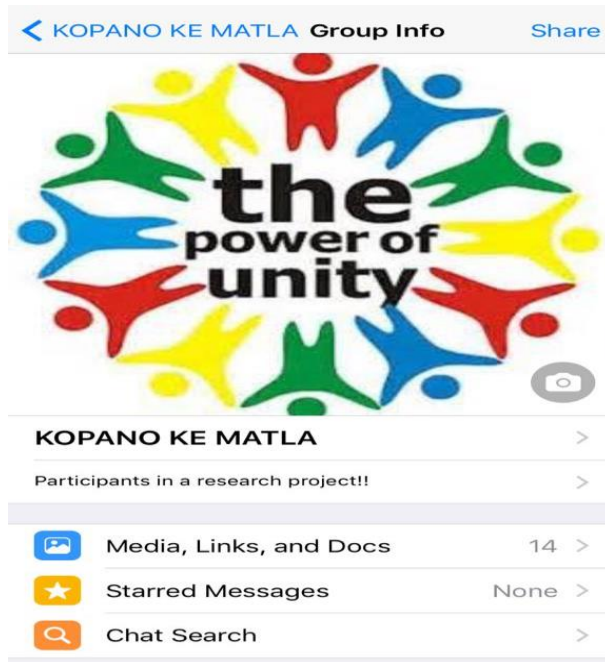
*Let's name our Whatsapp group Kopano ke matla [unity is power].*

This participant's suggestion shows that participants now anticipated improvement in terms of communication and collaboration.

### **Analysis at discursive perspective level**

Kgosi's utterance in the above extract reveals ill feelings between teachers and clerks. His statement, "*clerks own computers*" is actually ironic, as we all know clerks do not own the computers – they belong to the school. This statement was uttered as a result of anger and frustration caused by limited or no access to some of the school's resources. His use of *mokopakopa* (beggar) is an indication of his powerlessness.

The following is a screenshot of the logo of the Whatsapp group that was created to improve communication and collaboration in order to meet the curriculum needs of the 21<sup>st</sup> century.



**Figure 5.1: Screenshot of WhatsApp group logo**

The next activity the participants engaged in was to set rules for the Whatsapp group (see Annexure A).

### **Reflection**

Drawing from above discussions, the Whatsapp group and email addresses proposed by the research team serve as a platform that could be used by subject teachers to communicate and collaborate with their peers, with the ultimate aim of sharing ideas and information pertaining to curriculum implementation. Empowering the members would also reduce the load on the administration clerks regarding some curriculum-related responsibilities, as teachers would be able to send and receive emails from their peers and their subject advisors without the intervention of the clerks. What is interesting is that the co-researchers and the literature both identified technology integration as part of the solution for meeting the demands of the curriculum.

### 5.3.2 Maximising knowledge gained at in-service training and PLC meetings

Reflective inquiry, as one of the characteristics of PLCs, explains the importance of reflecting after applying what has been learnt (see Section 3.4.2). Taole and Van Wyk (2015:187) attest to this claim, by emphasising how collaboration between teachers can be strengthened further by reflection on how knowledge gained during training and workshops can be implemented in class. The following extracts reveal how participants brainstormed about this matter and how they came up with solutions to address their concerns:

**Gape** (teacher):

Re tsenela dithutano re be re fatlhosane motsing goo re kgonneng go tsenela di PLC. Bothata ke gore a fa re fitlha kwa dikolong re fitlha re fetisetsa thuto eo mo barutwaneng ka tsela e e siameng? *[We attend workshops and assist one another once in a while when we managed to hold a PLC meeting. The challenge is, are we able to impart the knowledge we gained in the correct way?]*

**Thusi** (HOD):

Jaaka tlhogo ya lefapha ke bona le go tlhatlhoba fela di lesson plan tsa barutabana mme. *[As a head of department I only manage to see and control the teachers' lesson plans]* the actual presentation of lessons is a no-go area due to unions, class visit is a very sensitive issue nowadays.

**Maki** (teacher):

Barutabana ba baswa ke mathata fela ka bone, re palelwa ke go ba eletsa ka the actual classroom teaching jaaka rona re ne re dirwa ka dinako tsa rona. Ga ke ba tshepe le eseng itjo! (clapping hands). *[New teachers are faced with serious challenges, we cannot support them with the actual classroom teaching as it happened to us. I don't trust them (novice teachers) at all (expresses concern and claps hands).]*

**Puleng** (teacher):

Go ka nna jang fa re ka dirisa [How about we use] Whatsapp video recordings to record a lesson presented by one of us in the classroom then we watch it and

critique it thereafter? Mo nakong e e tlang re ka batlisisa gore IBP e ka re thusa jang go rekota dithuto tse re batlang go di sekaseka *[In the future we can seek help from IBP to help us record the lessons which we want to reflect on.]*

**Thusi** (HOD) (sounding happy):

Wow! Ke e amogela ka diatla tsoo pedi mme fela a re dumalane ka a lesson to be presented. *[I agree in full, but we have to decide on a lesson to be presented.]*

**Lesego** (novice teacher):

Nna ke sa ntse ke le moswa e bile ga ke a katisediwa CAPS,ke na le kgwetlo fa ke tshwanetse go ruta poko ke ikaegile ka dikgato tsa go buisa. *[I am still new and I was not trained for CAPS, I have challenges when I have to teach poetry and use process writing.]*

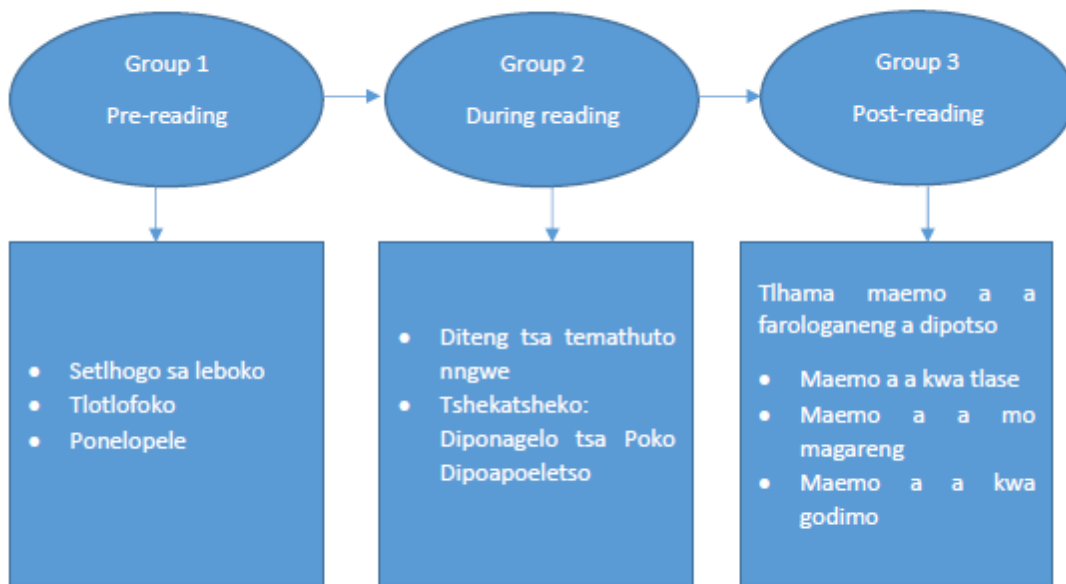
**Kgosi** (teacher)

Le rona ba kgale re ntse re itshwana fela, a re rulaganye thuto ya leboko re dirisa process approach mme morago re e dirise kwa diphaposiborutelong. *[It is still a problem for us experienced teachers. Let us all prepare a poetry lesson using the reading process, then afterwards we present it to the learners.]*

**Lesego** (novice teacher):

Mafoko ao ke a nesetsa pula. *[I am happy about what you are saying.]*

After these discussions, the research team broke into three groups, which unpacked the three stages of process reading, using a poem called *Fatshe le tlhokang ditoro le lolea* by M. Thotela (see Annexure B). The three groups unpacked the content as indicated in Figure 5.2.



**Figure 5.2: Groupwork (poem)**

All the members agreed and worked on a lesson, thereafter, each group worked on the content for each stage of the process (see Annexure C) and designed a lesson plan relevant for the content (see Annexure D). After all the work had been completed and each group had presented their tasks, participants commented as follows:

**Puleng** (teacher):

Fa re ka tswelala ka mokgwa ono ka metlha, ruri mathata a re itemogelang one a ka fokotsega, ke ne ke sa itse sepe gore tota molebo wa go ruta ka dikgato ke eng. *[If we can always do this, the problems we face in class will be less. I had no clue what this process approach is all about.]*

**Kgosi** (teacher):

Nna ke ithutile thata ka tshekatsheko ya poko, ke ne ke sa itse fa go buiwa ka mesola ya diponagalo tsa poko tota go buiwa ka eng le gore re di rute jang. *[I learnt a lot from this exercise, because I was clueless when it comes to teaching learners the purpose of these poetic techniques as used in poems.]*

**Lesego** (novice teacher):

Nna ke setse ke ithaopetse go nna mongwe yo o tla rutang mme ke romele video clip gore re kgone go buisana ka yone via Whatsapp, ke sa ntse ke le moswa mme ke tlhoka go thusiswa ke barutabana ba ba nang le maitemogelo jaaka lona.  
*[I already volunteer to be the one to be critiqued, I will record the lesson as I am presenting it in class and send the video clip via Whatsapp. I am still new and I really need assistance from experienced teachers like you.]*

### **Analysis at textual and spoken word level**

The extracts above reveal that participants were of the opinion that curriculum workshops, training and PLC meetings need to be reinforced by reflective sessions, during which PLC members help each other with the actual lessons presented in class; they would also learn from these reflective sessions. They chose Whatsapp video recordings to record the lessons and also use the same platform to discuss the lessons that had been presented. HODs pointed out how they are prohibited to do class visits by unions, and this makes it impossible for them to know exactly what is happening during lesson presentations in terms of content and the approaches followed. The different groups managed to work together to produce relevant content, and to present a poetry lesson following a process approach to reading. Lesson plans were drawn up and one of the participants, a novice teacher, volunteered to present a lesson to her class, record it and send it via Whatsapp to other group members for reflection. The extracts above reveal the co-researchers' enthusiasm and cooperation to maximise the knowledge they learnt at workshops.

### **Analysis at social perspective level**

In one of the extracts above, the HOD indicates that, these days, it is an accepted practice to manage the teachers' work on paper only, i.e., their files, including lesson planning – however, an actual classroom visit is impossible to conduct, due to the demands of unions. The general feeling deduced is that the HOD feels useless, as he is not able to assist and develop the teachers in actual classroom teaching, as HODs had been able to do when they entered the system. It seems that HODs are not being treated fairly, as they

are denied the opportunity to do what they are employed to do, i.e., teacher development, monitoring and control.

### **Analysis at discursive perspective level**

One of the extracts above reveals how experienced teachers feel about the novice teachers. His use of the phrases “*Ke mathata fela ka bone*”, which means they are faced with challenges, and “*Ga ke ba tshepe le eseng*” [I do not trust them at all] means they only cause problems and cannot be trusted. This lack of trust can create a feeling of inferiority, low self-esteem and insecurity in novice teachers. A novice teacher volunteered to record and send her lesson presentation via Whatsapp, so that a reflective inquiry could be performed by all the research participants. Figure 5.3 is a screenshot of a video clip sent via Whatsapp, showing the novice teacher presenting a poetry lesson. The constructive feedback provided after the lesson presentation is summarised in Annexure E.



**Figure 5.3: Screenshot from video clip on WhatsApp group**

### **Reflection**

Reflection on the discussions above indicates that the use of video clips provided an opportunity for teachers to perform a reflective inquiry and provide constructive feedback.

PLCs are, therefore, able to reinforce the theory teachers learnt from curriculum workshops and training, by guiding teachers to prepare lessons, record them and share with their peers, who will then critique them positively with the intention of learning from the lesson presented. What is interesting is that co-researchers came up with a solution to assist each other with the actual lesson presentation in the classroom. According to literature, this reflective enquiry is still not common in South African curriculum practices. What surprised me is that, for the sake of development, teachers are willing to share how they present lessons in the hope of getting assistance from their peers.

### **5.3.3 Supportive environment provided by school leaders**

The guidelines for PLCs (DBE, 2015) depict leadership as one of the key characteristics of PLCs (see Section 3.5.3). The implication is that, for the PLCs to be functional, they need support from all stakeholders, especially the SMT. Tshelane (2015:64) emphasises this, by stating that strong leadership is an important condition for successful ICT integration; furthermore, school leaders are positioned such that they can create and support environments conducive to ICT integration at school level. The following extracts capture what the co-researchers had to say around this topic.

**Puleng** (teacher) (discouraged):

Re ka di bua tsotlhe mme fela fa botsamaisi ba sekolo bo sa bone mosola wa go tshegetsa di PLC le tsela eo di dirang ka yone ga go kwa re yang gone. Re na le Wi-fi kwa sekolong mme e dirisiwa ke ba ba rileng, favouritism ya di clerk ijoo!  
*[We can say them all but if the school leadership does not see any good in supporting PLCs, we are going nowhere. We have Wi-fi connection in our schools but only certain individuals have access to it. Clerks' favouritism.]*

**Thusi** (HOD):

Kwa sekolong sa me mogokgo ke BBT mme o bona didiriswa tsa ICT e le tshenyo ya nako le tshetele, ga a ikamaganye le sepe se se nang le thekenoloji ka fa gare, e ka re le SASAMS ya SASAMS e mo palela. Nna ke re fa sekolo se ka thusa ka Wi-fi, di PLC di ka dira botoka ba dirisa didiriswa tsa ICT. *[In my school the principal is not computer literate and he sees ICT tools as a waste of time*

*and money. He does not like to associate with anything that has to do with technology. He cannot operate a simple SASAMS programme. My take is that if schools can help with access to Wi-fi, PLCs can operate much better with the assistance of ICTs.]*

**Moruri** (principal):

Ke mongwe wa bagokgo yo o neng a se na kitso e e tletseng ka tiriso ya Wi-fi, ke ne ke bona e batlelwa social media e e senang mosola, ga jaana ke fathogile mme ke bona mosola wa go thusa barutabana go dirisa Wi-fi ya sekolo. Ke tlile go bua le SGB ya sekolo ke be ke supentshe bagokgo ba bangwe ko dikopanong mosola wa go nna le Wi-fi kwa sekolong. *[I am one of the principals who did not have enough knowledge about other benefits of Wi-fi besides sending and receiving emails. I thought it is going to be misused by engaging in social media, now I have learnt and I can realise the importance of availing it for teachers. I will engage our SGB and I will also enlighten other principals in our forums.]*

**Motshidisi** (administration clerk):

Go tlhokega fela kitso ya pakete e e siametseng sekolo le maikarabelo go tswa go botlhe ba ba amegang. Tota go batlega Pholisi ya go dirisa Wi-fi e go dumalanweng ka yone. A re itireleng chart e e tla kaelang tiriso ya Wi-fi mo dikolong. E ka tswela dikolo mosola thata. *[All that is needed is the correct package that the school can afford, and also responsible behaviour from all those who will have access to it. Let us develop a responsibility chart that will guide school leaders on how to support Wi-fi usage at schools.]*

**Itseng** (subject advisor):

Great idea!

### **Analysis at textual and spoken word level**

The extracts above indicate that co-researchers believe that school leaders are the ones responsible for supporting the PLCs by meeting teachers halfway, and by giving them access to the school's Wi-fi – this is seen as the first step towards the use of ICT to promote communication and collaboration amongst PLC members. The interjective

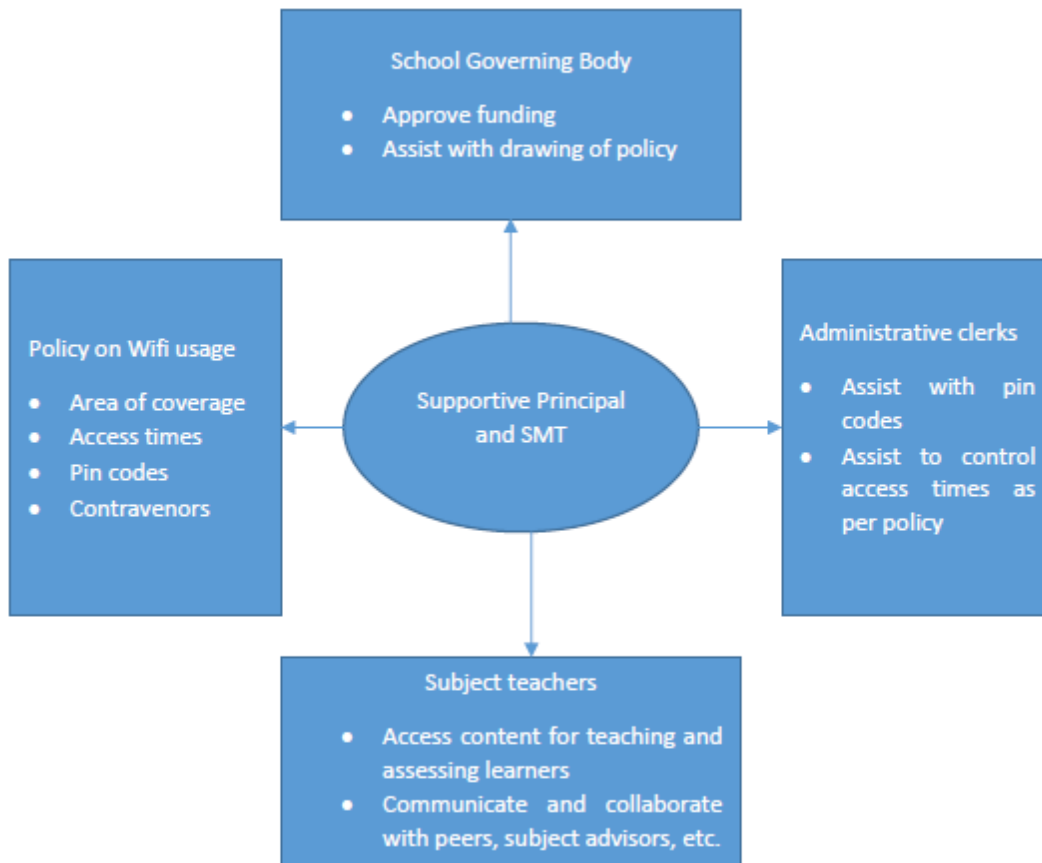
*“ijooo!”* and the non-verbal cue used by Puleng clearly indicate that things at schools do not run fairly when it comes to access to Wi-fi.

### **Analysis at social perspective level**

The co-researcher who indicated that their principal is a so-called BBT (born before technology) who considers exploring the use of technology to be a waste of time, reveals how some people in society still view technology negatively. It is an indication that some members of society, including professionals such as principals, still need empowerment and emancipation, which will free their minds from thinking that using technology in schools has no benefit. Those who still think that technology is only meant for use by administration clerks who are doing administrative duties also need to be freed from this perception.

### **Analysis at discursive perspective level**

The team member who said, *“clerks’ favouritism ijooo!”* indicates that there are teachers who are being treated unfairly, by being denied access to the school’s Wi-fi, whilst others enjoy that benefit. Favouritism is a strong word, which depicts the unfair, preferential treatment of one person at the expense of another, which is against the objectives of CER, which advocates equity and equality. This remark led to the research team drawing up a responsibility chart to guide all stakeholders in a school regarding their responsibilities in relation to the school’s Wi-fi (see Figure 5.4). This chart indicates that school leaders are at the centre, and they have to facilitate the process of availing access to school Wifi and ICT resources.



**Figure 5.4: Responsibility chart**

### Reflection

The discussions above reveal how the support of all stakeholders is deemed necessary for PLCs to be more functional. The SMTs are positioned in the centre of all this; through their influence, PLCs will be supported with Wi-fi and other resources, through which teachers will access the internet to develop materials for teaching and learning, and for communication and collaboration with their peers and department officials, such as subject advisors. The principal and other management staff are advised to oversee the development of the policy, and to ensure that everyone conforms to it. It is interesting that both the research team and the literature reviewed in Chapter 3, identified the role of the principal and the SMT in supporting the functionality of PLCs.

### 5.3.4 Promoting a free environment for teacher learning

One of the key characteristics of PLCs is encouraging learning environments that are free and which enable members to form networks with other schools, external experts and other PLCs. PLCs discourage isolated communities in which members are prevented from dispersing their knowledge, and from broadening their sources of information (DBE, 2015:7). Paulo Freire (see Section 3.4.4) insists that teachers need environments that are free of elements of power and domination. The following extracts captured the co-researchers' views around this topic:

**Gape** (teacher):

Nna ke a re fa o le motho o ka se iphetse, batho ba a tlhokana mme kopano e tshwanetse ya nna e e gololesegileng e bile e bolokesegile go ka dirisana mmogo. *[My take is that a person cannot always succeed in working alone, people need each other and need a free and safe environment to work with each other.]*

**Thusi** (HOD):

O a sweditse morwarra, ke gopola fa re sa tshwanela go felela fa, re ka nama ka go golagana le barutabana ba cluster tse dingwe, district tse dingwe, ke raa gore re ka feletsa re tlhaeletsana le ba diporofensi tse dingwe. Maikaelelo ke go godisa Serutwa seno sa rona. *[You have said it, my brother, I think we are not supposed to end here, we can end up collaborating with teachers from other clusters, districts and even other provinces. The aim of this is to develop our subject further. ]*

**Puleng** (teacher):

Re tla bua eng le batho bao re sa ba itseng? ga ke bone e le kakanyo e ntle eo. *[What are we going to talk about with people we do not know? I do not see it a good idea.]*

**Chaka** (ICT coordinator):

Ke nagana rre Thusi o opile kgomo lonaka, a re nameng re tle re itse go gola. Serutwa sa Natural Science ba na le website eo ba kgonang go golagana ka

yona mme yone ke [www.mindstream.co.za](http://www.mindstream.co.za). Re ka itshimololela ya Setswana, a re yeng online, gonne le tshedimosetso e ka se tsoge e latlhegile le fa mogala kgotsa khomputara di ka lathega, gonne e mo moweng. *[I think Mr Thusi is right, let us grow and be like natural science. They have their website and they use it for collaboration. www.mindstream.co.za is the name of their website, we can also do the same and go online. By doing this we cannot loose all the information we stored in there even if we lose our cellphones and computers.]*

**Maki** (teacher) (clapping hands):

fa o bua ka website eo o ntlhakanya tlhogo gonne e nolofatsa tiro ya barutabana e bile e godisa tirisano mmogo mo gare ga barutabana, le fa ba sa itsane. Mongwe le mongwe o kgona go nna le seabe ka go romela ditlhangwa tsa pono, dipampiri tsa ditlhatlhobo jalo jalo. Ke raa gore sengwe le sengwe se se maleba le Serutwa. *[When you refer to that website I go mad because it makes teachers' work easier and it extends collaboration between teachers despite them not knowing each other. Everyone can take part by sending visual texts, previous question papers, etc. Everything that is relevant to Setswana.]*

**Itseng** (subject advisor):

Website ya Setswana Puo ya gae ke e emiseta monwana (raising her thumb) re tla be re phunyeleditse lefatshe la mafaratlhatlha a thekenoloji. Re tla tlhaeletsana le go dirisana mmogo, re itse gore tshedimosetso e e ka fa gare ga website ga e lathege. *[I am for that idea (raising her thumb), it will be a great breakthrough in the world of technology. We will communicate and collaborate knowing that all the information in our website is safe.]*

### **Analysis at textual and spoken word level**

Co-researchers believed strongly that they should not limit communication and collaboration to their cluster only. We believed that we could broaden our territory by going online and making use of a website that would help to store and protect all our material and the information we shared. This proposal is supported by Guder (2010: 38), who indicates that large pools of knowledge can be stored and accessed through the internet, social networking and databases. Working online will create a free environment

for learning, where each member will be free to share and learn from the online community and the website. Communicating with people who share the same interests does not necessarily mean they have to know each other. Even Paulo Freire mentioned that you do not have to know or like each other, though you must be in a position to realise the social character of the process of learning and knowing (Freire, 1970:71). One co-researcher referred to natural sciences subjects, which have their own website, the phrase *“It makes me mad”* is used figuratively to indicate how the website fascinates the co-researcher. By clapping her hands, Maki shows she welcomes the idea of creating a website, as it will make their work easier.

### **Analysis at social perspective level**

In the extracts above Gape indicates that, *“O le motho o ka se iphetse, batho ba a tlhokana mme kopano e tshwanetse ya nna e e gololesegileng e bile e bolokesebile”*. This statement confirms that we are social beings and someone who is alone is limited in what they can achieve. The extract also suggests an environment that is safe and free to learn in. It concurs with one of the traits of connectivism (see Section 2.4.2.1) which is that, in an autonomous environment, participants can attempt to reduce external control by minimising top-down approaches (Tschofen & Mackness, 2012:128). The co-researcher’s opinion suggests that learning is a social endeavour and it cannot be regarded as an individual matter.

### **Analysis at discursive perspective level**

One co-researcher asked, *“Re tla bua eng le batho bao re sa ba itseng?”* [What are we going to talk about with people we do not know?]. This question suggests that this co-researcher is afraid and feels inferior – by going online we will be sharing and learning with people whom we might not know, and who might even have different experiences from ours. Our comfort zones will be violated and the co-researcher demonstrated a fear of the unknown. CER and connectivism refer to diversity and politics of difference (see Section 2.5.2.2). Both these concepts suggest that, in a community, people are different and they have different opinions, experiences and insights (Tschofen & Mackness,

2012:134). We cannot, therefore, limit ourselves to communicating with the people we already know; we also have to acknowledge diversity amongst all participants in online communities.

## **Reflection**

Drawing from above discussions, teachers need a more free and autonomous environment for learning. What is interesting is that, as co-researchers, we realised that, alone, as a cluster formed in the proximity of our schools, we cannot access all the knowledge we need. We need to spread our wings by going online and learning from other teachers with different experiences, opinions and insights. What surprised me is that co-researchers considered their own learning and development first, expressing the hope that it would impact positively on their learner's achievement. Literature reveals that most online spaces involves teachers and learners, and focuses mainly on learners' learning, and forget that teachers also need to sharpen their skills (see Section 3.5.4).

### **5.3.5 Elevating the status of Setswana home language**

One of the key characteristics of PLCs is advocating for a collective responsibility for learners' learning (DBE, 2015:6). In the Free State province, teachers have to form PLCs and function as a collective to create their own media and visual texts, such as brochures, posters, notices, advertisements, etc., as prescribed by CAPS (DBE, 2011b:13). Since Setswana is not one of the designated languages of the Free State (Free State Provincial Government, 2013:37), teachers struggle to find these resources in Setswana, and they have to devise other means and create these resources to elevate this language to achieve the same level of performance as other languages in the province. The co-researchers tried to devise a solution, in the following manner.

**Kerileng** (teacher):

We do not want our language to lag behind as other languages progress, but are we empowered enough for that?

**Puleng** (teacher) (taking a deep breath):

I hear what you are saying but we are already behind as compared to our counterparts. English is more advanced as they can access whatever they want from the internet, magazines, newspapers, etc. Rona? ke mathata net *[Its only problems.]*

**Itseng** (subject advisor):

Eish, ka nako eo *[In the mean time]* CAPS is expecting us to present our learners with opportunities to engage with contemporary topics. We cannot rely on textbooks for that, we have to be proactive by translating and typing from English or Sesotho texts to Setswana.

**Gape** (teacher):

Tsotlhe tse dintle tse re batlang go di direla barutwana ba rona, di tlhoka gape kitso ya go dirisa khomputara gore re kgone go downloada, go tlanya tota le go itlanyetsa dipampiri tsa dipotso. *[All the good things that we want to do for our learners demand from us computer knowledge so that we can be able to download, type and even type our own question papers.]* Some of our clerks are not Setswana speakers, which is why our papers have so many language mistakes.

**Chaka** (ICT coordinator):

Le buile go ka tlala seatla. Re tlhoka a basic computer course e e tla thusang go matlafatsa seo re setseng re se simolotse ka ICT. Ke ithaopa go ikopanya le bangwe ba ba ka direlang barutabana ba Setswana katiso ya khomputara. *[You said a lot, we need a basic computer course that will help to strengthen what we already started on ICT. I volunteer to seek help from one of the publishers who can help by presenting a basic computer course for teachers.]*

**Kerileng** (teacher) (ululating)

Aliiiiiiiiiiiii Pula! Barutabana ba Setswana le bone ba tla simolola go tsewa jaaka batho. *[Let it rain! The teachers of Setswana will also be regarded as people.]*

### **Analysis at textual and spoken word level**

The extracts above indicate that teachers of Setswana feel inferior, especially when they compare their language to other languages, such as English. They believe Setswana is neglected at the expense of other subjects, such as English. Setswana learners cannot be exposed to a variety of current media and visual texts that they can relate to. Most of these texts can only be accessed from the internet, in English, and the same applies to newspapers, magazines, etc. Sesotho enjoys a better position, as it is one of the designated languages of the Free State province. By taking a deep breath, Puleng displays lack of hope in the future of this language. The rhetorical question “*rona?*” which means “what about us?” implies a comparison between the statuses of their subjects. Kerileng’s ululating, after being promised a basic computer course, is an expression of happiness and hope in the future.

### **Analysis at social perspective level**

*The extracts above also expose an element of social injustice within the system, involving the status of one language being demoted whilst others are promoted at their expense. This also affects the teachers who teach that subject, as they are exposed to unsupportive environments. This was also noted in Section 4.6, where Grade 7 teachers of Setswana indicated how they struggle on their own because there has been no subject advisor responsible for Setswana for Grade 4–7 since the restructuring of schools into primary (Grades R–7) and secondary (Grade 8–12) in the Free State province. The extract, “We have to be proactive by translating and typing from English or Sesotho texts to Setswana” indicates that teachers of Setswana feel left out, compared to those teaching other subjects. The co-researchers displayed feelings of hopelessness and discrimination, because their subject is not taken in to consideration. English receives more privileges than Setswana, which is one of the marginalised languages of South Africa.*

## **Analysis at discursive perspective level**

By claiming, *“Some of our clerks are not Setswana speakers, which is why our papers have so many language mistakes”*, the co-researcher is trying to show how their language is disregarded; he sounds very frustrated. At the same time, he sounds ungrateful and lacks respect for the clerks, who also feel the burden they have to bear because of teachers who do not know how to use computers, and require clerks to type their papers.

As co-researchers, we attended an eight-week basic computer course (see Section 4.9.4.3 for details of the course), which was offered by Pearson Publishers. We used the facilities of the DTDC, and Pearson offered a presenter and study guides. At the end of eight weeks, all participants received certificates that confirmed their attendance of the basic computer training (see Annexure F for a blank example of the certificates). Annexure H is a picture captured during the actual computer training.

The co-researchers developed visual texts that were initially in English, but which they converted to Setswana by translating, typing and scanning them, and which they shared with their peers via email. PLCs now have texts to use when teaching and when assessing. One of the researchers commented, *“This is a real breakthrough, you see, this is where the website will assist”*. Another replied, *“Re tla nna le website e e humileng ra tshwana le batho”* [we will have a website which is loaded with information].

The above two extracts indicate that co-researchers saw transformation in their practices, and felt empowered, as they could now do things on their own and improve the status of Setswana as a subject. This confirms the principle of CER that, by the end of the research project, there must be transformation in people’s lives and empowerment that will help them develop into something beyond where they were before the research project started (Mahlomaholo, 2009:9). Using a variety of ICT resources to develop and store texts confirms what the learning theory of connectivism stands for, i.e., using technology to store and access vast pools of knowledge, and forming networks amongst peers (see Section 2.5.1).

## **Reflection**

Based on the discussions above, it can be concluded that Setswana as a subject in the Free State province experiences some degree of marginalisation, whilst other languages are elevated, e.g., English and Sesotho, which enjoy the status of designation. The literature reviewed in this study confirms that there are languages that experience marginalisation due to the hegemony of English (see Section 3.4.5). What was surprising is the enthusiasm of the co-researchers, who wanted to change their present situation by using technology to transform their present curriculum practices through sharing and collaborating with their peers. In this way, they will create their own database of visual texts, such as cartoons, advertisements and posters. This database will minimise their struggle during assessment and will ensure that learners of Setswana home language are exposed to current and a variety of visual texts through the efforts of their teachers.

## **5.4 CONDITIONS SUITABLE FOR FORMULATING THE FRAMEWORK**

This section considers the conditions that are suitable for and which will support the implementation of the components discussed in Section 5.3. These conditions are still relevant beyond the duration of this study for the implementation of a framework to use ICT to enhance the PLCs of Setswana home language.

### **5.4.1 Teachers' beliefs and positive attitudes towards ICT**

One of the key characteristics of PLCs is meeting regularly, which points to the necessity of regular communication between PLC members. Furthermore, it is recommended that electronic communication is used to reduce the challenges associated with face-to-face meetings (DBE, 2015:7).

Mathipa and Mukhari (2014:1217) identified teacher-level barriers that affect the smooth integration of ICT into curriculum practices, be it at the level of teacher development or classroom teaching. They identified high levels of confidence, willingness to explore new ways of doing things and a positive attitude towards the integration of ICT into various

curriculum practices as conditions necessary for the framework for using ICT to enhance PLCs of Setswana. The following was said by co-researchers in this regard:

**Gape** (teacher):

Go bonolo go bua mme go dira ke mathata, le yone technology ga e tshepagale. *[Easier said than done, this technology is also unreliable.]*

**Thusi** (HOD):

Rona re bo BBT fela fa re ka nna seoposengwe re ka kgona go phunyeletsa. *[We do not know anything about technology (BBT) but if we can be united we can.]*

**Maki** (teacher):

A re itepatepanyeng le dilo tsa sesweng re tle re itse go tswelera le rona thata jang go ithuta le go fetisetsa thuto kwa barutwaneng ba rona. *[Let us be current so that we progress and we are able to learn and impart that knowledge to our learners.]*

**Chaka** (ICT coordinator) (standing up):

O nepile kgaitsadiake, a re tlogeleleng go tshaba marago a tlhagile mo letlhabaphelong re sa itse beng ba one. Nna ka re tshono eno e re e fiwang fano a re e diriseng bathong. Re mmogo? *[That is so true, my sister, let us stop fearing the unknown. Let us use the opportunity we are presented with here. Are we together?]*

**Team** (all standing up):

Re mmogo! *[We are together!]*

### **Analysis at textual and spoken word level**

In the discussions above co-researchers displayed doubt and fear, as they do not really see themselves equipped to use technology. By referring themselves as BBT (born before technology) means Thusi could not imagine the possibility of becoming technology literate. He had lost hope and had developed low self-esteem in that regard. On the other hand, Maki insisted that they had to accustom themselves to current developments, so

that they could be empowered in order to educate their learners. “*Go tshaba marago a tlhagile ka letlhabaphefo o sa itse beng ba one*” is a Setswana proverb that discourages people from fearing the unknown, it means Chaka still had some hope and still believed that there is light at the end of the tunnel. His positive attitude spread like wildfire, and he managed to influence the team to change their attitudes and start seeing things differently, and believing that this research project presented a lifetime opportunity for them. As Chaka stood up, they all stood up and repeated what he said; this symbolises their assent to exploring the use of technology.

### **Analysis at social perspective level**

Despite some of the co-researchers displaying a negative attitude towards the use of technology, they still believed in the power of unity. Their societal background played a role in changing their beliefs and attitudes towards technology. Mentioning the phrases “*Seoposengwe*” and “*Re mmogo*” [Together we are one] tapped into their societal background, through which they survived by helping each other in their communities. They started changing their attitudes and beliefs, as they were assured that they would not be left to struggle on their own; instead, they will go through this process as a collective in order to achieve their goals. This is in line with CER’s intention of emancipation – co-researchers displayed emancipation from their own attitudes and beliefs.

### **Analysis at discursive perspective level**

When the conversation started, Gape uttered two phrases that could have a negative impact on the proceedings of the research project. “*Go bonolo go bua go na le go dira*” means easier said than done, and “*Le yone technology ga e tshepagale*” means this technology is unreliable. These opinions, if not addressed timeously, can give rise to a variety of negative attitudes in the the co-researchers, which would violate CER’s principle that the team’s engagements should give rise to new hope and a new awareness of self, where they manage to realise the hidden potential they possess, which was suppressed due to the situations they found themselves in.

## Reflection

What transpired in the discussions above leads to the realisation that teachers' beliefs and attitudes towards the use of ICTs are the conditions that will determine the success or failure of the envisaged framework to use ICT to enhance the PLCs of Setswana home language. What is interesting is that these discussions concur with the literature reviewed in Chapter 3, which reveals that, if teachers believe in collaboration, they will explore the transformative potential of ICT and will use the communicative opportunities that ICTs present (see Section 3.6.1). This is in accord with CER's agenda of transformation of people's lives. Exploring the opportunities presented by ICTs in this research project worked to benefit co-researchers, despite not all of them being directly involved with learners in the classroom.

### 5.4.2 Provision of proper infrastructure

The guidelines for PLCs recommend providing practical support to PLCs to ensure their functionality – providing relevant resources is cited as an example of this support (DBE, 2015:7). Provision of proper infrastructure is also emphasised by Mathipa and Mukhari (2014:1217), who indicate that access to ICT resources and internet connectivity is a condition for ICT integration in curriculum practices. The White Paper on e-Education outlines that the success and impact of ICT usage rest on the provision of hardware, software and connectivity for end users (DBE, 2004; see Section 3.6.2). The co-researchers expressed their views in the following manner:

**Kgosi** (teacher):

I said it before and I am still saying it now, in our school we do not enjoy any benefit with regard to technology, clerks own everything, ba na le access ya sengwe le sengwe (*they have access to everything*) from the school's telephone, computer, emails, Wi-fi and so on.

**Thusi** (HOD):

We are prepared to use our cell phones and our data at home, but can't the school meet us halfway when we are at school? Let them at least connect the teachers to the school's Wi-fi during school hours.

**Maki** (teacher):

Bietjie bietjie maak baie [*start small but achieve more*], we have to start somewhere to make this work.

**Mamalebo** (SGB member):

As we are hosting this research project in our school, we decided to connect all the team members to our Wi-fi for the duration of this project.

**Moruri** (principal):

It shows our appreciation for bringing this project to our school as we are all going to benefit in it.

### **Analysis at textual and spoken word level**

The discussions above reveal that the co-researchers were adamant about being provided with proper infrastructure, so that they could implement the framework envisaged by the research project. Thusi's consistency and commitment to making this project a success was emphasised by his repetition of what he had said before. His suggestion that Wi-fi should be made accessible during school hours suggests that the co-researchers had identified the challenges facing them, and they wanted a part in solving them. By using an Afrikaans proverb, "*bietjie bietjie maak baie*", Maki emphasises that they were prepared to start integrating ICTs in their practice, but they needed to be met halfway in doing this. This is a clear demonstration of the methodology employed in this study (PAR), which encourages participation in a research project, rather than involvement (Eruera, 2010:1). When you participate, you come up with solutions and identify conditions that will allow the solutions to manifest. This approach goes hand in hand with CER and connectivism, as both theories advocate participation and interaction. Freire (1970:96) maintains that silence and passiveness leads to all kinds of domination.

### **Analysis at social perspective level**

The SGB and principal of the hosting school took it upon themselves to provide their school's Wi-fi as a token of appreciation for bringing the project to their school. This action is influenced by the context and experiences of the co-researchers, as it is a social responsibility of the host to appreciate when people came into their territory. The school's offer made it possible for the co-researchers to engage in various activities using ICTs. This is a clear indication that provision of infrastructure will remain a condition beyond this research project, which promoted the use of ICTs to enhance the PLCs of Setswana home language.

### **Analysis at discursive perspective level**

Thusi's claim that "clerks own everything" is a cry for equity and equal distribution of opportunities amongst all stakeholders in the school system. Teachers feel deprived of resources that are deemed necessary for promoting communication and collaboration amongst teachers.

### **Reflection**

Drawing from the above conversations, it is evident how provision of proper infrastructure can improve communication and collaboration amongst teachers and co-researchers. What surprised me was the co-researchers' willingness to participate in the research project, despite inadequate provision of infrastructure and ICT resources. What is even more interesting is that, despite them coming from disadvantaged backgrounds, they stood up and broke the culture of silence and passiveness, which Paulo Freire maintains results in economic, social and political domination (Freire, 1971:25). It is now well known that the provision for infrastructure is a condition for implementing the framework to use ICT to enhance the PLCs of Setswana home language.

#### **5.4.3 Support and involvement of school leaders**

The guidelines for South African PLCs insist that school leaders are responsible for creating conditions in which PLCs can thrive, e.g., adequate resource allocation and other

logistics (DBE, 2015:9). Mukhari and Mathipa (2014:1218) emphasise how good leadership and the presence of a school ICT policy can promote the use of ICT in a school environment. The co-researchers expressed their views as follows:

**Kgosi** (teacher):

Our SMTs have to start taking our development seriously. They fail to develop us as it is part of their job description but they also do not at least support our PLCs' activities.

**Kerileng** (teacher):

In our school we do not have any access to the school's computers or even the school's internet. [*Ha e tla ba ke teng ba kwetse*] a bold notice at the door of the computer room which says: "NO TEACHERS ALLOWED". We do not have access to retrieve our emails, type or even scan or print.

**Maki** (teacher):

Some of us have a little knowledge of computers but if we do not get support how are we going to grow further? Nna ke tennwe ke ndoda sibonela e e diragalang koo. [*I am furious about the struggle we experience there.*]

**Moruri** (principal):

Since I became part of this project I realised the importance of supporting PLCs, especially in terms of making the school's ICTs accessible to them.

**Mamalebo** (SGB member):

Ke tlhaloganya thata kgwetlho ya barutabana mo kgannyeng eno ya dikhomputara le tsotlhe tse di tlhokegang to make communication with other subject teachers possible. Ke tlhagisa gore jaaka botsamaisi ba sekolo re nne le policy e e tla kaelang tiriso ya didiriswa tsa ICT tsa sekolo, we must also monitor and evaluate the impact. [*I understand what teachers are going through in terms of computers and all that is necessary to make communication with other subject teachers possible. I suggest that the school should have a policy that will guide the use of the school's ICT resources.*]

**Motshidisi** (administration clerk):

We also need to have a register to capture the usage, Wi-fi can be made accessible but passwords must be centrally controlled to minimise misuse.

**Thusi** (HOD):

Mafoko ao re a nesetsa pula “those words are welcomed” (clapping hands), by supporting teachers with necessary resources will also ease my job of developing teachers on the content of subjects that I did not major with.

### **Analysis at textual and spoken word level**

The extracts above prove beyond a doubt that co-researchers are not happy about the type of support they receive from their leaders. The unfair treatment by school leaders was captured when Maki said they do not get the curriculum development required in the HOD’s job description, neither are they supported to engage in self-development. Teachers are not treated with dignity and respect, as they are restricted from entering the administration office, as a result, their access to printers, scanners and email is very limited. Clapping his hands and uttering the Setswana idiom, “*Go nesetsa pula*”, which means to accept what is said, is an indication of approval and appreciation of what was suggested.

### **Analysis at social perspective level**

The suggestion that a policy and a register should be drawn up in order to control and monitor the use of ICTs and Wi-fi is a means of ensuring that equity prevails in the workplace. No one must experience unfairness in terms of access to resources that are available. The use of a Xhosa phrase, “*Ndoda sibonela*”, meaning fend for yourself, indicates that teachers feel isolated when it comes to their development.

### **Analysis at discursive perspective level**

The notice, “NO TEACHERS ALLOWED”, represents school leaders’ attempt to protect the school’s ICT resources from being overloaded and misused. Instead of serving that purpose, the notice represents discrimination against teachers who need to access those

resources. It elevates the school's leaders to powerful beings who take decisions that affect teachers, without involving them. This submits teachers to undesirable control and dominance from their leaders, instead of teachers being supported in their curriculum practices.

## **Reflection**

Based on the discussions above, it is clear that school leaders' support of PLCs is a condition that is necessary for implementing the envisaged framework. This condition also fulfils one of the agenda points of CER, which is empowerment. Teachers will be empowered to gain knowledge through the use of ICTs. What surprised me is that the co-researchers' views about the school leaders' involvement in supporting PLCs concurs with the literature reviewed in Chapter 3 (see Section 3.6.3). What is interesting is that co-researchers recommended that a policy be drawn up at schools to direct the use of and access to the schools' ICT resources. There was also a recommendation that, in addition to developing the policy, there must also be a register that will be reflected upon by SMTs to monitor and evaluate effective use of these resources.

### **5.4.4 Training on ICTs**

The guidelines on PLCs outline how DTDCs should support PLCs with resources and expertise on facilitation skills, video analysis, development of teaching resources and the use of ICT (DBE, 2015, see Section 3.6.4). This recommendation is also accentuated in the White Paper on e-Education, in which capacity building is indicated as one of the key elements that underpin the use of ICT in schools (DBE, 2004, see Section 3.6.4). The main reason behind focusing on capacity building is that many teachers grew up in environments with limited electronic technology, and this background makes it difficult for them to adapt to using electronic technology in their curriculum practices. Training, as one of the conditions needed for the implementation of the framework, is endorsed by Dzansi and Amedzo (2014:246) and Mathipa and Mukhari (2014:1218), who discovered that teachers who received inadequate training and those who were never trained find it

difficult to integrate ICTs in their practices. The following extracts capture what the co-researchers discussed:

**Motshidisi** (administration clerk):

I sat here and listened how clerks are blamed for possessing the school's computers and misusing Wi-fi, etc. I feel insulted as this is not always the case, I realised several times that teachers do not know how to use these resources, they want to barge into your office and instruct you to send emails or type a letter to parents immediately. No ways, it does not work like that.

**Kerileng** (teacher)

If we really want to face reality, computer training should be included in our teacher development programmes so that we can continually upgrade our skills. Once-off training will assist but we still need to further our knowledge.

**Gape** (teacher)

This is so true, it is really intimidating to realise that our learners are more knowledgeable than us. I don't think the system is fair on us, for me to be computer literate, I studied privately, seeing the Department is very slow in this regard.

### **Analysis at textual and spoken word level**

The extracts above disclose feelings of resentment amongst the co-researchers. This lead to a blame game, which was not healthy if we wanted to improve our present working conditions. Motshidisi's utterance of the phrase, "*I feel insulted*", displays that the treatment she received from her colleagues lacked respect and diminished her dignity. She feels degraded, as the teachers blame her for their own deficiencies. Teachers also face pressures in this regard, which are aggravated by their learners being more knowledgeable than the teachers when it comes to ICT. Feelings of frustration arose, and they blamed their employers for failing to provide sufficient empowerment around ICT training.

## **Social perspective**

Our society still views teachers as the ones who are supposed to be knowledgeable and who have to pass on their knowledge in a top-down manner to everyone around them. In this regard, teachers find themselves in an awkward situation, where they have to learn from clerks and even from their learners. They feel powerless, as they generally viewed their position as giving them power over others. This attitude works against CER, which seeks to investigate and eliminate unequal power relations generated from class, gender, race and position.

## **Reflection**

Based on the discussions above, we realised that training on the use of electronic technologies is one of the conditions needed to empower teachers on ways to improve communication and collaboration in their PLCs. They will be able to develop subject-related materials using technology, e.g., visual and media texts and item banks, which they will, in turn, share amongst themselves using ICTs. I found it interesting that training, as a condition, was the first thing co-researchers mentioned at our first meeting. They already anticipated that, for our framework to be implemented successfully, teachers need intensive training on computers and other electronic technologies. What surprised me is the willingness and enthusiasm they reflected; they even suggested that higher education institutions should consider introducing fully fleshed computer training in their teacher training curricula. Doing so would require collaboration between basic and higher education, and inputs will have to be made about the scope of training needed for pre-service teachers.

## **5.5 THREATS THAT MAY HINDER SUCCESSFUL IMPLEMENTATION OF THE FRAMEWORK**

Section 5.4 discussed the conditions under which the components of solutions, discussed in 5.3, could be implemented. In this section, possible threats that may hinder the implementation of the framework to use ICT to enhance the PLCs of Setswana home language are discussed.

### 5.5.1 Low confidence and negative attitudes with regard to ICTs

Teachers' low confidence about using ICTs might be a direct result of their inefficiencies in using ICTs. Low confidence can, therefore, threaten the implementation of the envisaged framework. Mathipa and Mukhari (2014:1218) discovered that one of the reasons for low confidence is technophobia, which is common in the older generation. Older people believe that ICTs are not meant for them, therefore, they are anxious and afraid of using it. A negative attitude towards ICTs may be a result of resistance to change, being attached to face-to-face meetings, and due to beliefs in some countries that the use of ICTs is unholy (Mathipa and Mukhari, 2014: 1217). The following extracts express the co-researchers' views on this matter:

**Puleng** (teacher):

Bangwe ba rona re digwa mowa ke go bona bana ba rona ba itse go re feta, ga ke rate go rutiwa ke bana nna. *[Some of us become discouraged when our children know more than us. I don't like to be taught by kids.]*

**Gape** (teacher):

Le yone thekenoloji ga e batle go ikangwa thata, gonne o ka latlhegelwa ke tshedimosetso ke di virus, gape madi le one to maintain these gadgets ga a yo. *[This technology does not want to be trusted too much, because you can loose information due to viruses and there is no money to maintain these gadgets.]*

**Motshidisi** (administration clerk):

Nna ka re re se iseng dipelo mafisa, a ke re bothale jwa phala bo tswa phalaneng, le di anti virus di gone go thibela kgang ya di virus. *[Let us not be carried away, we can still learn from the young ones and there are antiviruses to get rid of the virus.]*

### Analysis at textual and spoken word level

The excerpts above indicate what co-researchers believe poses threats to the implementation of the framework. Some still had reservations about ICTs. Children being more advanced than their teachers and parents, lead some some co-researchers to think

that ICTs are not meant for them. They sounded discouraged about using ICTs, and they also mentioned maintenance costs, and the danger of losing information to viruses.

### **Analysis at social perspective level**

Teachers who feel inferior and negative were reminded about a Setswana proverb “*Botlhale jwa phala bo tswa phalaneng*”, which means adults can still learn from their children. In our society, proverbs are often used to give advice and guide, so most of the co-researchers were accustomed to this practice.

### **Analysis at discursive perspective level**

The phrase, “*Nna ga ke rate go rutiwa ke bana*” [I don’t like to be taught by kids] provides an indication that some teachers still have superiority complex. They still see themselves as powerful beings, and they still prefer a type of learning that happens in a top-down manner. This view is not in line with the CER agenda, which seeks to demystify all types of power that exist amongst people who work together.

### **Reflection**

The above extracts confirms that low confidence and negativity towards ICTs pose threats that may hinder the implementation of the framework envisaged by this study. What is interesting is that co-researchers know exactly what causes their low confidence and their negativity towards ICT. The fact that they are not competent in using these technologies is one reason cited by co-researchers. What surprised me is that, despite their present situation, they mentioned how the threats can be overcome by using antivirus software and accepting help from a younger generation that is more knowledgeable than they are. Doing so will enable the framework to be implemented.

### **5.5.2 Limited resources and infrastructure**

Limited resources and infrastructure pose threats to the successful implementation of the framework. The PLC guidelines clearly indicate that, for PLCs to operate smoothly, they need practical support in the form of resources (DBE, 2015:7). The White Paper on e-

Education (DoE, 2004) also cites access to infrastructure as an element that underpins the use of ICTs in education (see Section 3.6.2). The following extracts capture the co-researchers' concerns about this threat:

**Thusi** (HOD):

We already indicated that without relevant infrastructure and resources, matsapa a rona ke a lefela. [*Our initiatives are useless.*]

**Gape** (teacher):

Morwarra maano ga a site a ke re [*My brother, you cannot run out of ideas*], we cannot forfeit this opportunity. Let us raise our voices and make our needs known to all relevant stakeholders, we have nothing to lose anyway.

**Kerileng** (teacher) (raising her right thumb):

Ke e tshaela monwana, ngwana yo o sa leleng o swela tharing. [*I agree to it, if you do not speak out, you will be compromised.*]

### **Analysis at textual and spoken word perspective**

The excerpts above confirm that co-researchers are aware that lack of resources and infrastructure poses a threat to the intended framework, hence, the use of the phrase “*Matsapa a rona ke a lefela*”, which means “our initiatives are for nothing”. Kerileng raising her right thumb is an indication that she supports the idea that they cannot fold their arms, instead they need to make their needs known to different stakeholders. This shows that the co-researchers value this intended framework, hence, they are ready to circumvent the above-mentioned threat.

### **Analysis at social perspective level**

The repeated use of proverbs in the above extracts indicates the co-researchers' social context, which influences their reaction to the threat they face, for example, “*Maano ga a site*”, which means one cannot run out of ideas. This proverb motivates the co-researchers and tells them that, despite the threats they face, they can still seek assistance from other stakeholders. “*Ngwana yo o sa leleng o swela o tharing*” is another

proverb uttered by a co-researcher; it implies that people who do not make their needs known will not get any assistance. These proverbs reveal the social context and beliefs of co-researchers, which helped them to minimise the threat and gave them hope.

### **Analysis at discursive perspective level**

The utterance, “*matsapa a rona ke a lefela*” [our initiatives are useless], means that this co-researcher was on the verge of losing hope about the intended framework succeeding whilst it faced this threat, which could be detrimental to its implementation. This attitude violates CER, which seeks to bring hope to all co-researchers.

### **Reflection**

From the discussions above, it is clear that, what the co-researchers have to say about limited resources and infrastructure is in accord with what the literature reviewed in Chapter 3 reveals. What surprised me is that, despite the threat facing the intended framework, co-researchers were still willing to go ahead, and they came up with suggestions to alleviate the threat. Voicing what we were facing helped the team to obtain support from other stakeholders.

### **5.5.3 School managers’ attitudes and level of support regarding ICTs**

School managers’ attitudes towards ICTs can determine the success or failure of the intended framework. School managers who display a negative attitude about integrating ICTs in curriculum-related practices tend to threaten to the emerging framework. During the meeting in which the threats were identified, co-researchers argued in this manner:

**Lesego** (novice teacher):

If our leaders from the HOD to the principal even beyond do not acknowledge the value of ICTs in implementing the curriculum, then our initiatives here are good for nothing.

**Maki** (teacher):

What surprises me is that some leaders are not even aware that ICT is a blessing to them as it reduces their responsibility of developing us. A ke re we will be using ICTs to communicate and collaborate with our peers, thus, engaging in our own development.

**Gape** (teacher) (stands up):

It's true some of us are willing to use our own ICT resources but we still need to be met half way. Mabogo a tlhatswana gamannete. *[I assist you and you assist me.]*

**Kgos:** (teacher):

Nna ke nagana re se ba tswalele kwa ntle *[let us not shut the door behind them]* how about using our DTDC ICT coordinator to conduct a workshop for all our SMTs to educate them on how ICTs can improve teachers' performance in implementing the curriculum.

**Itseng:** (Subject advisor)

I also support the idea. It will come as a better approach to our challenge. Go sa itse ke lebote *[lack of knowledge is painful]* e bile we all are lifelong learners.

### **Analysis at textual and spoken word perspective**

The excerpts above indicate co-researchers' views about their school leaders. They believe that, if their managers do not change their attitudes towards ICTs, then this study is doomed to fail. This is evident from Lesego's words, "*Our initiatives here are good for nothing*". However, the co-researchers still did not give up on their leaders, they displayed hope by suggesting a workshop that will empower the school leaders on the importance of supporting teachers with ICTs to enhance PLCs. Gape stood up as he expressed his feelings about the support they need from their leaders. Rising from the chair before talking indicates emphasis on what he has to say. The co-researchers' suggestion is in line with CER, as the school managers will be empowered with knowledge that will make it easy for the intended framework to be implemented.

### **Analysis at social perspective level**

The expression, “*Mabogo a a tlhatswana*”, which means people have to help each other, reveals the social context or background of the co-researchers. Gape indicated that they cannot use their resources without getting any compensation or support from their managers. This is also a promising statement, as it indicates that, if the managers do their part, teachers are willing to go the extra mile.

### **Analysis at discursive perspective level**

The statement, “*ICT is a blessing to them as it reduces their responsibility to develop us*”, refers to the managers. The co-researcher sounded angry and blamed their managers for failing to provide them with support, even though the managers will also benefit from teachers’ use of ICT. This statement does not promote unity or peace between the two parties. The agenda of peace, which CER advocates, is being violated by the co-researcher’s anger and unhappiness.

### **Reflection**

Based on the discussion above it is evident that unsupportive school managers pose a threat to the framework envisaged by this study. It is interesting to realise that the co-researchers’ approach to alleviating the threat concurs with that of a study conducted in Botswana, where principals were encouraged to obtain training on ICTs, because this would help to improve their level of adoption and alleviate their fears (see Section 3.6.3). What surprised me is that, despite their unhappiness, teachers are still prepared to adopt the framework; they suggested measures that could be taken to minimise the threats identified. They also demonstrate a willingness to use their personal resources, on condition that their managers demonstrate a more positive and supportive attitude.

### **5.5.4 Lack of basic computer skills**

Lack of basic computer skills poses another threat to using ICTs to enhance the PLCs of Setswana home language. Despite co-researchers demonstrating a willingness to integrate ICTs in their curriculum practices, they still claimed that a lack of basic skills in

relation to computers might delay their progress in using ICTs to communicate and collaborate with their peers. The following extracts capture discussions that emanated around this topic:

**Maki** (teacher):

For us to be able to develop and share materials, we need basic computer skills so that we can share materials of good quality. The use of ICTs does not only end with communication using emails, Whatsapp messages, sharing videos, etc.

**Moruri** (principal):

O opile kgomo lonaka morwarra [*You said the truth, my brother*], we need fully fleshed computer courses, not just a microwave course.

**Kerileng** (teacher):

Is it not the duty of the employer to train us using the facilities of the DTDC?

**Chaka** (ICT coordinator):

What you are saying is true, but the DTDC itself is faced with many challenges, which include manpower, enough resources and suitable time to train teachers. Most of the time I use ICT champions to assist.

**Itseng** (subject advisor):

Bathong [*People*], let us not always fold our arms and do nothing about our situation, some schools have computer gurus, especially the young teachers and also have computers and laptops. We can establish school-based PLCs which are not subject-based, just to recap on what we learnt at the computer course. I think we need school-based ICT champions to assist us.

### **Analysis at textual and spoken perspective level**

The excerpts above reveal how co-researchers felt about being empowered with more computer knowledge. They expressed that, for them to be able to communicate and collaborate with their peers using different ICT-based sources, they needed to be computer literate, because they needed to develop and share good quality materials. The

general feeling was that it is part of the employer's responsibility to empower them. The ITC coordinator pointed to many challenges that distract the DTDC from performing its duties in relation to teacher development. As PAR indicates, co-researchers should be in a position to identify the challenges that face them and, at the same time, to be actively involved in solving them. This was evident when Itseng suggested the formation of school-based ICT PLCs, which would focus mainly on sharpening computer skills.

### **Analysis at social perspective level**

It should be a normal practice for an employer to take full responsibility of employees' development. According to what the co-researchers indicated above, this is not necessarily taking place as it should. The use of a rhetorical question by Kerileng, *"Is it not the duty of the employer to train us using the facilities of the DTDC?"* indicated that teacher development regarding ICTs and computer skills was at stake. Hence, Itseng suggested that they have to do something, and not wait for the employer to do it for them.

### **Analysis at discursive perspective level**

The statement, *"We need fully fleshed computer courses, not just a microwave course"*, by one of the co-researchers reflects anger and unhappiness. The co-researcher did not seem to be happy with service delivery by the employer. By "microwave course" he refers to a quick course that does not necessarily add value to their knowledge.

### **Reflection**

The discussions above confirms that co-researchers believed that a lack of basic computer skills could result in a threat to the emerging framework. What surprised me was that, despite improved communication and collaboration that will exist with the use of different types of ICTs, co-researchers believe that they need to be fully empowered in relation to computer skills, so that they can develop and share materials of good quality. What is interesting is that they managed to propose a plan on ways to minimise this threat on their own, by suggesting that school-based ICT champions assist their colleagues at schools. This confirms connectivism's connectedness and interactivity principles, which

maintain that knowledge produced in a learning community should be a product of an interaction between the members (Trna & Trnova & Trna, 2013:142).

## **5.6 EVIDENCE OF SUCCESS**

### **5.6.1 Planning**

In its embryonic stage of development, the research team managed to develop the team's mission statement and a policy to guide all the activities of the team, to do a SWOT analysis in which the team's strengths, weaknesses, opportunities and threats were analysed, and they created a document for it. Lastly, the team managed to develop a strategic plan that would guide and prioritise all the activities of the team. The successful development of these documents at an early stage of the team's development provided early evidence of success. Often, the initial period of the team is the most difficult, as the team is still struggling to acclimatise. The successful development of these important documents was acknowledged by one of the co-researchers in the following manner:

**Thusi:(HOD):**

The development of these guidelines is a good indication that this research project is going to achieve its objectives.

This co-researcher already anticipated the success of the team at this early stage of the research project. This is the time that usually determines if the research team is willing to own the research project.

### **5.6.2 Adapting to the curriculum demands of the 21<sup>st</sup> century**

Co-researchers realised that, for them to adapt to the curriculum demands of the 21<sup>st</sup> century, they need to continuously communicate and collaborate with their peers. At this point they decided to use their personal gadgets to download Whatsapp and to create email addresses for all those who did not have it. A Whatsapp group was created and it was named *Kopano ke matla* [unity is power].

Co-researchers shared a poetry lesson by analysing a poem using the process approach. Feedback was presented via Whatsapp voice notes. Furthermore, a novice teacher presented the lesson and shared the video via Whatsapp. A reflective inquiry was performed and the teacher acquired immediate feedback from her peers via Whatsapp.

The activities above indicate the success of the framework, as co-researchers managed to work together as a team to assist the novice teacher and other teachers who experienced challenges relating to teaching poetry using the reading process. Other co-researchers, who were not necessarily teachers, such as the SGB member, were excited, as they now had email addresses, which they had not had before the commencement of the research project. An SGB member commented as follows:

**Mamalebo** (SGB member):

Ke itumeletse go nna le email address, e e leng yaka. Ke itumeletse go nna karolo ya setlhopha seno. *[I am happy to have my own email address. I will also be like other people and stop using people's emails.]*

**Lesego** (novice teacher):

I am the happiest teacher since I joined this team, I feel as if I have a subject advisor now. With us Grade 7s not having a subject advisor, I know where to seek help. I pray we continue like this even after this research project is over.

**Maki** (teacher):

As experienced as I am, I struggled to follow the reading process to make sure learners' reading skill improves. I am happy now, because I know exactly which type of activities to address during each of the three phases. I am also content with how to develop questions using the cognitive levels.

The excerpts above capture how grateful the co-researchers were after gaining the knowledge they lacked before being involved in the study. The SGB member also indicated how happy she was because she had her own email address. This reaction of co-researchers confirms both CER and PAR's agenda of emancipation. Co-researchers were emancipated, from being passive recipients of knowledge, to being actively involved in producing that knowledge.

### **5.6.3 Improved support from school leaders**

The development of a responsibility chart (Figure 5.4) is evidence of success, as all stakeholders knew exactly what their roles and responsibilities were with regard to provision of and accessing school Wi-fi. The principal and SMT remained in the middle, as they had to ensure that the policy was implemented, and had to support all the stakeholders accordingly.

### **5.6.4 Basic computer course**

Attending a computer training course lasting 16 hours brought new hope to the co-researchers. This is further evidence of the success of the framework, as all co-researchers managed to attend the course; we even included members from the focus group, which brought the number of delegates to 20 in total. The modules presented at the training included an introduction to technology, word processing, presentation software, spreadsheets and drawing software. After completing the course, all attendees were provided with certificates to confirm their attendance of the course. All the co-researchers were happy about the training and they commented as follows:

**Moruri** (principal):

This training meant a lot to us as we learnt skills that will help us as we engage in developing and sharing of materials.

Moruri indicated that the training contributed meaningfully to sharpening co-researchers' computer skills, which they actually need to be able to collaborate with their peers with ease. The administration clerk commented as follows:

**Motshidisi** (administration clerk):

This training did not only benefit teachers, even myself, I managed to learn some few things which will help me improve in my work as an administration clerk.

The point made by the administration clerk confirms the saying that we are lifelong learners. Despite already being computer literate, she still managed to learn something from the training. This course was actually a breakthrough for this research project, as

computer knowledge was a prerequisite for teachers to be able to engage effectively with their PLCs.

## **5.7 CHAPTER SUMMARY**

This chapter focused on presenting and analysing data, as well as interpreting and discussing findings with the aim of formulating a framework that uses ICTs to enhance the PLCs of Setswana home language. This was done in accordance with the five objectives of the study, which were mentioned in Chapter 1 (see Section 1.3), namely, to confirm the need for formulating the envisaged framework, to identify the components of solutions necessary for the implementation of the framework, to explore the conditions conducive to the sustainability of the framework and also to anticipate possible threats that may hamper the successful implementation of the framework, and measures to overcome them. The last objective focused on providing evidence of successful implementation of the framework.

The chapter primarily focused on how communication and collaboration amongst PLCs could be improved in the absence of regular face-to-face meetings. The co-researchers jointly settled on integrating ICTs to enhance their PLCs. CDA was used to analyse the co-researchers' inputs, which related to their exploration of the best way the emerging framework can benefit them and improve their curriculum practices. The next chapter will discuss the findings of this study, and will make recommendations.

## **CHAPTER 6: DISCUSSION OF FINDINGS AND RECOMMENDATIONS, AND FORMULATION AND PRESENTATION OF THE FRAMEWORK**

### **6.1 INTRODUCTION**

The aim of this study was to develop a framework to use ICT to enhance the PLC of Setswana home language. This chapter will commence by providing the background of the study, which includes a statement of the problem, the research question, aim and the five objectives of the study. Furthermore, the findings, conclusion and recommendations relating to the formulation and implementation of the framework will be discussed, based on the five objectives outlined in Chapter 1 of this study. Firstly, findings on challenges that justify the need for a framework to use ICT for enhancing PLCs of Setswana home language will be presented. Secondly, solutions proposed to address the challenges identified will be given. The conditions required for the successful implementation of the framework will also be outlined, as will as the threats that face it. I will then present the framework, which serves as a recommendation to address all the challenges that surfaced during the research period.

### **6.2 BACKGROUND OF THE STUDY**

As already stated in the introduction, this study was aimed at developing a framework that will use ICTs to enhance the PLCs of Setswana home language. Since the introduction and implementation of the new curriculum in South Africa, teachers have experienced many challenges, which demanded that the system engages in vigorous teacher development activities to assist teachers to meet the new curriculum demands. Research reveals that teacher professional development in South Africa faces considerable challenges. For example, it is still organised as isolated and once-off training events that lack a coherent strategy, monitoring and follow up (DBE, 2015:4). Teacher development is mainly done with a top-down approach, which minimises teacher participation and involvement in meeting their own needs. This type of approach does not promote communication and collaboration amongst teachers. With the aim of improving this situation, the DBE came up with the concept of PLCs.

The establishment of PLCs was suggested and was supposed to serve as an instrument to strengthen teacher development. PLCs are regarded as platforms in which teachers improve their knowledge, skills and approaches to teaching as they engage in critical discussions with their peers. The DBE's aim was to ensure that, by 2017, there would be a wide establishment of fully functional subject-based PLCs (DBE, 2011a: 73).

However, despite PLCs having been identified as a solution to improve communication and collaboration amongst teachers, they did not yield the expected outcomes. Research done around PLCs discovered that certain inherent challenges hinder the smooth running of face-to-face PLCs, among which, time, place, transport, and power differences. The failure of these face-to-face PLCs to function as expected caused subject teachers' communication and collaboration being threatened. Teachers of Setswana home language in the senior phase in Motheo district also fell prey to these challenges. Both experienced and novice teachers are struggling to come to terms with the demands of the new curriculum and, at the same time, the system does not offer optimal opportunities for teacher development.

It is against this background that I realised that teachers are faced with challenges that demand that they rely on each other, and that they learn and share good practices in order to improve learner achievement. PLCs are meant to be useful in that regard; however, due to the challenges faced by face-to-face PLCs, this study sought to develop a framework that would use ICT to enhance the PLCs of Setswana home language. It is envisaged that these ICT-enhanced PLCs will lead to improved communication and collaboration and, as a result, teacher learning as well as learner performance will improve.

### **6.2.1 Research problem and research question**

As indicated in the section above, it is important for subject teachers to support each other, with the aim of improving performance in their subject. Insufficient communication and inadequate collaboration amongst teachers of Setswana home language is detrimental, and it has undesirable results. Professional development of teachers and learner attainment will remain at risk if the status quo remains as it was before the

commencement of this study. In order to address this limitation, the study intended to answer the following research question: How can we use ICT to enhance PLCs of Setswana home language?

### **6.2.2 Research aim and objectives**

The aforementioned research problem and question resulted in the study aiming to design a framework to use ICT to enhance PLCs of Setswana home language. In order to achieve the aim, the following objectives were pursued (see Section 3.1).

- To demonstrate and justify the need for a framework for using ICT to enhance PLCs of Setswana home language;
- To identify the main components of using ICT to enhance PLCs of Setswana home language;
- To anticipate possible threats that may hinder successful implementation of a framework for using ICT to enhance PLCs of Setswana home language;
- To explore conditions conducive to the successful implementation of a framework for using ICT to enhance PLCs of Setswana home language; and
- To monitor the functionality of the framework for using ICT to enhance PLCs of Setswana home language.

### **6.3 FINDINGS**

The findings of this study will help to answer the aforementioned research question and to inform the formulation of the emerging framework, which will be presented in Section 6.6. The report presented here is based on the findings of the literature review presented in Chapter 3 and the empirical data that had been gathered and which was presented in Chapter 5.

### **6.3.1 Findings on the need to develop a framework that uses ICT to enhance PLCs of Setswana home language**

#### *24. Findings on the inability to adapt to the curriculum demands of the 21<sup>st</sup> century*

Education systems worldwide experience a constant state of reform and change, which has many causes (Gray, Scott & Auld, 2014:10). Furthermore, research reveals that, in some countries, changes might be political, as a result of a government seeking to demonstrate new priorities. In other instances, reform is initiated due to globalisation of education, where national education systems are under pressure to improve their rankings on international comparative assessments (Gray *et al.*, 2014:10).

Teachers are under constant pressure to keep abreast of these changes, and they can only achieve this if they engage in intensive learning and development (see Sections 3.4.1 and 5.2.1). Findings from both the literature and empirical data reveal that teachers face challenges that affect the smooth implementation of the curriculum. Furthermore, it was discovered that teachers learn better if they communicate and collaborate with their peers. This will assist them to share good practices whilst, at the same time, learning from each other. It is, therefore, evident that, for teachers to adapt to the curriculum demands of the 21<sup>st</sup> century, which will, in turn, improve learner attainment, teachers need to be involved in continuous and meaningful support and development programmes. Improved communication channels between subject teachers will assist them to collaborate with their peers, with the ultimate aim of improving their knowledge, skills and approaches to the subject content.

#### *25. Findings on inadequate learning from curriculum training and workshops*

Education reforms, which include changes in curriculum, have a great impact on teaching and learning. Teachers are the role players who bear a huge responsibility, as they have to deliver the new curriculum to the learners and ensure that it yields the expected outcomes. Both the literature review and empirical data reveal that the training received by teachers prior to the implementation of CAPS was inadequate and superficial (see

Sections 3.4.2 and 5.2.2). For example, Setswana home language CAPS training in the senior phase was conducted in English, whereas teachers are expected to deliver the content in Setswana. The duration of these training events was also questionable. Challenges facing teachers included subject content, methods of teaching, approaches and assessment. It was found that much professional development is still, today, organised as isolated events that lack coherent strategy, monitoring and follow up. Post-implementation training does not always address the teachers' needs and still uses a top-down approach. The empirical data revealed that subject advisors also face challenges, ranging from workload to lack of collaboration between the curriculum, IQMS and teacher development sections (see Section 5.2.2). In summary, teacher professional development faces serious challenges, which affect curriculum implementation. It is, therefore, evident that teacher development should take a different form, in which teachers are involved in their own development.

26. *Findings on absence of or minimal curriculum support by school leaders*

The guidelines for PLCs in South Africa indicate that a supportive SMT is a condition for functional PLCs (see Sections 3.4.3 and 5.2.3). School managers in different positions have to meet the teachers' curriculum needs in different ways. For example, HODs have to guide, support, control and monitor teachers on content-related matters, whilst principals have to provide support in terms of resources, space, time for PLCs, etc. The literature review in Chapter 3, as well as empirical data presented in Chapter 5, reveal that this is not the case. Many challenges stand in the way of this support being provided. For instance, some HODs are overloaded with work, and are in charge of subjects they did not specialise in. Principals focus more on managerial issues and tend to depend on HODs for curriculum matters. The empirical data revealed that Motheo district does not have a subject advisor responsible for Setswana home language. From these findings, the implication is that teachers who are affected by these challenges have to engage in self-development by communicating and collaborating with their peers.

27. *Findings on the need for a free environment for teacher learning*

According to PLC guidelines, teachers are supposed to engage in learning environments that are free of domination and physical intimidation; it should be an environment where teachers are not afraid to talk about their teaching challenges and are ready to share ideas with others (see Sections 3.4.3 and 5.2.4). Paulo Freire (1997:63) describes a free learning environment as an environment where people do not hear anything that will belittle them or discourage them from participating in the learning process.

Both the literature and empirical data reveal how teachers still long for a learning environment where they are not passive recipients of information, but in which they are actively involved and take a leading role in their own learning. The empirical data also reveals that PLC meetings are, in most instances, conducted in the same way as afternoon workshops and holiday training, which involve subject advisors deciding what must happen and which content must be addressed during the meetings. Empirical data also revealed that subject advisors are under pressure to report on the functionality of their face-to-face PLCs, hence, they end up taking a leading role to ensure that there is something to report on. To sum up the aforementioned findings, we can say that teachers still long for learning platforms that are free of domination and which allow them to freely participate in their own learning. Face-to-face PLCs do not always yield the expected outcomes, hence, they need to be reinforced.

28. *Findings on the need for Setswana home language to be empowered and elevated*

According to CAPS prescripts, teachers of Setswana are required to use a textual approach to teaching languages. They, therefore, have to expose their learners to different types of texts, including multimedia and visual texts. Furthermore, texts have to be current and identify with the learners' own life experiences (see Sections 3.4.5 and 5.2.5). Both the literature and empirical data reveal how this prescript poses challenges for teachers of Setswana in the Free State province. Teachers experience quite a struggle to find multimedia and visual texts produced in Setswana in the Free State province. This is due to the status of the language in this province, where it is not one of the designated

languages. The lack of texts requires teachers to collaborate to produce and share texts amongst themselves. Another finding was that producing these texts is not an easy task, as teachers have to be computer literate to scan and type up texts. Knowledge of working with computers will help them to produce these texts, to reproduce them by translating texts in languages other than Setswana, and to share texts with their peers and, thereby, developing a rich data base. Another finding is that producing these texts is made more difficult by the low status of Setswana and other indigenous languages, and the fact that little content in these languages is available on the internet, despite there being some evidence of development in this regard. It is, therefore, upon the teachers of Setswana to be innovative about ways to elevate the status of this language for the benefit of teaching and learning in this language.

### **6.3.2 Findings on the components of the framework**

The previous section presented findings relating to challenges that justify the need for a framework that uses ICT to enhance the PLCs of Setswana home language. This section will dwell on findings relating to solutions to the challenges discussed in Section 3.4 of literature review, and Section 5.2, which reported empirical data. Components of solutions for each challenge were already discussed in Section 3.4.2 (literature review) and Section 5.3 (empirical data). The components of solutions sought to address the research problem, which relate to inadequate communication and lack of collaboration amongst teachers of Setswana home language.

#### *29. Findings on adapting to the curriculum demands of the 21<sup>st</sup> century*

Bennett (2015:5) points out how communication and collaboration amongst subject-based PLCs could contribute to a smooth adaptation to the new curriculum (see Section 5.3.1). Collaboration also stands out in the guidelines for PLCs (DBE, 2015:6) which state that preparing, teaching and assessing learners cannot be an individual responsibility (see Section 3.5.1). Using technology was identified as a solution that could assist PLCs of Setswana home language to adapt to the curriculum demands of the 21<sup>st</sup> century. The creation of a Whatsapp group and email addresses for those who did not have them was

the 1<sup>st</sup> step towards improving teacher communication and collaboration. Teachers started small by sharing information and requesting assistance on content-related matters.

30. *Findings on maximising knowledge gained at in-service training and PLC meetings*

Little is known about how knowledge gained from in-service training conducted during afternoon workshops or holiday training is delivered in the classroom afterwards. Literature suggests conducting a reflective enquiry to maximise knowledge gained at in-service training and workshops (see Section 3.5.2). The empirical data identified technology, such as Whatsapp video recordings, as a method that could assist with reflective inquiry. Teachers record themselves during teaching, and later post the video clips to the group, whose members then critique the lesson and provide constructive feedback that can assist the teacher who posted as well as other PLC members. Furthermore, reflective inquiry will help to maximise knowledge gained during PLC meetings. According to the literature, reflective enquiry itself is a new concept that needs further research.

31. *Findings on supportive environment from school leaders*

From the discussions the team had, support by school leaders came out as a solution for assisting PLC members to improve their communication and collaboration. For teachers to be able to integrate ICTs in their curriculum practices, they need support, such as by making ICT resources accessible to them. We also realised that, even though teachers are willing to use their own resources, they feel that they should be able to access the school's Wi-fi during office hours. There could be strict measures to limit them to surfing the net to find subject-related information and networking with peers. Findings also indicate that access to any of the above ICT resources requires a school policy, so that all stakeholders know their limits. The school principal and SMT stand in the centre in order to oversee the whole process.

32. *Findings on a free environment for teacher learning*

From the deliberations of the co-researchers, we realised that teachers need a free and autonomous environment if they are to learn. Findings reveal that, in the past, teachers focused more on their learners' learning, and less on their own learning and development. Hence, it was realised that working online is an option that could assist teachers to spread their wings as, by doing so, they will be sharing with other teachers who have different experiences, opinions and insights. Creating a website is another means of working online, and findings indicated that the advantage of working online is that all materials and information shared online will always be safe and can be accessed from anywhere, at any time, using any device.

33. *Findings on elevating the status of Setswana as a subject*

It was discovered that the status of Setswana, as one of the languages spoken in the Free State, affects Setswana as a school subject. Setswana is not one of the designated languages in the Free State, therefore, its use is not extensive, compared to the designated languages, which enjoy use in extensive domains. Findings reveal that teachers of Setswana have to develop newspaper articles, posters, advertisements, notices, etc. that are current and relevant to learners' life experiences. Developing this material will help to elevate the status of Setswana as a subject and ensure Setswana learners are presented with opportunities equal to those of their counterparts. Findings also indicate that, to meet these standards, teachers will have to use technology to enable them to produce texts of high quality, and to share the texts with their peers. At the very least, teachers should have basic computer skills, that will help them to develop these materials on their own.

### **6.3.3 Findings on conditions suitable for implementing the framework**

The preceding section discussed findings on components of solutions that were identified to address the challenges mentioned in Chapter 1 of this study. This section will report on findings relating to conditions that are suitable for implementing a framework that uses ICT to enhance the PLCs of Setswana home language.

34. *Findings on teachers' beliefs and attitudes towards ICT as a condition*

The empirical data presented in Section 5.4.1 reveals how co-researchers started off with negative attitudes towards the integration of ICTs in their curriculum practices. This is because they undermined themselves by thinking that they are were too old to use technology. Findings reveal that, immediately after being assured of support and unity in using ICTs, they started to view the possibility of using ICT positively and they changed their beliefs about ICT. This finding proves that teachers have a fear of exploring using ICTs in their practices, however, when support and unity were assured, they started changing their attitudes. They expressed readiness to explore the ample opportunities presented by ICTs to improve communication and collaboration.

35. *Findings on provision of infrastructure as a condition*

The findings of this study confirm that provision of infrastructure is, indeed, another condition that could lead to either the success or failure of the envisaged framework. It is evident that, through the provision of infrastructure by the principal and SGB of the hosting school, co-researchers managed to access the internet and perform group activities, as indicated in Section 6.3.2. To sum up this finding, we can say that, for the framework to be implemented beyond the life span of this research project, teachers need to be offered enough support, including the necessary infrastructure that will enable them to use ICTs to enhance their PLCs.

36. *Findings on the support and involvement of school leaders as a condition*

It has been found by literature and empirical data that the support of school leaders – with the principal at the top of the list – is a condition for PLCs to thrive. Findings reveal that, if the principal and the SMT do not support the activities of the PLCs, let alone provide the resources needed to promote communication and collaboration, the PLCs are bound to fail. It was also found that school leaders should be in a position to draw up a school policy with regard to ICT use by staff members, and to continuously evaluate and monitor the use of these resources, as well as their impact on teaching and learning.

37. *Findings on training to use ICTs as a condition*

Many education policies have already determined that training on ICTs is a condition that needs to be met before the envisaged framework can be implemented successfully. Several researchers, among whom Dzansi and Amedzo (2014:246) and Mathipa and Mukhari (2014:1218) confirm this claim (see Section 5.4.4). The empirical data reports that teachers who had received inadequate training or who had never been trained before find it very difficult to integrate ICTs in their practices, including networking with colleagues. As discussed in Chapter 5, co-researchers reported that sharing and learning from each other involves developing materials and sharing these materials with colleagues. Possession of basic computer skills is, therefore, a prerequisite that will enable all subject teachers to actively participate in group activities.

**6.3.4 Findings on threats that may hinder the successful implementation of the framework**

The preceding section outlined findings on conditions necessary for the implementation of a framework that uses ICT to enhance PLCs of Setswana home language. In this section, findings on threats that may hinder the implementation of this framework will be presented, as well as findings on ways to circumvent these threats.

38. *Findings on teachers' low confidence and negative attitudes, as threats to the implementation of the framework*

Research from both the literature and empirical data reveal that teachers' low confidence and negative attitudes towards ICTs threaten the implementation of the envisaged framework (see Sections 3.6.1 and 5.5.1). Findings, furthermore, identified the cause of these threats as a lack of expertise that is a prerequisite for operating ICT resources. Co-researchers pointed out that a fear of viruses that might attack their gadgets, and an inferiority complex with regard to having to learn from youngsters, contributed to their low confidence and negative attitudes towards ICTs. In the same breath, they also revealed, through the empirical data, that the above-mentioned threats can be alleviated by taking

precautionary measures, such as installing antivirus software to protect ICT resources from attacks, and by welcoming help from young people.

39. *Findings on limited resources and infrastructure, as threats to the implementation of the framework*

Both the literature review and empirical data point out that limited resources and infrastructure could become threats that hinder the implementation of the emerging framework (see Sections 3.6.2 and 5.5.2). Literature findings also reveal that, in most countries, including South Africa and Botswana, this threat is more prevalent in rural schools than in their urban counterparts. In Botswana, rural primary schools face this threat to a greater extent than rural high schools. The literature reveals that, in most countries, this threat is reduced by requesting and receiving donations from other stakeholders.

40. *Findings on school managers' attitudes and level of support, as threats to the implementation of the framework*

Findings from the literature review and empirical data (see Sections 3.6.3 and 5.5.3) reveal how school managers' attitudes and their level of support for ICTs could determine the success or failure of the envisaged framework. Literature reveals that some educational leaders still find it difficult to appreciate the benefits of using ICTs in education institutions, and this attitude poses a threat to the intended framework. Findings from the empirical data confirmed this point, as co-researchers indicated that, if their leaders fail to change their attitudes towards ICTs and start to support them, the intended framework is doomed to failure. Another finding is that principals and other school managers act in that manner because their knowledge about the benefits of ICTs in relation to implementing the curriculum is very limited. They are, in most cases, concerned with managerial and administrative matters. Both the literature and empirical data suggest that information sessions or workshops organised by ICT coordinators could be a means to minimise this threat.

41. *Findings on lack of basic computer skills, as a threat to the implementation of the framework*

Findings from empirical data reveal that a lack of basic computer skills is regarded as a threat to the envisaged framework. It was discovered that co-researchers believe that the material they share should be of good quality, therefore, they cannot share handwritten materials for future use by themselves and their peers. Again, the finding was that the district ICT coordinator for our district was overloaded with work, hence, ICT champions are used to assist the ICT coordinator. The DTDC is not in a position to reach all teachers and provide them with computer skills based on teachers' level of competency. Hence, teachers minimised this threat by suggesting the appointment of a school-based ICT champion for each school.

### **6.3.5 Findings on evidence of success of the implementation of the framework**

42. *Findings on development of planning documents*

Findings indicate that the development of the team's mission statement, the team's policy, the SWOT analysis and a strategic plan gave a good indication of where the team was headed. Members started owning the project, and they were fully involved from the start. Furthermore, findings indicate that these activities broke the ice between the co-researchers, where were not all from the same school, not in the same ranks in the organogram of the Department of Education, and not of the same generation. Some were experienced, whilst some were novices. The diversity within the group could have created challenges for the group, however, in this case, the team pulled it off.

43. *Findings on adapting to the curriculum demands of the 21<sup>st</sup> century*

Findings reveal that the creation of a Whatsapp group and email addresses for the team yielded good results. The Whatsapp features of video recordings and voice recordings made it easier for group members to share and assist each other in relation to the presentation of a poetry lesson. The process approach was unpacked, and all members benefited from this activity. Findings are that this is evidence of the successful

implementation of the framework, as teachers were in a position to communicate and collaborate on content-related matters, instead of waiting for face-to-face PLC meetings or afternoon workshops. Another finding is that co-researchers were willing to use their own resources to access information for their subject, on condition they receive support.

44. *Findings on better support from school leaders*

Findings indicate that developing a responsibility chart mapped the responsibilities of school leaders regarding providing and controlling the school's Wi-fi. It is an indication of success, as it pointed forward, to the implementation of the framework.

45. *Findings on attending a basic computer course as evidence of success*

Findings after the co-researchers attended a 16-hour computer course, spread over eight weeks, indicate how co-researchers started developing materials on their own. Findings indicate that the certificates they received after attending the course contribute towards CPTD points. Success was evident when all who attended the course managed to gain computer knowledge, despite not all of them being teachers. Even the administration clerk, who was already computer literate, reported that she had upgraded her skills.

## **6.4 RECOMMENDATIONS**

A recommendation that could be made from this study is that, for ICT-enhanced PLCs to be functional, subject teachers should not be thrown into the deep end, as if they are the sole beneficiaries of PLCs. All stakeholders, including school-based, district-based and non-governmental organisations, should have a stake in assisting teachers to use ICTs to enhance PLCs. For example, in this study, school-based stakeholders were very supportive in assisting the PLC members. The principal and SGB member of the hosting school offered the co-researchers access to their school's Wi-fi, so they could perform the activities prioritised by this study. The administration clerk also shared her expertise and gave advice on some ICT-related issues. Teachers themselves worked selflessly as a team to assist those in need. For instance, they performed a reflective enquiry on the lesson presented by the novice teacher, of which a video recording was sent via

Whatsapp. District-based officials also assisted by offering their expertise, the ICT coordinator assisted with creating email addresses and a Whatsapp group, and he also recruited a publisher who offered to train teachers on basic computer skills. DTDC officials were also supportive, as they allowed the training to be held with the aid of their resources. Subject advisors who were part of the team also played an important role, especially in giving curriculum advice and guidance, where needed. All of the above is evidence that the success of the framework to use ICT to enhance PLCs of Setswana home language is not up to subject teachers alone, it needs collaboration and support from all stakeholders.

## **6.5 LIMITATIONS OF THIS STUDY**

The findings of the study will be applicable mainly in schools situated in areas where there is enough network coverage. The study was conducted in a semi-rural town of the Free State, called Thaba Nchu. There are schools situated on the outskirts of this town, where there is still limited network coverage. However, where there is enough coverage and teachers have controlled access to the school's Wi-fi, and where teachers are willing to use their own resources after school hours, then the findings of this study can still be implemented.

## **6.6 PROPOSED FRAMEWORK FOR USING ICTS TO ENHANCE PROFESSIONAL LEARNING COMMUNITIES OF SETSWANA HOME LANGUAGE**

This section will focus on the formulation and presentation of a framework for using ICT to enhance the PLCs of Setswana home language. The framework will be presented in the form of a diagram comprising three levels: The first level is in the middle of the diagram, and it is shaped like a polygon, to which all the components of the second level are attached. The middle part is made up of differently coloured polygons, which are all attached to the central polygon. Lastly, pointers are placed on the outer part of the diagram, and this forms the third level of the diagram. The next section will present and discuss all the components of the framework and their roles in the framework. The last section will present the framework in its complete form.

### 6.6.1 The inner part

#### 46. *ICT integration*



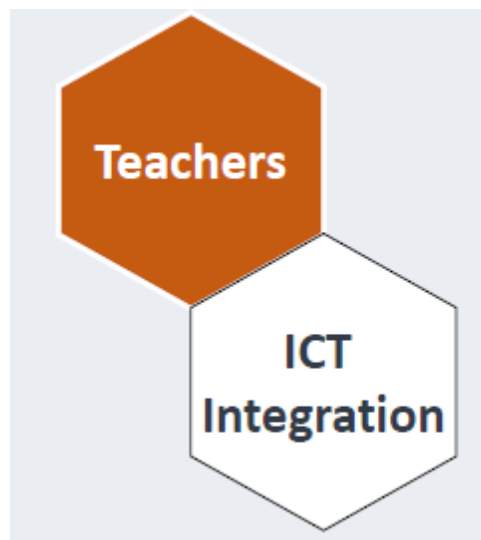
**Figure 6.1: ICT integration**

The framework representing ICT integration is the innermost part of the diagram, with all other components of the diagram surrounding it. This position is significant, as it symbolises something that needs to be preserved, maintained and supported by all the surrounding elements. In the 21<sup>st</sup> century, ICT integration in curriculum practices is an important component of education that needs to be valued and protected for its benefits to education. This study accepted that ICTs are important tools that can be used by teachers to communicate and collaborate, by sharing important information and knowledge and storing it for later use (see Section 3.2.1). The use of ICTs in curriculum practices also goes hand in hand with CER and connectivism, which are the theoretical framework and learning theory adopted in this study respectively. Both theories advocate for participation, dialogue, connectedness and interactivity. It is, therefore, important for the framework to place ICT integration in the centre, as it is the essence of the matter. Everything aimed at improving PLCs in this study revolves around ICTs – this realisation was also depicted in the smaller scale of the research team. Co-researchers focused on ways to explore different technologies that could assist PLCs to improve their communication and collaboration.

## 6.6.2 The middle part

The middle part of the diagram represents the framework, and comprises six components, namely, teachers, school leaders, district officials, non-teaching staff, partners and policies. Each component is represented by a polygon of a different colour. These polygons converge in the centre, where ICT is located. This means that all these components have a role to play regarding ICT integration to support teaching and teacher development. The framework also depicts how these components have to team up to promote the use of ICTs in teacher development and curriculum practices. The following section will discuss every component of the middle part of the diagram.

### 47. *Teachers*

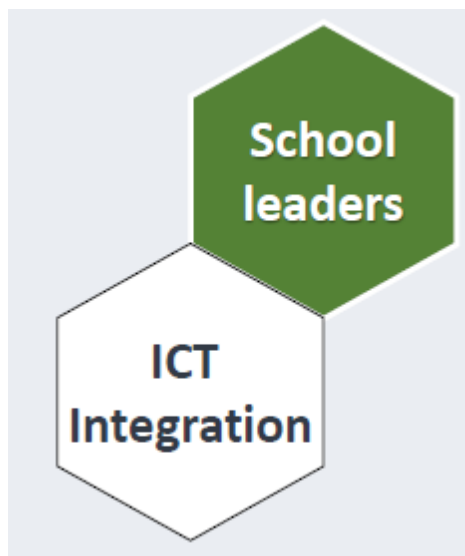


**Figure 6.2: Teachers**

As Figure 6.2 illustrates, teachers are the first component of the middle part of the framework. The framework seeks to improve communication and collaboration amongst teachers of Setswana home language. Teachers are the primary stakeholders, as the framework focuses mainly on teacher development through networking with their peers using ICTs. Teachers are required to be actively involved and to participate in all the activities intended to develop them. Their participation takes the form of sharing ideas and knowledge with subject colleagues. The framework will only thrive if teachers accept

the support provided, and they themselves take part in their own learning. They have to identify the challenges they face with regard to the curriculum and be actively involved in resolving their challenges. They also have to take part in developing the team's mission, and doing the SWOT analysis and strategic planning, which leads to a strategy to achieve the priorities that were set. The teachers who were part of the research team were active participants in determining what can be done to improve their present situation.

48. *School leaders*

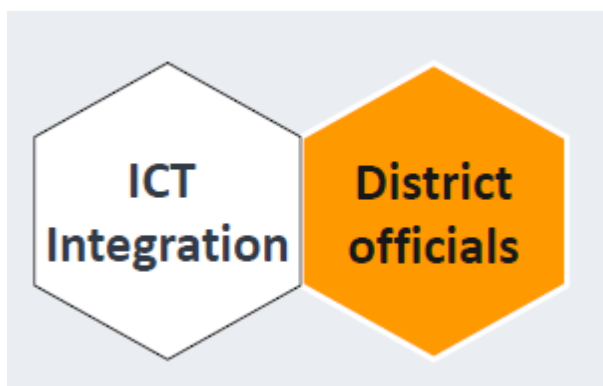


**Figure 6.3: School leaders**

Figure 6.3 illustrates that school leaders play a role in a framework for using ICT to enhance PLCs of Setswana home language. Even though the principal of the school is the primary school leader, the SMT and the SGB are also expected to have inputs in what the principal decides. Research reveals that teachers need concrete encouragement, support and favourable opportunities to assist them to integrate ICTs in their curriculum practices (Uluyol & Sahin, 2016:65). The principal and other school leaders are the role players who are expected to provide all that is required to make sure subject teachers integrate ICTs in their curriculum practices. School leaders also have to provide inputs in terms of the teams' planning activities, as depicted in this research project with the research team. The principal and the team must know what the team's planned priorities are, so that they can provide support in terms of resources and other needs that will assist

in improving teachers' professional development through communication and collaboration with their peers. For example, the principal and SGB member approved that the teachers use the hosting school's resources, including Wi-fi, electricity, space, laptops and projectors. The HOD was the person responsible for connecting these resources to be used by the co-researchers, and disconnecting them after meetings, to ensure their safekeeping. The discussion above proves that school leaders are important components of ensuring the implementation of the framework. It is also crucial to realise that the principal's attitudes towards ICTs can determine the success or failure of the implementation of the framework.

49. *District officials*

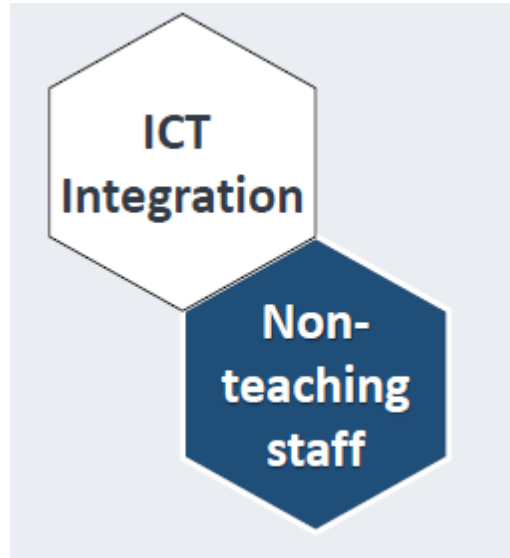


**Figure 6.4: District officials**

The role of district officials in contributing to functional ICT-enhanced PLCs cannot be overlooked. The teacher development section and curriculum section are both responsible for teacher professional development, which was also evident in this research project. Subject advisors from the curriculum section, and the ICT coordinator from the teacher development section, both played important roles in ensuring that the priorities set by the co-researchers are met. The subject advisor assisted mainly with subject content matters, whilst the ICT coordinator was helpful in creating a Whatsapp group and email addresses for co-researchers. The DTDC also availed their resources to ensure the success of the computer course arranged for the co-researchers. Both the subject advisor and the ICT coordinator actively participated in developing the team's mission statement, SWOT analysis and strategic plan, to ensure that priorities set by the team were met. At

this stage, both officials accepted their roles as co-researchers, and did not see themselves as outside experts who take unilateral decisions without involving other co-researchers. They accepted that CER seeks to thematise power and domination against co-researchers.

50. *Non-teaching staff*

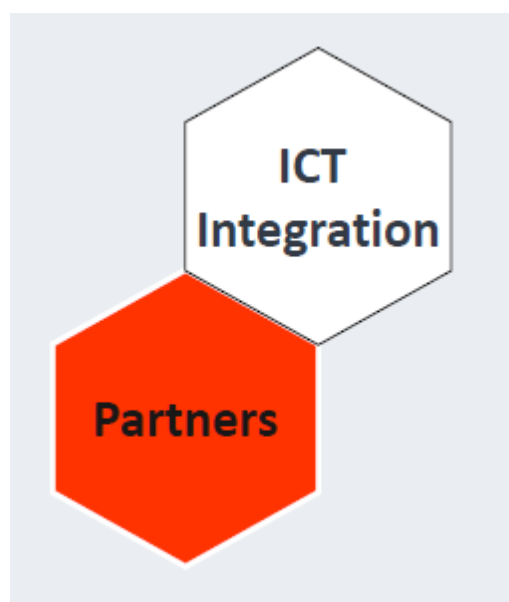


**Figure 6.5: Non-teaching staff**

As depicted in Figure 6.5, the success of the framework also depended on the support rendered by non-teaching staff, especially the administration clerk. In the majority of South African schools, the administration clerk plays a major role in ICT. For example, they are the recipients of emails to the school, they manage printing and scanning machines, and computers are their responsibility. In most cases, they are the staff who have access to the school's Wifi. They also assist with typing documents, including question papers, and they are responsible for feeding and accessing information from SASAMS. All these duties indicate that administration clerks are more conversant with ICTs than some of the co-researchers. Administration clerks might not be directly involved with curriculum, but they can still assist teachers to access their emails and the school's Wi-fi in accordance with the school's ICT policy. As co-researchers in this research project, they enjoyed full participation and their inputs were taken into consideration. Their

participation is in line with CER's principle of social justice and democratic citizenship, which is about making sure all participants are made to feel that they are part of the group; they also have a fair say in the research process and are treated with respect (Nkoane, 2012:98). It was, therefore, important that non-teaching staff were a component of this framework.

#### 51. *Partners*



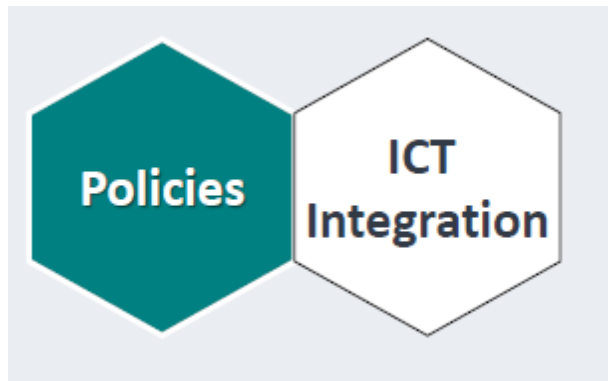
**Figure 6.6: Partners**

Partners in education play an important role and can, in most cases, assist schools with resources, knowledge and skills, motivations and safety, etc. For this research project, we invited two research students who aligned their research with CER and PAR. They assisted us in delivering a PowerPoint presentation on PAR (see Appendix C) and also guided us by delivering a PowerPoint presentation on doing a SWOT analysis (see Appendix O). Annexure G is a photo of one of the research students, taken while she was presenting information on PAR. Sitting down while presenting was a way of indicating to other co-researchers that we were on the same level regarding status; usually presenting carries with it some element of power and an ideology of superiority, which CER seeks to demystify.

Another partner who played an important role in this research project was Pearson Publishers. This company was not initially part of the research team and only joined later, when they were approached to assist co-researchers with training via a basic computer course. They agreed to offer their services at no cost (see Appendix H).

What I am trying to bring home is that, for the framework using ICTs to enhance PLCs of Setswana home language to be functional, we should not close our doors to partners. In our case, the research students provided knowledge, whilst the publishers provided the team with skills. Partners can also assist with ICT resources, etc., in the form of sponsorships and discounted Wi-fi packages (Dzansi & Amedzo, 2014:346).

## 52. Policies



**Figure 6.7: Policies**

Educational policies and guidelines on the use of ICTs at school level are also important components of this framework. All other components have to align their activities and make sure they are in line with ICT policies and guidelines. For instance, the White Paper on e-Education (DoE, 2004), The Action Plan to 2014 – Towards the realisation of schooling 2025 (DBE, 2012a), and Professional Learning Communities - A Guideline for South African Schools (DBE, 2015) are all relevant policies that need to be consulted by all parties interested in integrating ICTs in curriculum practices. For example, this study used the key characteristics of PLCs as the organising principles of the study.

ICT policies are developed at national, provincial, district and school levels. Policy developers at each level should consult the policies developed at preceding levels. As

co-researchers in this research project, we developed a responsibility chart, which indicates the responsibility of each stakeholder at school level with regard to use of school's Wi-fi (see Section 5.3.3, Figure 5.4). This policy will protect the school Wi-fi and ICT resources from being misused by any of the stakeholders. Similar policies should be drawn up at school level to ensure the smooth integration of ICTs into curriculum practices.

All the above-mentioned components are depicted by different colours in the framework. This depiction symbolises that this framework acknowledges diversity, as every component has a different purpose, and is located at different work stations; nevertheless, they can all come together and assist in implementing the framework. This is what both connectivism and CER advocate (see Section 2.5.2.2).

### **6.6.3 The outer part**

The outer part of the diagram that represent the framework depicts the outcomes of effective integration of ICTs in education, specifically those relating to teacher development, especially when the focus was mainly on promoting networking amongst subject teachers. As depicted in Figure 6.8, the pointers go clockwise, from ICT enhanced PLCs indicating the results of enhancing PLCs with ICT.

Firstly, it is expected that communication amongst PLC members will improve, as they will not only depend on traditional face-to-face meetings to talk to each other. They will start using different types of ICTs to discuss their challenges and accept help from other members. This communication can be either synchronous or asynchronous, depending on the urgency of the matter under discussion. What is attractive about communication in ICT-enhanced PLCs is that it is not limited to time or space. As co-researchers, we experienced improved communication between us, as we started a Whatsapp group and created and shared email addresses. Communication had already improved even before we proceeded deeper into the research, as we had already started to discuss the dates of our meetings and created the agenda of each meeting via Whatsapp. The PowerPoint presentations on PAR and the SWOT analysis were disseminated to other co-researchers via email.

Secondly, when teachers communicate frequently and share ideas and materials, it results in collaboration. Without communication, collaboration cannot happen. Collaboration is actually deeper than just communication. In PLCs, it involves mutual trust and respect, support for challenging and providing constructive critique, reflective enquiries and collective responsibility for learners' learning, as outlined in the document that provides guidelines for PLCs (DBE, 2015:6–7). This means that the realisation of all these key characteristics of PLCs can be improved if PLCs are enhanced by using ICTs to improve communication and collaboration. As co-researchers, we participated in several activities that reflected collaboration. For example, the reflective inquiry we performed for the novice teacher was a sign of collaboration. The constructive feedback that was given to her after she presented a poetry lesson helped all of us, not only the novice teacher.

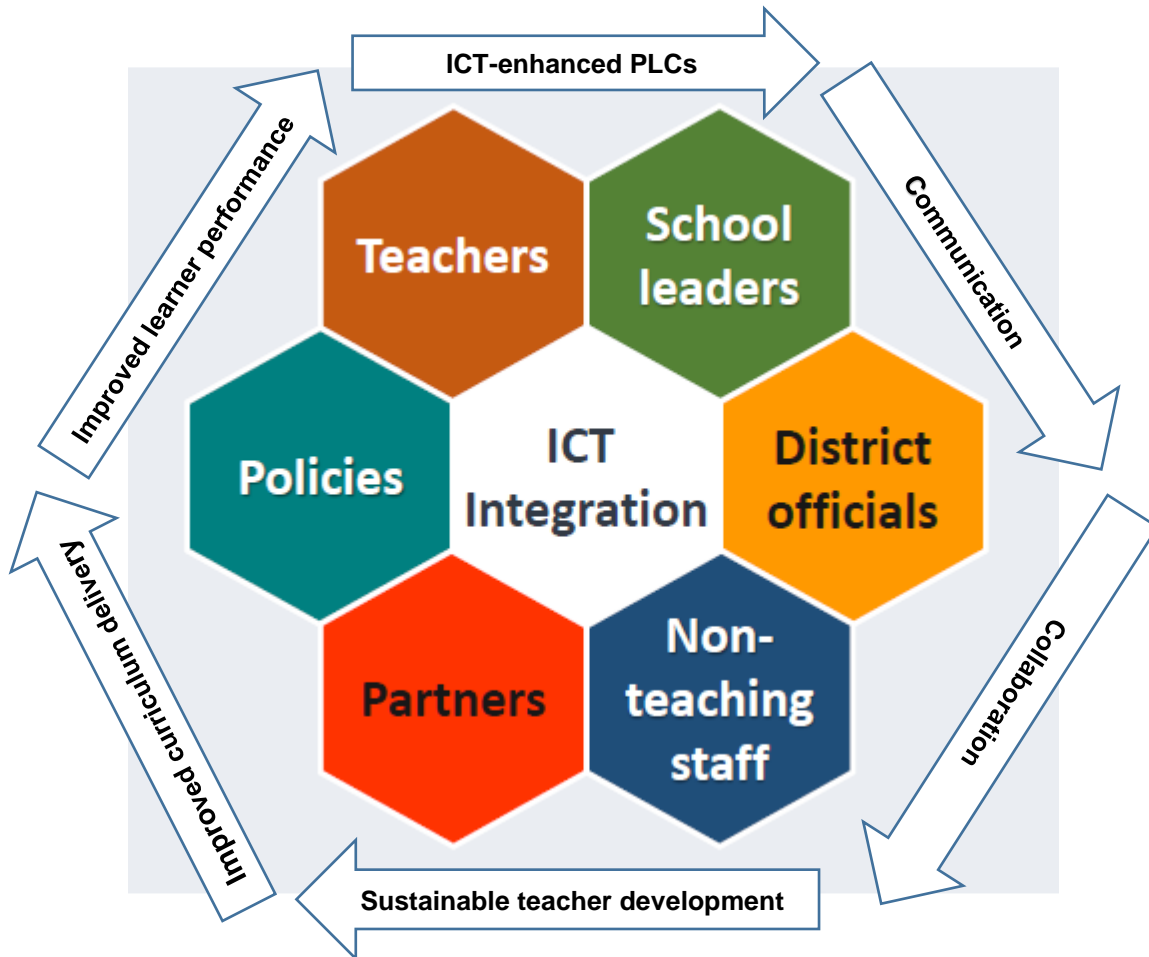
Thirdly, if there is evidence of improved communication and collaboration amongst PLC members, it means teacher learning will be guaranteed. Subject teachers will, in future, share knowledge and ideas amongst themselves, they will develop materials that they will save for future use via electronic means, such as websites. Novice teachers will also have the opportunity to be mentored by experienced teachers, and experienced teachers themselves will keep on learning from each other. This research project already offered us opportunities to share and even learn from each other. We read and analysed poems, using the process approach to reading, which had previously posed a challenge to many of us as co-researchers; we also tackled the purpose of using different poetic techniques in a poem, which was also a challenge to both teachers and learners. Doing so ensures teacher learning, which is sustainable and free of many factors that hinder effective teacher development. The South African Council of Educators acknowledges these PLC activities, and teachers can accumulate CPTD points by producing evidence of their participation in PLCs and of materials they developed for their PLCs.

Fourthly, the pointer from sustainable teacher development points towards improved curriculum delivery. The framework strongly indicates that effective and sustainable teacher development leads to improved curriculum delivery. We cannot overlook that curriculum coverage and curriculum delivery are affected by the subject teacher's

competency in reaction to the subject content. If the teacher is not competent in some areas of the subject matter, the teacher will either skip the challenging content or do an injustice in presenting it. Skipping content leads to curriculum backlogs. HODs and subject advisors, upon detecting backlogs, immediately insist on a catch-up plan being drawn up. Experience has taught us that catch-up plans are drawn up from quarter to quarter, but if teachers are not capacitated on challenging topics, drawing up a catch-up plan is a futile exercise. The framework, therefore, points out that improved curriculum delivery depends on preceding actions indicated on the framework. Teachers in the research team managed to return to presenting a challenging topic using the process approach, which had also posed a challenge to them before. They no longer skip that topic, and this resulted in improved curriculum delivery and reduction of curriculum backlogs.

Lastly, improved learner performance is cited as the last leg of our string of pointers relating to using ICT to enhance PLCs. The framework points out that the end product of our activities should be an improvement in our learner's results. One characteristic of PLCs as cited in the guidelines for PLCs points to collective responsibility for learners' learning (DBE, 2015:7). This indicates that, by engaging in PLCs and integrating ICTs to enhance our PLCs, we all take collective responsibility for learners' learning. The guidelines for PLCs state that PLCs have two major goals: a) improved teacher practice, which leads to b) improved learner achievement (DBE, 2015:5).

## 6.7 PRESENTATION OF THE FRAMEWORK FOR USING ICT TO ENHANCE PROFESSIONAL LEARNING COMMUNITIES OF SETSWANA HOME LANGUAGE



**Figure 6.8: Proposed framework**

Figure 6.8 presents the complete version of the proposed framework as discussed in the preceding sections of this chapter. As shown in the figure, ICT integration is placed in the centre. All the components are represented in the middle of the diagram. This section represents the different stakeholders involved in supporting the integration of ICTs in curriculum practice, with an intensified focus on teacher development. The support rendered to PLCs will be guided by the group's mission, findings of the SWOT analysis, and targeted priorities (see Sections 4.6.2 and 4.6.3). Relevant policies that guide the use of ICTs in schools are also regarded as one of the components. Components are

differentiated by different colours, to show that they have different roles to play, though they all converge at the centre of the diagram, where ICT integration is located. The outermost part of the diagram represents the fruits of adopting ICTs to enhance PLCs. After introducing ICTs in PLCs, we can experience improved communication and collaboration amongst teachers. This benefit addresses our research problem, which is about insufficient communication and inadequate collaboration amongst teachers of Setswana home language. Sustainable teacher development is a direct result of regular interaction amongst subject teachers. Regularity is also one of the key characteristics of PLCs, which indicates that it is only through regular meetings that the depth of discussions, progressive gains in knowledge and sustainable effects on teaching and learning can be achieved (DBE, 2015:7).

If teachers are conversant with all the content stipulated in their annual teaching plans, they will be in a position to deliver the curriculum to the learners, as expected of them. Doing so will result in improved learner performance, which is the DBE's ultimate goal. These activities are not once-off events, hence, after improved learner performance is achieved, which can be measured at the end of the year, everything continues in the same way in the next year, to make sure PLCs yield good outcomes again. Hence, the pointer does not end at improved learner performance, but continues to ICT-enhanced PLCs again.

## **6.8 RECOMMENDATIONS FOR FURTHER RESEARCH**

The 21<sup>st</sup> century makes considerable demands on ICT competencies relating to educational practices. Already when pre-service teachers are absorbed into the education system, they are expected to implement the curriculum, and they are expected to explore different ICTs that will assist them in their curriculum practices. This demand, therefore, reflects back to teacher training institutions – they have a responsibility to prepare pre-service teachers adequately for the world of ICTs that the pre-service teachers will face upon entering the education system. This need, therefore, calls for further research on a framework that will enhance collaboration between teacher training institutions and the Department of Education, to ensure that pre-service teachers are adequately prepared

for the world of work. Tondeur, Aesaert, Pynoo, Van Braak, Fraeyman and Erstad (2017:462) suggest that pre-service teacher education should not only focus on how to use technology, but it should also examine how technology intersects with pedagogical and content knowledge (technological pedagogical content knowledge, or TPACK).

## **6.9 CHAPTER SUMMARY**

This chapter focused on a discussion of findings and recommendations, and formulated and presented the framework that uses ICTs to enhance PLCs of Setswana home language. The background of the study was summarised briefly, then the findings based on the objectives of the study were outlined. The chapter presented recommendations that were made in the light of the findings of the study. The limitations of the study were also discussed. Thereafter, the chapter discussed how the framework was formulated, by discussing in detail all three parts of the framework, i.e., the centre, the middle part and the outer part of the formulated framework. Furthermore, the completed framework was presented in the form of a diagram, and all three parts were summarised, based on the proposed framework. Finally, recommendations for further research were presented.

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**APPENDIX A: 1<sup>ST</sup> FORUM INVITATION**

**EXAMPLE OF A NOTICE TO A FORUM**

**Enquiries:** SNP Moduka

Date:



**To:** The Principals  
Setswana teachers  
Administration clerk  
Parent component – SGB  
District ICT coordinator  
Setswana subject advisor

***INVITATION TO A FORUM FOR RESEARCH PURPOSES***

Dear Member

You are cordially invited to attend a forum for a research project. The title of the research project is: **Using information and communication technology to enhance the professional learning communities of Setswana home language.**

The forum is scheduled as follows:

Date: 05 June 2016

Venue: Strydom

Time: 14H00

**AGENDA:**

1. Opening and welcome
2. Presentation of my research problem
3. Description of methodology to be used- PAR
4. Acceptance of a common problem
5. Election of co-researchers and coordinating committee
6. Closure

**N.B** The schedule for further meetings will be negotiated amongst the elected coordinating committee and all the meetings will last for 45minutes.

**Yours in Service**

**Researcher**

## APPENDIX B: MINUTES OF A MEETING

### Minutes of the research meeting

**Date:** 20 June 2016

Venue: Moutloatsi

Chairperson: [REDACTED]

Secretary: [REDACTED]

#### 1. Opening and welcome- [REDACTED]

[REDACTED] opened the meeting and welcomed all the members present.

#### 2. Purpose of the meeting- [REDACTED]

The research coordinator clearly outlined the purpose of the meeting to members present and introduced the title of the research project: Using ICT to enhance the PLCs of Setswana home language

#### 3. Research problem and research method – Me Moduka

- Me Moduka as the research coordinator presented the research problem and unpacked the background of the research problem.
- The problem was presented as : *The inadequate communication and insufficient collaboration between the Setswana home language teachers brings an undesirable outcomes.*
- Participatory action research (PAR) as the research methodology to be followed in this study was also presented.
- Members of the coordinating team accepted the research problem and indicated how they appreciate to be part of the team.
- They also indicated that they are looking forward to learning something as well as to share their knowledge with other members.

#### 4. Introduction of team members

[REDACTED] asked all team members to introduce themselves and to indicate their positions as team members.

## 5. Comments and Questions

- [REDACTED] indicated that he is satisfied with the way the research problem was unpacked as well the methodology to be used.
- Others members acknowledged being part of this team and that they are looking forward to learning something as well as sharing what they know with other members.
- Members also highlighted how they feel left out when it comes to the use of technology in both communicating and teaching.
- Me Moduka highlighted that as PAR indicates each and every member in the team is important and no one should feel inferior to others.
- It was also indicated that all members will be given an opportunity to chair the meetings and to be the scribe.

## 6.Way forward

- Dates for next meetings were set as : 06 July 2016 and 20 July 2016
- It was also indicated that the team only has 1 term to work as the department of education does not allow any research activity during the last term of the year.

## 7. Closure

[REDACTED] thanked all members for attending this first meeting and also for showing their interest in the research project.

## APPENDIX C: POWERPOINT PRESENTATION

2019/01/18

### APPENDIX C

#### RESEARCH TITLE

Using information and communication technology(ICT) to enhance the Professional learning communities(PLCS) of Setswana home language.

#### RESEARCH PROBLEM

- Insufficient communication and inadequate collaboration amongst the teachers of Setswana- Impacts negatively on professional development and learner attainment.

### RESEARCH AIM

To design a framework to enhance  
PLCs of  
Setswana H.L through the use of  
ICT

### PARTICIPATORY ACTION RESEARCH

- An approach to research- Qualitative in nature
- Different from other research approaches- action purpose
- Change and action are embedded and critical elements of PAR

### PAR - CONTINUED

- Double objectives of PAR -
  - i. Produce knowledge and action useful to the group of people.
  - ii. Empower people through using their own knowledge

### PAR - CONTINUED

- Key elements of PAR
  - i. Action - research should be more than just finding out
  - ii. Participation - research is a participatory process that requires the equal and collaborative involvement of the “community of research interest”

## PAR - CONTINUED

- Collaborative and Participatory nature of PAR



- Moving away from idea of an "outside expert" who - examines, theorises and propose solutions.
- PAR works "with" not "on" the community of interest.

## PAR CONT

- Other known qualities of PAR:
  - i. Elevation of participants to co researchers
  - ii. Valuing co researchers s lived experiences and knowledge
  - iii. Challenges power imbalances amongst team members.
  - iv. It is emancipatory-Seeks to free people from oppressive social structures.

## DATA GATHERING & ANALYSIS

- Gathering - Discussions during meetings and group chats.
- Analysis - Critical discourse analysis(CDA)

I THANK YOU

## APPENDIX D: RESEARCH APPLICATION

Ref: Research Application

### APPLICATION TO REGISTER AND CONDUCT RESEARCH IN THE FREE STATE DEPARTMENT OF EDUCATION

- Please complete all the sections of this form that are applicable to you. If any section is not applicable please indicate this by writing N/A.
- If there are too few lines in any of the sections please attach the additional information as an addendum.
- Attach all the required documentation so that your application can be processed.
- Send the completed application to:

DIRECTOR: STRATEGIC PLANNING, POLICY AND RESEARCH

Room 319, 3<sup>rd</sup> Floor  
Education

Old CNA Building  
Bloem Plaza

Charlotte Maxeke Street  
BLOEMFONTEIN, 9300

OR

Free State Department of

Private Bag X20565  
BLOEMFONTEIN, 9300

Email: [berthakitching@gmail.com](mailto:berthakitching@gmail.com) and [research@edu.fs.gov.za](mailto:research@edu.fs.gov.za)

Fax: 086 692 9092

Tel: 051 404 9283 /9211









Insufficient communication and inadequate collaboration amongst teachers of Setswana home language is undesirable because it impacts negatively on professional development and learner attainment in South African schools. In order to address this limitation the following questions will be posed to initiate discussions:

How did the various education reforms of the 21st century impact on the subject (Setswana home language).

How can we use ICT to enhance PLCs of Setswana home language?

## 24 STARTING AND COMPLETION DATES OF THE RESEARCH PROJECT

Please bear in mind that research is usually not allowed to be conducted in schools during the fourth academic term (October to December).

May2016 to August 2016

## 25 WILL THE RESEARCH BE CONDUCTED DURING OR AFTER SCHOOL HOURS?

Please bear in mind that research is usually not allowed to be conducted in schools during normal teaching time.

Research will be conducted after normal teaching time for 45 minutes per session X 5 sessions

## 26 HOW MUCH TIME IS NEEDED WITH THE TARGET GROUP/S TO CONDUCT THE RESEARCH?

Target Group	Activity (ie interview, questionnaire, etc)	Time Needed
Teachers - Setswana home language	Experiences on factors leading to disfunctionality of face to face PLCs	45 minutes x5
Subject advisor	Curriculum expertise to help teachers with their curriculum needs and learn from them as well.	45 minutes x 5
Administration officer	Support with assisting teachers to access school computers, emails and internet	45 minutes x 5
Principal	Hands on support on establishment and maintenance	45

Target Group	Activity (ie interview, questionnaire, etc)	Time Needed
	of PLCs, both face to face and online	minutes x 5
District ICT official	Use ICT expertise to support teachers sharpen their ICT knowledge to enhance PLCs.	45 minutes x 5
SGB Member	To make inputs on how schools can assist teachers with their needs in the areas of communication and collaboration for teacher development.	45minutes x 5

## 27 HAVE YOU INCLUDED / ATTACHED?

27.1 A letter from your supervisor confirming your registration for the course you are following?

Yes	No
X	

27.1 A draft letter / specimen that will be sent to principals requesting permission to conduct research in their schools?

Yes	No
X	

27.2 A draft letter / specimen that will be sent to parents requesting permission for their children to participate in the research project?

Yes	No
	X

27.3 A copy of the questionnaires that you wish to distribute to the target group/s?

Yes	No
	X

27.4 A list of questions that will be asked during interviews with the target group/s?

Yes	No
X	

28 I Sibongile Nomonde Patience Moduka herewith confirm that all the information in this application form is correct and that I will abide by the ethical code and the conditions under which the research may be undertaken, ie:

28.1 I will abide by the ethical research conditions in the discourse of my study in the FSDoE.

28.2 I will abide by the period in which the research has to be done

28.3 I will apply for extension if I cannot complete the research within the specified period

- 28.4 If I fall behind with my schedule by three months to complete my research project in the approved period, I will apply for an extension.
- 28.5 I will not conduct research during the fourth quarter of the academic year
- 28.6 I will not disrupt normal learning and teaching times at schools to undertake my research
- 28.7 I will submit a bound copy or CD of the research document to the Free State Department of Education, Room 319, 3<sup>rd</sup> Floor, Old CNA Building, Charlotte Maxeke Street, Bloemfontein, upon completion of the research.
- 28.8 I will upon completion of my research study make a presentation to the relevant stakeholders in the Department as per the arrangements of the Department.
- 28.9 The ethics documents will be adhered to in the discourse of my study in your department.
- 28.10 The costs relating to all the conditions mentioned above are for my own responsibility.

SIGNATURE: \_\_\_\_\_

\_\_\_\_\_

DATE:

## APPENDIX E: FSDOE PERMISSION LETTER

Enquiries: BM Kitcing  
Ref: Research Permission:  
Tel. 051 404 9283 / 9221 062 454 1519  
Email: [berthakitcing@gmail.com](mailto:berthakitcing@gmail.com) and [B.Kitcing@edu.fs.gov.za](mailto:B.Kitcing@edu.fs.gov.za)



MRS NSP MODUKA  
11443 L MOTSOENENG STREET  
BLOEMANDA  
BLOEMFONTEIN, 9323

Dear Mrs Moduka

### APPROVAL TO CONDUCT RESEARCH IN THE FREE STATE DEPARTMENT OF EDUCATION

1. This letter serves as an acknowledgement of receipt of your request to conduct research in the Free State Department of Education.

**Research Topic:**

Approval is herewith granted to conduct research in Albert Moroka, Moroka, Moutloatsi, Goronyane, RT Mokgopa, Selosesho, Ratau, Christiaan Diphoko, W Thejane schools in Mofheo District.

2. **Target Population:** Grades 7 – 9 Teachers of Setswana Home Language, Setswana Subject Advisor, Admin Officer, Principal, District ICT Official.
3. **Period of research:** From the date of signature of this letter until end September 2016. Please note the department does not allow any research to be conducted during the fourth term (quarter) of the academic year.
4. Should you fall behind your schedule by three months to complete your research project in the approved period, you will need to apply for an extension.
5. The approval is subject to the following conditions:
  - 5.1 The collection of data should not interfere with the normal tuition time or teaching process.
  - 5.2 A bound copy of the research document or a CD, should be submitted to the Free State Department of Education, Room 319, 3<sup>rd</sup> Floor, Old CNA Building, Charlotte Maxeke Street, Bloemfontein.
  - 5.3 You will be expected, on completion of your research study to make a presentation to the relevant stakeholders in the Department.
  - 5.4 The attached ethics documents must be adhered to in the discourse of your study in our department.
6. Please note that costs relating to all the conditions mentioned above are your own responsibility.

Yours sincerely

  
DR JEM SEKOLANYANE  
CHIEF FINANCIAL OFFICER

DATE: 19/05/2016

RESEARCH APPLICATION MODUKA PERMISSION 14 MAY 2016

Strategic Planning, Policy & Research Directorate

Private Bag X20565, Bloemfontein, 9300 - Room 319, Old CNA Building, 3<sup>rd</sup> Floor, Charlotte Maxeke Street, Bloemfontein

Tel: (051) 404 9283 / 9221 Fax: (086) 6678 678

Enquiries: BM Kitching  
Ref: Notification of research: Mr Moduka  
Tel. 051 404 9221 / 082 454 1519  
Email: [berhalkitching@gmail.com](mailto:berhalkitching@gmail.com) and [B.Kitching@fseducation.gov.za](mailto:B.Kitching@fseducation.gov.za)



**education**  
Department of  
Education  
FREE STATE PROVINCE

The Acting District Director  
Motho District

Dear Mr Moloi

**NOTIFICATION OF A RESEARCH PROJECT IN YOUR DISTRICT BY MRS SNP MODUKA**

1. The abovementioned candidate was granted permission to conduct research in your district as follows:

**Topic: Using Information and Communications Technology to enhance the Professional Learning Communities of Setswana HL.**

**Schools involved: Albert Moroka, Moroka, Moutloatsi, Goronyane, RT Mokgopa, Selosessa, Ratau, Christiaan Diphoko, W Thejane.**

**Target Population: Grades 7 – 9 Teachers of Setswana Home Language, Setswana Subject Advisor, Admin Officer, Principal, District ICT Official.**

**Period: From the date of signature of this letter until the end of September 2016. Please note the department does not allow any research to be conducted during the fourth term / academic quarter of the year.**

2. **Research benefits:** The research study will provide benefits for for Setswana Home Language Teachers by improving their communication and collaboration through the use of ICT. The Department will benefit from the study as it contributes to their primary goal, which is improved learner attainment.
3. Logistical procedures were met, in particular ethical considerations for conducting research in the Free State Department of Education.
4. The Strategic Planning, Policy and Research Directorate will make the necessary arrangements for the researcher to present the findings and recommendations to the relevant officials in your district.

Yours sincerely

  
DR JEM SEKOLANYANE  
CFO

DATE: 19/05/2016

RESEARCH APPLICATION MODUKA NOTIFICATION MOTHEO 14 MAY 2016

Strategic Planning, Research & Policy Directorate

Private Bag X20565, Bloemfontein, 9300 - Old CNA Building, Room 318, 3<sup>rd</sup> Floor, Charlotte Maxeke Street, Bloemfontein

Tel: (051) 404 9283 / 9221 Fax: (086) 6678 678

## APPENDIX F: ETHICS APPROVAL LETTER



Faculty of Education

30-Mar-2016

Dear Mrs. Sibongile Moduka

**Ethics Clearance: Using Information and communication technology to enhance the Professional learning communities of Setswana H.L.**

Principal Investigator: Mrs. Sibongile Moduka

Department: School of Education (Bloemfontein Campus)

### APPLICATION APPROVED

With reference to your application for ethical clearance with the Faculty of Education, I am pleased to inform you on behalf of the Ethics Board of the faculty that you have been granted ethical clearance for your research.

Your ethical clearance number, to be used in all correspondence is: UFS-HSD2015/0651

This ethical clearance number is valid for research conducted for one year from issuance. Should you require more time to complete this research, please apply for an extension.

We request that any changes that may take place during the course of your research project be submitted to the ethics office to ensure we are kept up to date with your progress and any ethical implications that may arise.

Thank you for submitting this proposal for ethical clearance and we wish you every success with your research.

Yours faithfully

A handwritten signature in black ink, appearing to read 'Juliet Ramohai', written over a light blue rectangular background.

Dr. Juliet Ramohai

**APPENDIX G: PERMISSION LETTER PRINCIPAL**

11443 Lebona Motshoeneng  
Blomanda  
Bloemfontein  
9323  
15/06/2016

The Principal

.....school

**REQUEST FOR PERMISSION TO CONDUCT RESEARCH WITH SETSWANA TEACHERS (Grade 7-9)**

Dear Sir/Madam

My name is Sibongile Nomonde Patience Moduka . I am a Master’s in education student at the University of Free State. The research I wish to conduct for my Masters’ dissertation involves designing a framework to use Information and communication technology to enhance Professional learning communities of Setswana Home language .The research will be conducted in Motheo district using senior phase teachers. It will take place from June to September and sessions will be conducted after normal school hours. There will be 5 - 7 focus groups sessions that will last for 45 minutes per session. The project will be conducted under the supervision of Dr M.D Tshelane of Free State University, Education faculty.

I am hereby requesting permission to approach and work with a Setswana Home language teacher (senior phase) from your school.

Upon completion of the study, I undertake to share the findings and recommendations of my thesis with the school. If you require any further information; please do not hesitate to contact me on 0832635383,modukas@edu.fs.gov.za/modukasnp@gmail.com.

Hope my request will be granted

Yours sincerely  
SNP Moduka

## APPENDIX H: REQUEST FOR PERMISSION

11443 Lebona Motshoeneng  
Blomanda  
Bloemfontein  
9323  
20/07/2016

The Principal  
Mabeoana School

REQUEST FOR PERMISSION TO CONDUCT RESEARCH WITH ME [REDACTED]

Dear Sir/Madam

My name is Sibongile Nomonde Patience Moduka .I am a Masters in education student at the University of Free State. The research I wish to conduct for my Masters' dissertation involves designing a framework to use Information and communication technology to enhance Professional learning communities of Setswana Home language .The research will be conducted in Motheo district using senior phase teachers. It will take place from June to September and sessions will be conducted after normal school hours. There will be 5 - 7 focus groups sessions that will last for 45 minutes per session. The project will be conducted under the supervision of Dr M.D Tshelane of Free State University, Education faculty.

I am hereby requesting permission to approach and work with Me [REDACTED] from your school. As a co student from the University of Free. Her involvement will bring much value to my study.

Upon completion of the study, I undertake to share the findings and recommendations of my thesis with the school. If you require any further information; please do not hesitate to contact me on 0832635383,modukas@edu.fs.gov.za/modukasnp@gmail.com.

Hope my request will be granted

Yours sincerely  
SNP Moduka

## APPENDIX I: CONSENT ENGLISH

**Supervisor:**

Dr M.D Tshelane

University of Free State

Nelson Mandela Drive

**Researcher:**

SNP Moduka

0832635383

modukasnp@gmail.com

### INFORMED CONSENT:

Dear co-researcher

You are hereby invited to take part in this research Project:

**The use of Information and Communication Technology (ICT) to enhance Professional Learning Communities (PLCs) of Setswana Home Language (home language)**

The study is about designing a framework to use ICT to enhance the PLCs of Setswana home language

The reason for your invitation in this study is your direct and indirect involvement in the teaching of Setswana home language

The main reasons behind this study is to improve the level of communication and collaboration amongst teachers who are teaching Setswana and this is done by using technological tools to improve the functionality of the PLCs.

All the stakeholders involved will benefit as the study will empower teachers to communicate more frequently, share materials, learn new knowledge, skills and approaches relevant to this subject. The use of technological devices will benefit all the members involved in this study as we will all be empowered to face the digital age. The knowledge gained through this study will help us share with others teachers in our schools.

Please take note that I appreciate your willingness to be part of this study but your participation is entirely voluntary and you are under no obligation to take part in this study. If you do choose to take part, and an issue arises which makes you uncomfortable, you may at any time stop your participation with no further repercussions.

If you experience any discomfort or unhappiness with the way the research is being conducted, please feel free to contact me directly to discuss it, and also note that you are free to contact my study supervisor (indicated above).

Should any difficult personal issues arise during the course of this research, I will endeavour to see that a qualified expert is contacted and able to assist you.

Yours sincerely,

SNP Moduka

Please fill in and return this page. Keep the letter above for future reference

**Study: The use of Information and Communication Technology (ICT) to enhance Professional Learning Communities (PLCs) of Setswana Home Language (home language)**

Researcher: SNP MODUKA

Name and Surname: \_\_\_\_\_

Age: \_\_\_\_\_

Contact number: \_\_\_\_\_

- I hereby give free and informed consent to participate in the abovementioned research study.
- I understand what the study is about, why I am participating and what the risks and benefits are.
- I give the researcher permission to make use of the data gathered from my participation, subject to the stipulations he/she has indicated in the above letter.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## APPENDIX I 1:

**Supervisor:**

Dr M.D Tshelane

University of Free State

Nelson Mandela Drive

**Researcher:**

SNP Moduka

0832635383

modukasnp@gmail.com

### INFORMED CONSENT:

Dear co-researcher: Administration clerk

You are hereby invited to take part in this research Project titled:

**The use of information and communication technology to enhance professional learning communities of Setswana home language**

The reason for this invitation is to solicit your general experience and knowledge on learning communities and ICT which will contribute positively to this study.

The main reasons behind this study is to improve the level of communication and collaboration amongst teachers who are teaching Setswana and this is done by using technological tools to improve the functionality of the PLCs.

All the stakeholders involved will benefit as the study will empower teachers to communicate more frequently, share materials, learn new knowledge, skills and approaches relevant to this subject. The use of technological devices will benefit all the members involved in this study as we will all be empowered to face the digital age. The knowledge gained through this study will help us share with other teachers in our schools.

The research methodology employed in this study is Participatory Action Research (PAR) which enables researchers to work in partnerships with communities in a manner that leads to action and change. As a co-researcher your role will be to assist with your

knowledge of technological devices relevant for communication and collaboration. We need your inputs as to how teachers could access computers for email chats etc and also access information from the internet. The research will also be a platform which fosters an opportunity for your own empowerment in the field of ICT. The research will take place from May to July and will be conducted in 5 sessions of 45 minutes each.

Please take note that I appreciate your willingness to be part of this study but your participation is entirely voluntary and you are under no obligation to take part in this study. If you do choose to take part, and an issue arises which makes you uncomfortable, you may at any time stop your participation with no further repercussions. You are going to be assigned a pseudonym to protect your identity and maintain confidentiality.

If you experience any discomfort or unhappiness with the way the research is being conducted, please feel free to contact me directly to discuss it, and also note that you are free to contact my study supervisor (indicated above).

Should any difficult personal issues arise during the course of this research, I will endeavour to see that a qualified expert is contacted and able to assist you.

Yours sincerely,

SNP Moduka

Please fill in and return this page. Keep the letter above for future reference

**Study: The use of Information and Communication Technology (ICT) to enhance Professional Learning Communities (PLCs) of Setswana Home Language (home language)**

Researcher: SNP MODUKA

Name and Surname: \_\_\_\_\_

Age: \_\_\_\_\_

Contact number: \_\_\_\_\_

- I hereby give free and informed consent to participate in the abovementioned research study.
- I understand what the study is about, why I am participating and what the risks and benefits are.
- I give the researcher permission to make use of the data gathered from my participation, subject to the stipulations he/she has indicated in the above letter.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## APPENDIX I 2: CONSENT ICT CO-ORDINATOR

**Supervisor:**

Dr M.D Tshelane

University of Free State

Nelson Mandela Drive

**Researcher:**

SNP Moduka

0832635383

modukasnp@gmail.com

INFORMED CONSENT:

Dear co-researcher: ICT coordinator

You are hereby invited to take part in this research Project titled:

**The use of information and communication technology to enhance professional learning communities of Setswana home language**

The reason for this invitation is to solicit your general experience and knowledge on learning communities and ICT which will contribute positively to this study.

The main reasons behind this study is to improve the level of communication and collaboration amongst teachers who are teaching Setswana and this is done by using technological tools to improve the functionality of the PLCs.

All the stakeholders involved will benefit as the study will empower teachers to communicate more frequently, share materials, learn new knowledge, skills and approaches relevant to this subject. The use of technological devices will benefit all the members involved in this study as we will all be empowered to face the digital age. The knowledge gained through this study will help us share with other teachers in our schools.

The research methodology employed in this study is Participatory Action Research (PAR) which enables researchers to work in partnerships with communities in a manner that leads to action and change. As an ICT coordinator and co-researcher in this study, your role will be to assist all the stakeholders with your expertise of ICT which is relevant for communication and collaboration. We need your inputs as to how teachers could improve the functionality of PLCs by establishing online communities in which they will be able to learn and access information from the internet. The research will also be a platform which fosters an opportunity for your own empowerment of learning from the experiences of other co-researchers. The research will take place from May to July and will be conducted in 5 sessions of 45 minutes each.

Please take note that I appreciate your willingness to be part of this study but your participation is entirely voluntary and you are under no obligation to take part in this study. If you do choose to take part, and an issue arises which makes you uncomfortable, you may at any time stop your participation with no further repercussions. You are going to be assigned a pseudonym to protect your identity and maintain confidentiality.

If you experience any discomfort or unhappiness with the way the research is being conducted, please feel free to contact me directly to discuss it, and also note that you are free to contact my study supervisor (indicated above).

Should any difficult personal issues arise during the course of this research, I will endeavour to see that a qualified expert is contacted and able to assist you.

Yours sincerely,

SNP Moduka

Please fill in and return this page. Keep the letter above for future reference

**Study: The use of Information and Communication Technology (ICT) to enhance Professional**

**Learning Communities (PLCs) of Setswana Home Language (home language)**

Researcher: SNP MODUKA

Name and Surname: \_\_\_\_\_

Age: \_\_\_\_\_

Contact number: \_\_\_\_\_

- I hereby give free and informed consent to participate in the abovementioned research study.
- I understand what the study is about, why I am participating and what the risks and benefits are.
- I give the researcher permission to make use of the data gathered from my participation, subject to the stipulations he/she has indicated in the above letter.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## APPENDIX I 3: CONSENT PRINCIPAL

**Supervisor:**

Dr M.D Tshelane

University of Free State

Nelson Mandela Drive

**Researcher:**

SNP Moduka

0832635383

modukasnp@gmail.com

### INFORMED CONSENT:

Dear co-researcher: Principal

You are hereby invited to take part in this research Project titled:

**The use of information and communication technology to enhance professional learning communities of Setswana home language**

The reason for this invitation is to solicit your general experience and knowledge on learning communities and ICT which will contribute positively to this study.

The main reasons behind this study is to improve the level of communication and collaboration amongst teachers who are teaching Setswana and this is done by using technological tools to improve the functionality of the PLCs.

All the stakeholders involved will benefit as the study will empower teachers to communicate more frequently, share materials, learn new knowledge, skills and approaches relevant to this subject. The use of technological devices will benefit all the members involved in this study as we will all be empowered to face the digital age. The knowledge gained through this study will help us share with other teachers in our schools.

The research methodology employed in this study is Participatory Action Research (PAR) which enables researchers to work in partnerships with communities in a manner that leads to action and change. The department of education's guidelines on PLCs requires

the school principals to provide practical support to PLC establishment and functionality. As a co-researcher your role will be two fold, firstly it will be to make inputs as to how principals could assist in the functionality of PLCs, secondly it will be to learn from other stakeholders how the principal can enhance the PLCs by supporting the use of ICT to promote communication and collaboration amongst subject teachers. The research will also be a platform which fosters an opportunity for your own empowerment in the field of ICT. It will take place from May to July and will be conducted in 5 sessions of 45 minutes each.

Please take note that I appreciate your willingness to be part of this study but your participation is entirely voluntary and you are under no obligation to take part in this study. If you do choose to take part, and an issue arises which makes you uncomfortable, you may at any time stop your participation with no further repercussions. You are going to be assigned a pseudonym to protect your identity and maintain confidentiality.

If you experience any discomfort or unhappiness with the way the research is being conducted, please feel free to contact me directly to discuss it, and also note that you are free to contact my study supervisor (indicated above).

Should any difficult personal issues arise during the course of this research, I will endeavour to see that a qualified expert is contacted and able to assist you.

Yours sincerely,

SNP Moduka

Please fill in and return this page. Keep the letter above for future reference

**Study: The use of Information and Communication Technology (ICT) to enhance Professional Learning Communities (PLCs) of Setswana Home Language (home language)**

Researcher: SNP MODUKA

Name and Surname: \_\_\_\_\_

Age: \_\_\_\_\_

Contact number: \_\_\_\_\_

- I hereby give free and informed consent to participate in the abovementioned research study.
- I understand what the study is about, why I am participating and what the risks and benefits are.
- I give the researcher permission to make use of the data gathered from my participation, subject to the stipulations he/she has indicated in the above letter.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## APPENDIX I 4: CONSENT SGB

**Supervisor:**

Dr M.D Tshelane

University of Free State

Nelson Mandela Drive

**Researcher:**

SNP Moduka

0832635383

modukasnp@gmail.com

### INFORMED CONSENT:

Dear co-researcher: SGB member (Parent component)

You are hereby invited to take part in this research Project titled:

**The use of information and communication technology to enhance professional learning communities of Setswana home language**

The reason for this invitation is to solicit your general experience and knowledge on learning communities and ICT which will contribute positively to this study.

The main reasons behind this study is to improve the level of communication and collaboration amongst teachers who are teaching Setswana and this is done by using technological tools to improve the functionality of the PLCs.

All the stakeholders involved will benefit as the study will empower teachers to communicate more frequently, share materials, learn new knowledge, skills and approaches relevant to this subject. The use of technological devices will benefit all the members involved in this study as we will all be empowered to face the digital age. The knowledge gained through this study will help us share with other teachers in our schools.

The research methodology employed in this study is Participatory Action Research (PAR) which enables researchers to work in partnerships with communities in a manner that leads to action and change. As a co-researcher your role will be to learn more about the importance of teachers' communication and collaboration. You will also be expected to

make inputs as to how the school can help teachers to access Wi-fi during school hours to learn and make inputs in online PLCs. The research will also be a platform which fosters an opportunity for your own empowerment in the field of ICT. The research will take place from May to July and will be conducted in 5 sessions of 45 minutes each.

Please take note that I appreciate your willingness to be part of this study but your participation is entirely voluntary and you are under no obligation to take part in this study. If you do choose to take part, and an issue arises which makes you uncomfortable, you may at any time stop your participation with no further repercussions. You are going to be assigned a pseudonym to protect your identity and maintain confidentiality.

If you experience any discomfort or unhappiness with the way the research is being conducted, please feel free to contact me directly to discuss it, and also note that you are free to contact my study supervisor (indicated above).

Should any difficult personal issues arise during the course of this research, I will endeavour to see that a qualified expert is contacted and able to assist you.

Yours sincerely,

SNP Moduka

Please fill in and return this page. Keep the letter above for future reference

**Study: The use of Information and Communication Technology (ICT) to enhance Professional Learning Communities (PLCs) of Setswana Home Language (home language)**

Researcher: SNP MODUKA

Name and Surname: \_\_\_\_\_

Age: \_\_\_\_\_

Contact number: \_\_\_\_\_

- I hereby give free and informed consent to participate in the abovementioned research study.
- I understand what the study is about, why I am participating and what the risks and benefits are.
- I give the researcher permission to make use of the data gathered from my participation, subject to the stipulations he/she has indicated in the above letter.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## APPENDIX I 5: CONSENT SUBJECT ADVISOR

**Supervisor:**

Dr M.D Tshelane

University of Free State

Nelson Mandela Drive

**Researcher:**

SNP Moduka

0832635383

modukasnp@gmail.com

INFORMED CONSENT:

Dear co-researcher: Subject advisor

You are hereby invited to take part in this research Project titled:

**The use of information and communication technology to enhance professional learning communities of Setswana home language**

The reason for this invitation is to solicit your general experience and knowledge on learning communities and ICT which will contribute positively to this study.

The main reasons behind this study is to improve the level of communication and collaboration amongst teachers who are teaching Setswana and this is done by using technological tools to improve the functionality of the PLCs.

All the stakeholders involved will benefit as the study will empower teachers to communicate more frequently, share materials, learn new knowledge, skills and approaches relevant to this subject. The use of technological devices will benefit all the members involved in this study as we will all be empowered to face the digital age. The knowledge gained through this study will help us share with other teachers in our schools.

The research methodology employed in this study is Participatory Action Research (PAR) which enables researchers to work in partnerships with communities in a manner that

leads to action and change. As a co-researcher and curriculum specialist, your role will be to assist teachers and other stakeholders with curriculum related matters which can be improved through the functionality of PLCs. Your experiences on the causes of non functionality of many existing PLCs will form the basis for designing a framework to use ICT to enhance PLCs. The research will also be a platform which fosters an opportunity for your own empowerment in the field of ICT. The research will take place from May to July and will be conducted in 5 sessions of 45 minutes each.

Please take note that I appreciate your willingness to be part of this study but your participation is entirely voluntary and you are under no obligation to take part in this study. If you do choose to take part, and an issue arises which makes you uncomfortable, you may at any time stop your participation with no further repercussions. You are going to be assigned a pseudonym to protect your identity and maintain confidentiality.

If you experience any discomfort or unhappiness with the way the research is being conducted, please feel free to contact me directly to discuss it, and also note that you are free to contact my study supervisor (indicated above).

Should any difficult personal issues arise during the course of this research, I will endeavour to see that a qualified expert is contacted and able to assist you.

Yours sincerely,

SNP Moduka

Please fill in and return this page. Keep the letter above for future reference

**Study: The use of Information and Communication Technology (ICT) to enhance Professional Learning Communities (PLCs) of Setswana Home Language (home language)**

Researcher: SNP MODUKA

Name and Surname: \_\_\_\_\_

Age: \_\_\_\_\_

Contact number: \_\_\_\_\_

- I hereby give free and informed consent to participate in the abovementioned research study.
- I understand what the study is about, why I am participating and what the risks and benefits are.
- I give the researcher permission to make use of the data gathered from my participation, subject to the stipulations he/she has indicated in the above letter.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## APPENDIX I 6: CONSENT TEACHER

**Supervisor:**

Dr M.D Tshelane

University of Free State

Nelson Mandela Drive

**Researcher:**

SNP Moduka

0832635383

modukasnp@gmail.com

### INFORMED CONSENT:

Dear co-researcher: Teacher

You are hereby invited to take part in this research Project titled:

**The use of information and communication technology to enhance professional learning communities of Setswana home language**

The reason for this invitation is to solicit your general experience and knowledge on learning communities and ICT which will contribute positively to this study.

The main reasons behind this study is to improve the level of communication and collaboration amongst teachers who are teaching Setswana and this is done by using technological tools to improve the functionality of the PLCs.

All the stakeholders involved will benefit as the study will empower teachers to communicate more frequently, share materials, learn new knowledge, skills and approaches relevant to this subject. The use of technological devices will benefit all the members involved in this study as we will all be empowered to face the digital age. The knowledge gained through this study will help us share with other teachers in our schools.

The research methodology employed in this study is Participatory Action Research (PAR) which enables researchers to work in partnerships with communities in a manner that leads to action and change. As a teacher and co-researcher in this study your role will be to use your own experiences of face to face PLCs and to identify factors which lead to

their disfunctionality. Your knowledge of ICT will be sharpened through your engagement with other stakeholders in this research project. As a teacher you will work hand in hand with other stakeholders to develop a framework that will use ICT to enhance PLCs of Setswana home language. The research will also be a platform which fosters an opportunity for your own empowerment in the field of ICT. The research will take place from May to July and will be conducted in 5 sessions of 45 minutes each.

Please take note that I appreciate your willingness to be part of this study but your participation is entirely voluntary and you are under no obligation to take part in this study. If you do choose to take part, and an issue arises which makes you uncomfortable, you may at any time stop your participation with no further repercussions. You are going to be assigned a pseudonym to protect your identity and maintain confidentiality.

If you experience any discomfort or unhappiness with the way the research is being conducted, please feel free to contact me directly to discuss it, and also note that you are free to contact my study supervisor (indicated above).

Should any difficult personal issues arise during the course of this research, I will endeavour to see that a qualified expert is contacted and able to assist you.

Yours sincerely,

SNP Moduka

Please fill in and return this page. Keep the letter above for future reference

**Study: The use of Information and Communication Technology (ICT) to enhance Professional Learning Communities (PLCs) of Setswana Home Language (home language)**

Researcher: SNP MODUKA

Name and Surname: \_\_\_\_\_

Age: \_\_\_\_\_

Contact number: \_\_\_\_\_

- I hereby give free and informed consent to participate in the abovementioned research study.
- I understand what the study is about, why I am participating and what the risks and benefits are.
- I give the researcher permission to make use of the data gathered from my participation, subject to the stipulations he/she has indicated in the above letter.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## APPENDIX J: CONSENT SETSWANA LETTER

**Supervisor:**

Dr M.D Tshelane

University of Free State

Nelson Mandela Drive

**Researcher:**

SNP Moduka

0832635383

modukasnp@gmail.com

TUMALANO:

MOTSAYAKAROLO YO O RATEGANG

O lalediwa go tsaya karolo mo Porojekeng e e latelang ya thuto:

**The use of Information and Communication Technology (ICT) to enhance Professional Learning Communities (PLCs) of Setswana Home Language (home language)**

Patlisiso eno ya thuto ke ka ga go dirisa didiriswa tsa thekenoloji go tokafatsa dikomiti tsa barutabana ba Setswana Puo ya gae.

O lalediwa gone o na le seabe se se rileng mabapi le thuto ya Setswana jaaka Puo ya gae.

Maikaelelo magolo a Patlisiso eno ya thuto ke go dirisa didiriswa tsa thekenoloji go tokafatsa maemo a tlhaeletsano le tirisano mmogo mo gare ga barutabana ba ba rutang serutwa sa Setswana Puo ya gae. Seno se tla dirwa ka go dirisa ditlhopho tsa barutabana ba Setswana Puo ya gae.

Porojeke eno e tla tswela batsayakarolo molemo gone ke maiteko a go matlafatsa barutabana go tlhaeletsana kgapetsakgapetsa ka maikaelelo a go ithuta diteng tsa serutwa, mekgwa e e farologaneng ya go ruta le tse dingwe. Tiriso ya didiriswa tsa thekenoloji e tla tswela botlhe molemo gone rotlhe re tshwanetse go ikamaganya le mafaratlhatlha a thekenoloji. Kitso e e tla ungwang mo porojekeng eno e tla thusa le barutabana ba dirutwa tse dingwe mo dikolong tsa rona.

Ela tlhoko gore ke itumelela go tsaya karolo ga gago mo porojekeng eno mme itse fa o sa patelediwe ka gope le gore o ka ikgolola nako nngwe le nngwe fa o ikutlwa jaalo. Fa go na le sengwe se o sa se tlhaloganyeng kana se se sa tsamayeng ka tshwanelo o ka emisa go tsaya karolo ga gago mme ga go ditlamorago dipe tse o tla di itemogelang.

O letleletswe go bua le nna ka sengwe le sengwe mabapi le Porojeke eno. O ka ikopanya le Moeteledipele wa me wa thuto yo leina la gagwe le tlhagelelang fa godimo fa go na le sengwe seo o batlang go se bua le ene mabapi le Porojele eno.

Fa o ka itemogela bothata bo bo amanang le tsa pholo ka nako eo porojeke e tswelletseng pele, ke itlama gore ke tla batla thuso go mongwe yo o nang le bokgoni jwa go go thusa.

Weno

SNP Moduka

Tlatsa diphatlha tse di latelang mme o boloke lekwalo le le fa godimo

**Thuto: The use of Information and Communication Technology (ICT) to enhance Professional Learning Communities (PLCs) of Setswana Home Language (home language)**

Motlhotlhomisi: SNP MODUKA

Leina le sefane: \_\_\_\_\_

Nomoro ya mogala: \_\_\_\_\_

- Ke dumela ka botlalo go tsaya karolo mo Porojekeng eno
- Ke tlhaloganya gore Porojeke ke ka ga eng, goreng ke tsaya karolo le melemo ya porojeke eno.
- Ke fa Motlhotlhomisi tetla ya go dirisa tshedimosetso yotlhe e e kgobokantsweng go tswa go nna

- Ke naya motlhotlhomisi tetla ya go dirisa dipatlisiso tse di bonweng mo projekeng eno jaaka go boletswe mo lekwalong.
- 

Tshaeno: \_\_\_\_\_

Letlha:

\_\_\_\_\_

**APPENDIX K: MINUTES 2-6 JULY**

**Minutes of the research meeting**

**Date:** 06 July 2016

Venue: Moutloatsi

Chairperson: [REDACTED]

Secretary: [REDACTED]

**1. Opening and welcome- Chairperson**

The chairperson opened the meeting and welcomed all present.

[REDACTED] and [REDACTED] where introduced as new members to the research team

**2. Apologies**

Apologies where received from:

Me [REDACTED]

Mr [REDACTED]

Mr [REDACTED]

Me [REDACTED]

**3. Minutes of the previous meeting**

Minutes were read and adopted

**4. Recap from previous meeting**

The research coordinator presented the research problem and PAR as a research method to the new team members.

**5. Code of conduct**

- The chairperson indicated that team members need to compile the code of conduct which will guide the activities of the group.
- A code of conducted was drafted with all members actively participating in the process.
- The team will be presented with a copy of the code of conduct in the next meeting.

## **6. SWOT Analysis**

- Me [REDACTED] presented a brief description of SWOT analysis and how to perform it.
- All team members engaged in this process and the research coordinator was assigned to compile a complete document of the team's SWOT analysis.

## **7. Wayforward**

- The following was suggested by the team members for the smooth running of the project:

7.1 Compilation of all members's contact details and distribution to all members

7.2 Compilation of tentative dates for our meetings and sending to schools to make principals aware.

- All the 2 tasks shall be performed by the coordinator of the research team.

## **8. Vote of thanks**

Me [REDACTED] thanked all members present and the chairperson adjourned the meeting.

**APPENDIX L: MINUTES**

**Minutes of the research meeting**

**Date:** 28 July 2016

Venue: Moutloatsi

Chairperson: Me [REDACTED]

Secretary: Me [REDACTED]

**1. Opening and welcome-** Chairperson

The chairperson opened the meeting and welcomed all present.

**2. Apologies**

Apologies where received from:

Me [REDACTED]

Mr [REDACTED]

Mrs [REDACTED]

Me [REDACTED]

**3. Minutes of the previous meeting**

Minutes were read and adopted

**4. Justifying the need to design the envisaged framework**

The following needs were identified by team members through discussions:

4.1 The need to use ICT to improve communication and learning in PLC

4.2 The need to improve learner performance through continuous sharing of information by teachers.

4.3 The need to augment curriculum support offered by districts through peer support.

4.4 Workshops conducted by subject advisors do not always yield desired outcomes.

4.5 PLCs and workshops always faced with a challenge of time etc

4.6 New teachers in the system are facing unique challenges which need increased support.

4.7 The need for collaboration between GET and FET teachers to ensure a smooth transition to FET.

5. Deciding on the 5 main challenges that justify the formulation of a framework from the above list. The following 5 challenges were decided upon

- Inability to adapt to the curriculum demands of the 21<sup>st</sup> century
- Inadequate learning from curriculum training and workshops
- Absence or minimal curriculum support from school managers
- The need for a free environment for teacher learning
- The need for Setswana home language to be empowered and elevated

6. Way forward

The above mentioned challenges will be elaborated further in the next meetings as well as the components of solutions, the conditions to implement the framework, the identified threats as well as the evidence of successful implementation.

## 7. Vote of thanks

All members were thanked for attending the meeting

Signatures..... Chairperson .....Date

Signature.....Secretary .....Date

**APPENDIX M: ATTENDANCE REGISTER**

**ATTENDANCE REGISTER FOR RESEARCH PARTICIPANTS**

**Date:**

**Venue:**

**Purpose:**

<b>Surname</b>	<b>Initials</b>	<b>Work station</b>	<b>Designation</b>	<b>Contact number</b>	<b>Email address</b>	<b>Signature</b>
			Principal			
			HOD			
			HOD			
			SES			
			SES			
			ICT coordinator			
			Research student			
			Administration clerk			
			Teacher			
			Teacher			
			Teacher			

			Teacher			
			Teacher			
			Researcher			
			SGB member			
			Researcher			

## **APPENDIX N: CODE OF CONDUCT**

### **CODE OF CONDUCT FOR THE RESEARCH TEAM**

#### **ALL MEMBERS OF THE RESEARCH TEAM ARE SUBJECTED TO THE FOLLOWING RULES:**

1. Research meetings will be held on alternating Tuesdays until the termination of the project.
2. Members have to attend all meetings of the project.
3. Apologies for not attending should be sent to the chairperson of the day.
4. In this research project all members are equal and no member should exert pressure on other members.
5. All members are to show full participation and commitment in all the activities of the team.
6. Co-researchers can use a language of their choice
7. Cell phones should be put on silent all the time
8. Members have to show respect towards each other.
9. No position is permanent, members will rotate in positions of chairperson, secretary etc.
10. The golden rule of the team is "RESPECT AND PARTICIPATION".

# SWOT ANALYSIS

## WHAT IS SWOT ANALYSIS

## WHAT IS SWOT ANALYSIS

- Strategic planning tool for the organisation/group/institution/project
- Used to identify and understand the strengths, weaknesses, opportunities and threats affecting an organisation/group/institution/project
- Assist in decision making
- Assist in directing the group/project participants towards their common goal or objective
- Make all participants aware of themselves, others and their environment

## STRENGTHS

- **Positive factors** that are controllable by the people involved
- **Inside or internal factors** including the following:
  - the people involved, skills, resources available, knowledge, qualifications, personality etc.

## WEAKNESSES

- Also **internal factors** within the control of the people involved
- They may have a **negative effect** or disturb the progress of the group
- Factors such as lack of experience, insufficient funds, lack of qualifications
- Can be changed or transformed to be strengths

## OPPORTUNITIES

- **External** factors out of the control of the group
- Influence the group **positively**
- Factors such as support, training, allocation of resources by stakeholders

## THREATS

- **External** factors beyond the control of the group/people involved in the project
- **Negative** factors **impacting** on the performance of the project
- Place the project at risk
- Lack of parental support, inadequate allocation of funds by the department, criminal activities, attitude of people towards the project

## RESULTS

- Lead to the group/organisation being aware of the important issues
- Capitalise on your strengths, overcoming of weaknesses, make use of opportunities and counter act towards the threats
- Able to identify the important issues in order to **set the priorities relevant for the project**

**APPENDIX P: PERMISSION LETTER – CHIEF EDUCATION SPECIALIST DTDC**

11443 Lebona Motshoeneng  
Blomanda  
Bloemfontein  
9323  
23/03/2017

THE CHIEF EDUCATION SPECIALIST  
DTDC  
MOTHEO DISTRICT  
BLOEMFONTEIN  
9300

**REQUEST FOR PERMISSION TO USE COMPUTERS AT DTDC**

Dear Sir/Madam

My name is Sibongile Nomonde Patience Moduka .I am a Masters in education student at the University of Free State and also a Setswana Subject advisor in Motheo district. The research I am conducting for my Masters' dissertation involves designing a framework to use Information and communication technology to enhance Professional learning communities of Setswana Home language .The research is conducted in Motheo district using the Setswana Senior phase teachers.

My research is Quantitative in nature and I am using Participatory Action Research as my approach. It came to the attention of the focus group that some of the teachers of Setswana lack the basic computer skills, hence we decided to seek assistance from the DTDC. The information we received is that Pearson publishers are willing to conduct a basic computer course for the teachers but they need to use the DTDC computers to conduct such a training. According to the information I received from Mr Madiehe they already submitted a letter in which they were offering their services. I also contacted Mrs Shirley Bendile who indicated that to conduct the training she will need 8 afternoons and teachers will be provided with an attendance certificate thereafter.

I am hereby requesting to use the facilities at DTDC as it will be part of development for teachers and the training will be extended to Senior phase teachers (Grade 7-9). Together with this letter I attached my Ethical clearance letter from the University of Free state as well as permission to conduct research from the FSDOE.

I Hope my request will be granted

Yours sincerely  
SNP Moduka

E MAIL: [s.moduka@fseducation.gov.za](mailto:s.moduka@fseducation.gov.za)  
Cell: 0832635383

## **APPENDIX Q:       DECLARATION OF SECRECY**

### **A DECLARATION OF SECRECY FOR THE RESEARCH GROUP**

**RESEARCH TITTLE:** The use of Information and Communication Technology to enhance Professional Learning Communities of Setswana Home Language

I, \_\_\_\_\_ declare that I will at all times observe secrecy in respect of all the engagements of the Research team. I will keep confidential:

- i.       All our discussions during face to face meetings
- ii.       All our discussions in our Whatsapp group
- iii.       All data that belongs to the research team, either stored electronically or otherwise.
- iv.       All photos and video recordings of co-researchers that we share amongst ourselves.

I fully understand that disclosing the activities and conversations of the team will jeopardize the credibility of the research project and violate the ethics associated with research projects.

I fully understand that a breach of this undertaking of confidentiality may lead to termination of my membership as a co-researcher in this research project.

Signature of member: \_\_\_\_\_

Date: \_\_\_\_\_

## **ANNEXURE A: RULES OF WHATSAPP GROUP**

### **RULES FOR KOPANO KE MAATLA WHATSUP GROUP**

1. The group's activities are limited between 8am – 8pm everyday of the week.
2. Membership is limited to teachers of Setswana(Senior phase)
3. The group's postings should only be limited to Setswana senior phase matters and content discussions.
4. No chain messages should be shared with the group
5. All members of the group should participate and take part in the group's activities
6. Lurking is not permitted
7. The medium of communication should strictly be Setswana
8. Let us always treat each other with respect and dignity
9. The Group administrator will be notified of any teacher of Setswana who is interested to join the group
10. One on one conversations are not allowed instead switch to your private walls.
11. Group conversations should be kept confidential between the members, no one wants their weaknesses to be discussed with other people.
12. If someone asks a question that you do not know its answer, do not reply with I don't know, rather try to search for the correct answer or wait for those who know the answer.
13. Those who are not interested in the group for any reason, do not just leave the group, inform the group administration, who will then inform other members and remove you from the group.
14. Members who are no longer teaching Setswana in the Senior phase due to new work allocations at their schools, are still permitted to remain in the group and still make inputs where necessary.

## ANNEXURE B: POEM

### Leboko: Fatshe le tlhokang ditoro le lolea

1. Le lolea ga le na botshelo
2. Botshelo bo ntlafatswa ke toro
3. E nayang tsholofetso o robetse
4. O tsoga o e bone tlhaloganyong.
5. O e huparele e se tshwemoge.
  
6. Dupelela bokamoso jwa gago,
7. Itse se o batlang go nna sona.
8. Toro tsa motho di motlele.
9. Etsa banna le basadi ba ipetlileng,
10. Borrakgwebo le bo mmakgwebo,
11. Borrasaense ba nnileng le ditoro.
  
12. Le wena o na le toro
13. Ya gago go fetsa thuto.
14. Itshoke o tla be o fitlhe,
15. Se nne pelokhutshwane
16. Moremogolo go betlwa wa taola.
17. Gopola go dirai kwa pele
18. Go senya toro e ntle ya gago.

Le kwadilwe ke M.Thotela

## **ANNEXURE C: PROCESS READING NOTES**

**Tshekatsheko ya poko/ Analysis of the poem**

### **A-PELE GA PUIISO**

#### **1. Mofuta wa leboko**

Leboko la sesweng-

#### **2. Setlhogo sa leboko**

Fatshe le tlhokang ditoro le lolea- Se tlhalosa gore lefatshe/ batho ba ba nnang mo lefatsheng fa ba se na ditoro ga ba nne le sepe kana ga go sepe se ba se fitlhelelang.

#### **3. TLOTLOFOKO**

**Toro** – Setshwantsho sa sengwe fela se motho a se bonang fa a robetse/Setshwantsho se motho a ipopelang son emo thaloganyong.

**Lolea-** ga go na sepe

**Huparela-** go tlamparela/ go tshwara thata mo seatleng se se tswetsweng

**Tshwemoge-** go tswa mo seatleng ka tshoganyetso.

**Dupelela-** nkgelela

**Motlele-** kemo ya go nna ntsi go feta selekanyo/bontsintsi

**Itshoke** –se fele pelo

**Taola-** lerapo le le betlilweng la diphologolo go dira bola

**Serai** – sediriswa se se dirisiwang go raela kgotsa go thaisa.

### **B- KA NAKO YA PUIISO**

#### **3.Tlhaloso ya ditemana**

##### **Temana 1**

Mmoki o tlhalosa gore ditoro di dira gore batho ba itumelele botshelo e bile gape ba nna le tsholofelo ya gore ditoro tsa bone di tla fetoga nnete.

##### **Temana 2**

Mmoki o tlhalosa gore motho o tshwanetse go bonela isago ya gagwe kwa pele ka go kgaratlhelela ditoro tsa gagwe tse dintsi. Motho a ka tsaya motlhala go batho ba ba atlegileng mo botshelong.

### Temana 3

Mmoki a re baithuti le bona ba na le ditoro tsa go fetsa dithuto tsa bona, o ba eletsa gore ba nne pelotelele go di fitlhelela mme ba itse gape gore tsela ga e ne e nna bonolo.

### 5. DIPONAGALO TSA POKO

#### Puo ya botshwantshi le dipoapoeletso

**\*Tlogelo:** Fatshe- lefatshe (setlhogo)

Go tlogetswe 'le' e bong tlhogo ya leina 'lefatshe'

*Mosola:* Go aga moribo le morethetho mo lebokong

**\*Neeletsano/ ngamelo** (mola 1 le 2) – Le lolea ga le na **botshelo**

**Botshelo** bo ntlafatswa ke toro

*Mosola:* E gatelela gore botshelo bo nna botoka fa ditoro di le gone.

#### **\*Puo e e bofitlha**

1. O e huparele e se tshwemoge.(Mola 5)

Toro ke leinakgopolo o ka se e tshware/huparele e bile e ka se tshwemoge.

*Tlhaloso:* Mmoki o supa gore toro fa o sa e sale morago e ka senyega.

2. Dupelela bokamoso jwa gago (Mola 6)

*Tlhaloso:* Go kaya gore motho o tshwanetse go tseela bokamoso jwa gagwe matsapa.

3. Le lolea ga le na botshelo (mola 1)

*Tlhaloso:* Go kaya tsela eo lefatshe le senang mosola ka lona fa batho ba sena ditoro.

#### **\*Enjambemente:**

*Mola 12 le 13*

Le wena o na le toro

Ya gago go fetsa thuto

*Mosola:* Go tswelletsa kakanyo e e tlhagelelang mo moleng o o fa godimo go bontsha gore mongwe le mongwe o na le toro.

*Mola 17 le 18*

Gopola go dirai kwa pele

Go senya toro e ntle ya gago

*Mosola:*Go tswelletsa mogopolo ka go lemosa gore le fa o e tswelletsa pele go ka nna le dilo tse di ka e senyang.

**Seane:** Moremogolo go betlwa wa taola wa motho o a ipetla- Motho o itira se a batlang go nna sona.

**Thitokgang/Morero:** Go lorela bokamoso

**Molaetsa:** Mmoki o re ruta gore motho o tshwanetse go nna le seo a eletsang go se fitlhelela mo botshelong/ Motho o tshwanetse go kgotlelela gore a fitlhelele ditiro tsa gagwe/ Motho mongwe le mongwe a ka fitlhelela ditiro tsa gagwe fa a ka di sala morago e bile a di tsamaisa le thuto.

**Maikutlo a mmoki:**

**Mowa o o renang:** Thotloetso - mmoki o rotloetsa batho/baswa go nna le ditiro le go di sala morago go thusa go bopa bokamoso jo bo phatsimang.

## **C- MORAGO GA PUIISO**

**Dipotso:**

1. Go ya ka mmoki wa leboko leno ke eng se se ntlafatsang botshelo?
2. Tlhalosa mola wa 6 ka mafoko a gago ‘ Dupelela bokamoso ba gago’
3. Molaetsa wa mmoki ka leboko leno ke ofe?
4. Neela ponagalo ya poko e e tlhagelelang mo moleng 1 le 2 o be o bolele mosola wa yona mo lebokong.
5. Felelets a seane se se tlhagelelang mo moleng 16.
6. Naya tlhaloso ya seane se o se feleleditseng fa godimo.
7. Mmoki o bolela eng fa a re “ Gopola go dirai kwa pele”(mola 17)
8. Mmoki o dirisitse sekapuo sefe fa a re: ‘Lefatshe fa le se na ditiro le lolea, ga le na botshelo’?

9. Go ya ka wena a go siame go arolelana ditiro le ditsala/batho? Tshegetsa karabo ya gago ka lebaka le le utlwalang.

## ANNEXURE D: LESSON PLAN

Ipaakanyetsotiro/ Lesson plan

Mophato: 9

<b>KGONO: GO BUISA LE GO LEBELELA</b>
<b>Nako e e abetsweng: Diura di le nne</b>
<b>Maikaelelo a thuto: Go ruta barutwana poko le tshekatsheko ya yona o dirisa dikgato tsa go buisa.</b>
<b>Didiriswa</b>  Leboko le le buisiwang  Letlapakwalelo  Dibuka tsa go kwalela  Ditshwantsho tse di maleba
<b>Dintlha tsa go ruta le go ithuta</b>  Dikgato tsa puiso/Process writing  <b>Pele ga Puiso:</b> ( Go okola, go bonela kwa pele,go dira ka tlotlofoko) <ul style="list-style-type: none"><li>- Thaloso ya setlhogo- Fatshe le senang ditoro le lolea</li><li>- Barutwana ba ka bodiwa ka ditoro tsa bona tsa isago</li><li>- Mofuta wa leboko</li><li>- Tlotlofoko</li></ul> <b>Ka nako ya Puiso-</b> (Go tlhaloganya, go bopa setshwantshokgopolo,go dira dikgolagano,lebelo la puiso) <ul style="list-style-type: none"><li>- Puiso ya leboko</li><li>- Tlhaloso go ya ka ditemana tsa leboko</li><li>- Tshekatsheko ya leboko- Puo ya botshwantshi , diponagalo tsa poko le mesola</li><li>- Thitokgang le molaetsa</li><li>- Dipotso go bona a barutwana ba a tlhaloganya</li><li>- Barutwana ba fiwa tshono ya go buisa. Go bua le go botsa dipotso kgapetsa kgapetsa</li></ul> <b>Morago ga Puiso- Tlhatlhobo ( E e sa tlhomamang)</b>  <b>Barutwana ba ka fiwa ditirwana tse di latelang:</b>

- Ba ka araba dipotso tse di ikaegileng ka maemo a dipotso
- Ba ka kwala tlhamo kana sethangwa sa tirisano tse di maleba le leboko le le buisitsweng.

**Ditshono tse di okeditsweng sek: thuto ya tlaleletso**

## **ANNEXURE E: FEEDBACK ON SHARED LESSON**

REFLECTIVE INQUIRY: Feedback based on the Process of reading

**Lesson presented:** Poem

### **1. Pre reading**

The teacher managed to introduce the lesson by:

- Using the learners' pre knowledge on what a dream is and why do we dream
- Types of dreams.
- Vocabulary work

### **Recommendations**

- Allow learners to do predictions where necessary
- Try to be in control and engage learners by asking questions from time to time.
- Skimming and scanning is also important during this stage- learners can quickly decide on the type of poem and some features of the poem.

### **2. During reading**

- The teacher managed to engage learners in reading different stanzas of the poem.
- Poetic language and features of the poem were pointed out.
- Learners followed the teacher throughout the lesson

### **Recommendation:**

- Learners should be allowed the opportunity to say the purpose/use of poetic techniques, don't tell them the purpose always let them decide what the purpose might be.
- All the learners must have the poem in front of them

### **3. Post reading**

- Learners were given an activity to do at home

### **Recommendations:**

- The homework was not written down and some of the learners might get lost.
- Prepare the homework as you prepare the lesson, don't give it by heart as if you just decided it during the lesson.
- Always plan your time properly because towards the end of the lesson it was a hurry and it might disadvantage some of the learners especially the slow ones.

**ANNEXURE F: TEACHER EDUCATION & LEADERSHIP ACADEMY TRAINING  
CERTIFICATE**

**Teacher Education  
& Leadership  
Academy**

**TRAINING CERTIFICATE**

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Name

has attended the following  
**Teacher Development Workshop:**

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Workshop



Alan Tait  
*Executive Director: Sales*

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Date

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**ANNEXURE G: SWOT PRESENTATION**

**PHOTO 2 – SWOT analysis**



**ANNEXURE H: CO-RESEARCHERS IN COMPUTER TRAINING CLASS**

**PHOTO 3 - Computer training**

