

**A CONSTRUCTIVIST FRAMEWORK TO PREPARE TEACHERS FOR
SUSTAINABLE RURAL LEARNING ECOLOGIES**

By

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DECLARATION

I, Moeketsi Elias Dlamini, declare that the Masters research dissertation, **A CONSTRUCTIVIST FRAMEWORK TO PREPARE TEACHERS FOR SUSTAINABLE RURAL LEARNING ECOLOGIES**, that I herewith submit for the Master's Degree qualification in Higher Education Studies at the University of the Free State is my independent work, and that I have not previously submitted it for a qualification at another institution of higher education.

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Dlamini ME

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DEDICATION

This dissertation is dedicated to

My beautiful wife

Deliwe Elsie Dlamini

My grandmother

Madikotsi Marriam Dlamini

My children

Ncenisa “Poppy” Dlamini

And

Karabo Dlamini

LIST OF ABBREVIATIONS AND ACRONYMS

B.Ed.	Bachelor of Education
CAPS	Curriculum Assessment Policy Statement
CCFO	Critical Cross-Field Outcomes
CDA	Critical Discourse Analysis
CER	Critical Emancipatory Research
CM	Centre Manager
CPD	Continuing Professional Development
DBE	Department of Basic Education
DHET	Department of Higher Education and Training
FAI	Free Attitude Interview
FET	Further Education and Training
FSDE	Free State Department of Education
HEQ	Higher Education Qualification
HEQF	Higher Education Qualification Framework
IPET	Initial Professional Education of Teachers
ITE	Initial Teacher Education
MRTEQ	Minimum Requirements for Teacher Education Qualifications
NCS	National Curriculum Statement
NPFTED	National Policy Framework for Teacher Education and Development
NQF	National Qualifications Framework
NTEDC	National Teacher Education and Department Committee

OBE	Outcome Based Education
PAR	Participatory Action Research
PGCE	Post Graduate Certificate in Education
RNCS	Revised National Curriculum Statement
SA	South Africa
SACE	South African Council of Educators
SAQA	South African Qualifications Authority
SES	Senior Education Specialist
SGB	School Governing Body
SWOT	Strength Weaknesses Opportunities and Threats
TA	Traditional Authority
TEI	Teacher Education Institution
TEP	Teacher Education Programme
TP	Teaching Practice
UK	United Kingdom
USA	United States of America
WIL	Work-Integrated Learning

SUMMARY

The study aimed to propose a constructivist framework to prepare teachers for sustainable rural learning ecologies. Generally, newly qualified teachers are not prepared to teach in rural schools. This may be because they were not trained or exposed to rural learning ecologies during their training for the profession. Although the government has come up with strategies to recruit teachers for rural teaching, the study therefore sought to prepare student teachers while in their field of study. Student teachers in the study used constructivism as a teaching and learning approach in rural learning ecologies as solutions to address the challenges. Constructivism in the study was used to acknowledge sustainable rural learning ecologies for student teachers as learners to the profession, to bring their existing ideas about teaching, and learn through others viewpoints on how to facilitate the lesson in rural learning ecologies. Critical Emancipatory Research (CER) was used as the paradigm underpinning the study to empower the marginalized group. Participatory Action Research (PAR) was adopted as the methodology for generating data to allow freedom of participation for co-researchers. The generated data were analysed and interpreted through the use of Critical Discourse Analysis (CDA) which subsequently made it possible for data to be interpreted at textual, social and discursive levels. The study makes recommendations to propose a constructivist framework to prepare teachers for sustainable rural learning ecologies using constructivism.

Keywords: Constructivism, Work Integrated Learning (WIL) and Sustainable rural learning.

OPSOMMING

Die studie gemik voor te stel 'n Konstruktivistiese raamwerk om voor te berei onderwysers vir volhoubare landelike leer ekologie. Oor die algemeen, nuut gekwalifiseerde onderwysers is nie bereid om te leer in landelike skole. Dit kan wees omdat hulle nie opgelei of blootgestel aan landelike leer ekologies gedurende hul opleiding vir die professie. Hoewel die regering het kom met strategieë om onderwysers vir landelike onderrig werf, die studie dus gesoek om voor te berei student onderwysers in hul veld van studie. Student onderwysers in die studie gebruik konstruktivisme as 'n onderrig- en leerprosesse benadering in landelike leer ekologies as oplossings om die uitdagings aan te spreek. Konstruktivisme in die studie was om te erken volhoubare landelike leer ekologies vir student onderwysers as leerders aan die professie, bring hul bestaande idees oor onderrig en leer deur ander standpunte oor hoe om te fasiliteer die les in landelike leer ekologies gebruik. Die studie gemik voor te stel 'n Konstruktivistiese raamwerk om voor te berei onderwysers vir volhoubare landelike leer ekologies. Oor die algemeen, nuut gekwalifiseerde onderwysers is nie bereid om te leer in landelike skole. Dit kan wees omdat hulle nie opgelei of blootgestel aan landelike leer ekologies gedurende hul opleiding vir die professie. Hoewel die regering het kom met strategieë om onderwysers vir landelike onderrig werf, die studie dus gesoek om voor te berei student onderwysers in hul veld van studie. Student onderwysers in die studie gebruik konstruktivisme as 'n onderrig- en leerprosesse benadering in landelike leer ekologie as oplossings om die uitdagings aan te spreek. Konstruktivisme in die studie was om te erken volhoubare landelike leer ekologie vir student onderwysers as leerders aan die professie, bring hul bestaande idees oor onderrig en leer deur ander standpunte oor hoe om te fasiliteer die les in landelike leer ekologie gebruik.

Sleutelwoorde: Konstruktivisme, Werk Geïntegreerde Leer en volhoubare landelike leer.

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CHAPTER 1

INTRODUCTION AND BACKGROUND ON A CONSTRUCTIVIST FRAMEWORK TO PREPARE TEACHERS FOR SUSTAINABLE RURAL LEARNING ECOLOGIES

1.1 INTRODUCTION AND BACKGROUND

This study aims to propose a constructivist framework to prepare teachers for sustainable rural learning ecologies. This study used student teachers from a Teacher Education Institution (TEI) that is offering a B.Ed. degree programme and a Post Graduate Certificate in Education (PGCE) for teaching qualification. The B.Ed. programme is divided into B.Ed.: Foundation Phase programme that prepares student teachers to teach in the foundation phase, and B.Ed.: FET Phase and PGCE that prepares them to teach in the Further Education and Training (FET) phase.

Through the study, student teachers from the TEI were located to two rural schools to prepare them for sustainable rural learning ecologies. Student teachers visited the rural schools for Work Integrated Learning (WIL) occasionally from the beginning of the study until the end. They learn and practise constructivism in the TEI and apply it during the WIL. This chapter discusses the overview of the study to introduce the reader to the overall idea of the whole study. The chapter provides brief literature related to the study, the research problem and question, research aim and objectives. The research design and methodology used in the study, the value and the ethical consideration of the study are also discussed in the chapter. Lastly the chapter provides the layout of chapters and conclusion at the end.

1.2 LITERATURE REVIEW

Roofe and Miller (2013:1) mentioned the issue of teacher preparation continuing to occupy academic discourse relating to student outcomes and student achievement. Dilek and Nilufer (2013:2) concur with Roofe and Miller by indicating that teacher preparation programmes are facing the challenge of how best to prepare teachers to manoeuvre the diverse needs of the classroom. From above researchers, I find that

there is an inextricable link between student outcomes, quality of teaching and teachers and teacher preparation. Again, the researchers recommended reforms in the way student teachers are prepared for their role of teaching. Consequently, South Africa is caught within a cycle of trying to improve the status of teaching as a profession and yet grappling with a shortage of teachers. This results in students entering the profession who are either academically weak (and education is the only course to accept them) or who do not have a passion for the profession but could not get into the course of their choice. There were teachers within schools who were not trained to teach within the approach of the new curriculum during their pre-service training and the DBE provided bursaries for them to study while working.

The curriculum changed from Outcome Based Education (OBE), to National Curriculum Statement (NCS), revised NCS to Curriculum Assessment Policy Statement (CAPS) respectively. Based on the above curriculum changes, I proposed the study to reform the way how teachers are prepared to teach in rural schools using constructivism.

South Africa established Initial Professional Education of Teachers (IPET) in 2007 to transform teacher education for student teachers while in their field of study (DBE 2007). This initiative was established to overcome the challenge of teaching experience for new teachers in schools during their first year of their profession. To support this, Ngidi and Sibaya (2003:18) and Perry (2004:2) cited teaching practice as a tool for student teachers to get experience in the actual teaching and learning environment. To address this, I suggest the use of TP to enhance the constructivist framework to prepare teachers for sustainable rural learning ecologies. This approach of TP for student teachers in a rural school is a practice of the art of teaching before actually getting into the real world of the profession, as Makura and Zireva (2013:4) indicate.

The Department of Basic Education (DBE) also introduced a bursary called the Funza Lushaka Bursary Programme to fund students that will work in rural schools after completion of their degrees. The Information Guide on Initial Teacher Education (DBE, n.d:13) indicates that students funded through this programme are expected to teach in rural schools where they will be placed. Therefore, I saw the initiative serving as a

means of recruitment for newly appointed teachers to work in rural schools. Considering that TP can enrich the experiences of student teachers and mature their epistemological beliefs as indicated by Alphan and Erdamar (2013:131), its functions were extended in the study by sending student teachers to rural schools.

TP is meant to provide for the authentic context in which student teachers are exposed to experience in the schools (RSA 2000:12). The TEI again applies micro teaching as part of TP where students teach their peers in small groups at the university after learning the theory of teaching. Student teachers also teach learners in different schools on Saturdays and during holidays to practise teaching. I see it as a means to equip every student teacher and to make them ready to serve learners when employed in any school. In all these expectations and training for the teaching profession, I find it necessary to consider the ecology in which learning occurs, and the culture and economy of the schools where teaching is taking place. This study was extended to prepare student teachers to teach in rural schools after completing training for the teaching profession.

SA embarked on rationalization, reorganization and redeployment processes to address the complex web of the apartheid teacher education system upon attaining liberation and redressing the apartheid legacies related to under-resourcing, particularly in rural schools (Mukeredzi 2013:85). The study focuses on enhancing teaching in rural schools to address these apartheid legacies in rural schools through TP. TP is a period of intense search and exploration of self, others and the new scenarios of the teaching profession. During TP, the experience of student teachers learning to teach is discussed and analysed. Student teachers are “involved as a whole during TP, their cognitions, emotions, listening to the dilemmas, doubts and fears regarding their teaching practices, as well as their drives, beliefs and expectations about the profession in rural schools are all attended to” (Caires, Almeida & Vieira 2012:166). Martins, Caires, Almeida and Vieira (2010) conducted research to identify and assess student teachers’ feelings and perceptions regarding their own teaching practice, as well as the impact of this experience on their personal and professional development. I extended the study to further improve constructivist teaching and learning through TP to prepare teachers for sustainable rural learning ecologies.

Abongdia and Adu (2015:214) identify TP as a challenging but important part of teacher training, especially in developing countries such as South Africa, where its effectiveness can be diminished or eroded by a range of challenges, such as geographical distance, low and uneven levels of teacher expertise, a wide-ranging lack of resources as well as a lack of discipline among a wide cross-section of teachers. Consequently, as suggested by the South African Norms and Standards for Educators (2000:12), TP is meant to provide for the authentic context within which student teachers are exposed to experience in the schools. This process provided student teachers in the study with an opportunity to establish whether the right career choice had been made or not.

TEI in Zimbabwe adopted the principle of mentoring for their TP exercise. The basic expectation of mentoring is that a student teacher is attached to a qualified teacher, considered experienced and knowledgeable (Makura & Zireva 2013:4). A research study was conducted in 2007-2008 at Mersin University about how to improve teacher education in three countries, Turkey, Germany, and Denmark. The findings of that research indicated that more practice was essential for a good teacher programme. I proposed this study to come up with a constructivist framework in TP to prepare teachers for sustainable rural learning ecologies. The statement above indicates that TEI must attempt to produce professional teachers that are well experienced to fit in any schools to improve learner performance in the country.

Constructivism is a way of how students make sense of the material and how they can learn most effectively from what they know. We used constructivism as an educational theory taking into account the learning ecology of rural schools. In constructivism, the lesson is constructed in such a way that knowledge is generated from the needs and from the experience of the society (Mvududu & Thiel-Burgess 2012:108). In this study, co-researchers, teachers, student teachers, parents and learners in a rural school generate knowledge from local experience. This approach helps to avoid the practice of newly appointed teachers who engage in direct instruction by transmitting content knowledge “*based on the belief that learning is tantamount to memorization*” (McGhie, Underwood & Jordan 2007:27). According to McGhie *et al.*, experienced teachers do not automatically develop techniques that promote higher order thinking skills.

A learning ecology in the study is a rural school providing opportunities for formal teaching and learning in an authentic environment (Hlalele 2013:564). The school encompasses different activities, material resources, relationships, and the interactions with rural community. Student teachers in rural schools learn activities that take place within, between and across contexts (constituting a learning ecology) (Barron 2004, 2006; Hlalele 2012). Constructivism fits well with the above explanation because teachers generate their teaching from the materials around them. Constructivist learning gives way to a more structured process for knowledge transmission where the role of a teacher is to facilitate (Siemens 2003:5). Constructivist learning moves teachers away from the 'reserved' approach in solving problems which teachers use more competently, and move towards the 'self-confident and thinking approach' which they use with less competence in schools (Siemens 2003:5).

1.3 RESEARCH PROBLEM AND QUESTION

Teacher education and training programmes have changed in South Africa to accommodate global changes in the social, political and economic spheres (Venter & Swanepoel 2008:25). It is expected for student teachers to learn to be flexible and adaptable in order to meet the demands of society and education. Teachers need to know what constitutes creative thought in a particular context if they are to foster teaching and learning in a systematic and deliberate way (Newton, Harries and Bolden 2010:147). They need to be encouraged to develop to be more active in their own teaching, to challenge, analyse and synthesise rather than to describe, and to initiate and manage change. Schweifurt (2013:20) further indicated that current teaching is couched within outdated teacher-centred approaches which do not allow creativity and independence of learners.

The outdated teacher-centred mode of teaching runs contrary to the stated intents and purposes of the whole educational theorisation and practices in the democratic South Africa as enshrined in our critical cross-field outcomes (CCFOs) (SAQA 2000:18). Among others, the CCFOs stipulate that education should lead to citizens who can work independently, can collaborate and work meaningfully with others from a self-chosen standpoint. Currently research demonstrates that our education does not achieve the above, as our teachers are trained in outdated modes described above.

The challenge in the study is that teachers are not prepared or not trained to teach in the rural learning ecologies.

The identified challenge leads to the following research question: **How can we prepare teachers for sustainable rural learning ecologies using constructivism?**

The aim of the study is to propose a constructivist framework to prepare teachers for sustainable rural learning ecologies.

The above aim leads to the following objectives for this study:

- To conduct needs analysis regarding the constructivist framework in a rural learning ecology.
- To find the solutions to the challenges of a constructivist framework in a rural learning ecology.
- To find out conducive conditions under which constructivism worked successfully.
- To highlight possible threats in a constructivist framework to prepare teachers for rural learning ecologies that may hamper improvement.
- To provide evidence of success to a constructivist framework to prepare teachers for sustainable rural learning ecologies.
- To propose a constructivist framework that will prepare teachers for sustainable rural learning ecologies.

1.4 THEORETICAL FRAMEWORK

The study is based upon Critical Emancipatory Research (CER) which will help this study and co-researchers to identify the need to prepare teachers for sustainable rural learning ecologies. In the study we will use constructivism as a strategy to empower student teachers to create knowledge from the resources available through socio-cultural means (Singh, Stuart & Ali 2012:198). Constructivism like CER has an element of empowerment to co-researchers in the research process. I adopted CER as a theoretical framework to encourage effective means of creating favourable conditions under which distorted consciousness can be dealt with by the co-researchers. The use

of CER in the study helped co-researchers in the TP programme to work cooperatively throughout the study (Mahlomaholo 2009:13).

Couched in CER, the study empowers and capacitates student teachers during TP with the skills of constructivist learning in the rural school for future practice. CER is relevant to this study because student teachers as co-researchers and beneficiaries in the study are equal to the role of the researcher and have equal powers to interrogate the study. The inputs and critical contribution of co-researchers in the study are welcomed, appreciated and respected. Mahlomaholo (2009:223) indicated that the criteria of quality in CER include advancing the agenda for equity in all its forms and advocating social justice, peace, freedom and hope. In CER, co-researchers are free from the repressive conditions which frequently exist within the social context found in rural schools (Singh, Yager, Yutakom, Yager and Ali 2012:198). Co-researchers are afforded the opportunity to own the problem and process, and to provide solution(s) to the challenge and to provide the conditions that will make the solution work. Student teachers are analytical in their learning and go for the deeper meaning on the content to learn and allow learners to do the same in their teaching. They are also allowed to come up with ideas and positively criticize the misunderstanding in the study.

A research site in this study was a school situated on traditional communal farmland, a peri-urban area where people have a number of possibilities to make a living from the land (Hlalele 2012:563). Teachers in this rural school were skilled to enable rural learning to take place, and were dealing effectively with rural poverty through the optimal use and management of available resources. This is a participatory process through which teachers learn through their own experiences and initiatives, how to adapt their teaching method to the changing world (Hlalele 2012:563). Assisting student teachers with a constructivist teaching approach accomplished an effective social context in which learner-centred teaching and meaningful learning processes could take place (Kalaoja & Pietarinen 2009:114).

SA passed the South African Qualifications Authority Act (SAQA) in order to rectify the shortage of skilled manpower (SAQA 1995:58). The purpose of this Act is to improve the quality of education and training at all levels in the country. The Act provides for

the development and implementation of a National Qualifications Framework (NQF) and is designed to give national recognition to learning achievements. I see teachers playing a key role in the transformation of education in South Africa. Teachers fulfil the various roles outlined in the Norms and Standards for Educators. These include being mediators of learning, interpreters and designers of programmes and materials, leaders, administrators and managers, scholars, researchers and life-long learners, community members, citizens and pastors, assessors and subject specialists (Norms and standards for educators 2000). TP cultivates the above norms through Initial Teacher Education (ITE) to be considered successful. Mounted on CER, the study was able to empower student teachers and to capacitate them to be better teachers who will bring about change as described above.

Furthermore Held (1983) and Ivey (1986) confirm that CER preaches closeness between the researcher and the co-researchers. In CER, co-researchers are treated with respect and their equality between them and the researcher are recognised. CER sees the participants as other human being(s), as equal(s) to the researcher. It sees the researcher as being tasked with the role of interpreting other people's interpretations and trying to make sense thereof. Research is seen as the most humanizing experience and one from which the researcher must emerge more human, more cautious, more respecting and more open-minded to signals and messages coming from a very diverse list of sources. This framework informs researchers to be analytical, to be able to go for the deeper meaning and to look at all sides of the story. Good CER is empowering, changing people's lives and station in life, liberating them from not-so-useful practices and thoughts and meeting the needs of a real-life situation; it is useful and also methodologically consistent. In short, the criteria of quality in CER include advancing the agenda of equity in all its forms and advocating social justice, peace, freedom and hope (Mahlomaholo, 2009:223).

CER was relevant to this study because student teachers as co-researchers were also beneficiaries in the study. They are the people who were directly doing the action of TP in the rural school; they knew the expectations and possible threats involved in teaching as the career they chose. Their role in the study was equal to the role of the researcher, as they had the powers to interrogate the study. Their inputs about the study and their critical contribution to the study were respected and acknowledged.

They were told that their safety was guaranteed, they remained anonymous and they knew that they would be free to express their feelings about the study. The question arose of how best effective teacher training that promotes quality education can be delivered. This required teachers who are empowered to think about their work with their peers and to both provide and get feedback on what they do. The researcher believed that student teachers would develop the skills during their TP while still studying for the profession as indicated by Kiggundu and Niyamuli (2009:346).

1.5 RESEARCH DESIGN AND METHODOLOGY

A Participatory Action Research (PAR) was used as a methodology guiding the study to allow co-researchers to own the study from the beginning to the end. PAR made co-researchers come up with positive responses as they were aware that they own the study. Teachers in the rural school and student teachers made free and informed choices, including the choice to participate, and made personal commitment to the results of the inquiry (Mallick 2007:253). Co-researchers shared ownership of research projects, started by analysing the rural ecologies that were initially marginalized, and can implement the action for improvement (Kemmis & McTaggart 2007:273). PAR was also relevant to constructivist teaching and learning practices, as co-researchers worked together to come to common understanding about rural teaching and learning. To include student teachers in the study was easy because they were building on their profession as future teachers in the country.

It was essential that student teachers be taught to be confident, autonomous and independent and be able to make sound decisions when faced with life situations in different school contexts. Data was generated with co-researchers who were treated equally to the main researcher. The research team was formed following the reflective cycle of PAR as indicated by Kemmis and McTaggart (2007:276), of planning a change, acting and observing the process of change, reflecting on the processes, and re-planning until positive outcomes are achieved. The team came up with many inputs and participated in generating data throughout the study, until in the last chapter of findings and recommendations. The research team consisted of five third year education students from the university, three experienced rural school teachers who acted as mentors, grade 10 learners in a rural school and two lecturers from the

Faculty of Education, one Teaching Practice officer, one Senior Education Specialist (SES) for rural schools and two SGB members.

The initial research team meeting was held, as Singh *et al.* (2012:199) argued, to provide the opportunity to indicate the degree to which constructivist learning practices are used in rural schools. I chose the third year students because they would still be in the university the following year when the study is completed. They would be available to participate in the study for two consecutive years. The study is participatory in nature. PAR fits well in the study, as it involves the researcher and the participants to work together to come up with the best strategy for improvement. The team would sit and draw up the programme about what the needs were, how to address them, when to meet for feedback, etc. The team would also come up with inputs and help in gathering of data throughout the study, until in the last chapter of findings and recommendations.

1.6 THE VALUE OF THE STUDY

The study was attempting to better development of the TP programme to acknowledge the nature of rural learning ecologies. The DBE would benefit by appointing new teachers who would be prepared to teach in rural schools. Learners and parents in the rural ecology will benefit from being taught by teachers who are better trained and prepared to work with the rural community. The study will also benefit the university by contributing to TP as a field of study and TP as a practice in rural schools.

1.7 ETHICAL CONSIDERATION

Permission to conduct the study was requested from the Faculty of Education at the University of the Free State, the Free State Department of Education (see appendix H) and the principal of the rural school under the study. Letters were used to request permission from all parties involved. Consent letters and informed consent forms to be signed were given to other co-researchers who took part in the study. Co-researchers were assured that they would remain anonymous and that they were participating voluntarily in the study. Furthermore, the Faculty of Education from the University of the Free State provided the ethical clearance to conduct the study (see Appendix G.).

1.8 LIMITATIONS TO THE STUDY

The study was limited to only rural schools and only five student teachers participating in the study. It is accepted that different rural schools may have challenges different from the ones identified. Again, other students placed in different rural schools may have different experiences and viewpoints according to unique situations. The positive results of the study may be implemented in other rural schools with similar challenges.

1.9 LAYOUT OF THE CHAPTERS

Chapter 1 focused on the background of the study, the research problem and research question.

Chapter 2 presented the theoretical framework and literature review.

Chapter 3 deals with data generation for the study.

Chapter 4 handled data presentation, analysis and interpretation.

Chapter 5 provides findings, recommendations and conclusion for the strategy to prepare teachers for sustainable rural learning ecologies.

1.10 CONCLUSION

The chapter provided the overview of the study about a constructivist framework to prepare teachers for sustainable rural learning ecologies. The research question, aim and the objectives of the study have been indicated. The significance of this study and the structure of the chapters have also been given. The next chapter will focus more on the literature review supporting the study, the theoretical lenses guiding the study and conceptual framework.

CHAPTER 2

THEORETICAL FRAMEWORK AND LITERATURE REVIEW ON A CONSTRUCTIVIST FRAMEWORK TO PREPARE TEACHERS FOR SUSTAINABLE RURAL LEARNING ECOLOGIES

2.1 INTRODUCTION

The current study aims to propose a constructivist framework to prepare teachers for sustainable rural ecologies. This chapter focuses on the theoretical framework and literature related to the envisaged framework. It explains Critical Emancipatory Research (CER) as the framework guiding the study and the reason why it was chosen for this study. The principles of CER are discussed in line with the objectives of the study. The chapter also discusses literature related to constructivism as a strategy to formulate the framework to prepare teachers for sustainable rural learning ecologies.

Characteristics of rural learning ecologies that need to be addressed during teacher education programme are also discussed in the chapter. Relevant research works and literature related to the research objectives stated in chapter one are discussed to address the research question. Consequently, the chapter responds to the calls and recommendations for reforms in the way student teachers are prepared for their role of teaching in rural schools using constructivism. From the theoretical and conceptual frameworks, the chapter discusses legislative imperatives, definitions of operational concepts and the conclusion as a summary of the chapter at the end.

2.2 DEFINITION OF OPERATIONAL CONCEPTS

This section clarifies the concepts used in the study to make it understandable to the readers.

2.2.1 Constructivism

Constructivism refers to a learning theory that learners construct knowledge from themselves, from each other and socially as they learn (Whatley 2009:94). Koohang, Riley and Smith (2009:91) affirms that constructivist learning theory focuses on knowledge construction based on learners' previous experience, is a good fit for skills

based learning, and further declares that it ensures learning among learners. Participants are creators of the learning content according to the constructivist approach in education (Toprak 2006:177). I chose constructivism to develop TP for rural learning ecologies, for student teachers as learners to the profession have to bring their existing ideas (cognitive constructivism of Piaget) and learn through others viewpoints (social constructivism of Vygotsky) to facilitate the lesson in rural schools where there are limited resources for teaching. Constructivism fits well with CER as the theoretical framework guiding the study to empower student teachers while in their study for the profession. Constructivism, like critical thinking, assisted student teachers in the study to pursue relevant and reliable knowledge about the world (Booth 2001:490). It also made them as learners in the study to be reasonable, reflective, responsible, and skilfully think, to be focused on deciding what to believe or do.

A person who thinks critically can ask appropriate questions, gather relevant information, efficiently and creatively sort through this information, reason logically from this information, and come to reliable and trustworthy conclusions about the world that enable one to live and act successfully in it. True critical thinking is higher-order thinking, enabling a person to, for example, responsibly judge between political candidates, serve on a murder trial jury, evaluate society's need for nuclear power plants, and assess the consequences of global warming. Critical thinking enables an individual to be a responsible citizen who contributes to society, and not be merely a consumer of society's distractions. Through critical thinking, student teachers were able to be creative and constructive to come up with alternative explanations for events, think of implications of research findings, and apply new knowledge to social and personal problems during TP programme.

2.2.2 Student teacher

A student is a person who is studying at a university or other place of higher education (Qahtani 2015:149). A student teacher is a student who is studying to become a professional teacher. A mentor is an experienced person in a company or educational institution who trains and counsels new employees or students.

2.2.3 Rural ecologies

Kızılaslan (2012:243) defines rurality according to five factors: underdevelopment, demography, urbanisation, higher education and industrialisation. Mukeredzi (2013:80) defines rurality by identifying Traditional Authority (TA) land composed of community owned land and commercial farms in former white areas of SA and former homeland areas as rural. The researcher referred to policies of apartheid in SA to define rurality by referring to the Land Act, the Group Areas' Act of 1953 and the Separate Development Act that forced native Black South Africans to live in rural or "homeland" areas. These former homelands are marked by considerably dense or sparsely populated village-style settlements and are characterized by poor infrastructure and inadequate services and facilities. The researcher further adds that the poorest and least developed SA rural schools are those that are located in the former homelands, particularly in KwaZulu-Natal, Eastern Cape, and Limpopo where the conditions of poverty and underdevelopment are reflected by the poor quality of education available there.

Mukeredzi (2009:3) further noted poor physical infrastructure, which limits public transport availability and, when available, it is expensive, which forces children to walk long distances to the nearest school. As such, most teachers who accept posts in these contexts are either professionally unqualified or under-qualified. The researcher indicates that Zimbabwean rural schools are located in sparsely populated villages. Avery (2013:29) describe a rural ecology as a school in an area that do not lie inside an urbanized area, and to be isolated with low population density and a small number of learners in a school. Rural learning ecologies is classified in three categories, as a regular rural school (located in the city but with less enrolment and less resources), as a special or vocational rural school and as alternative rural school. Student teachers in this study are placed in an alternative rural school, in an extreme remote place according to geographical location and with limited resources, public transport and teaching resources. The rural school in this study is a school located in a remote area (Greenough & Nelson 2015:324) with limited public transport (Mukeredzi 2009:3) to and from the school for teachers and learners.

2.2.4 Sustainable rural learning

Tsotetsi (2013:45) describes sustainable learning ecology as one of open discussion of educational issues with the community at large included in the education of a child. Hlalele (2013:565) further indicates that sustainable development involves the processes of change in society that contain at least seeing connections by relating functions to one another, offering support in a society that is more sustainable than is presently the case. The above researchers see sustainable learning as engagement of people in the same community with the same vision to improve life. The study therefore sees sustainable rural learning as learning ecologies that will bring about educational improvements in the rural communities. It is with reason that the study intends to improve TP to prepare teachers to learn the art of rural teaching while still studying for the profession.

2.3 THEORETICAL FRAMEWORK

The theoretical framework provided by the literature to couch this study is Critical Emancipatory Research (CER). CER is chosen to ground the study to enable interaction among co-researchers to work on equal basis (Nkoane 2012:99). This framework will couch the study to prepare teachers for sustainable learning ecologies by engaging co-researchers throughout the study and recognizing their views as they are involved. CER allows co-researchers to critically confront the way of seeing things when engaged with others who see the world differently (Kress 2011:271). I chose CER because it is in line with the aim of this study in preparing teachers, who are the main facilitators of learning in rural learning ecologies, for them to realize that it is common to see things differently than other people and learners, who can also have a different interpretation of their learning. CER in this study ensures that co-researchers are equal and the study sides with the oppressed, with the vulnerable, sees to it that the project is progressing in the right direction, and ensures that co-researchers are actively involved (Mohlomaholo 2009:225). Changing policies in education demands the implementation of new knowledge and creative and critical ways of thinking about the implementation of these changes (Omar 2013:2). Through CER, co-researchers are involved to participate in all activities pertaining to the study attempting to bring change. It follows that CER was chosen as the most apposite lens

for this study, as it encourages teamwork in which people are bound to share their thinking.

Thomas, Menon, Boruff, Rodriguez and Ahmed (2014:55) mention that individuals come to construct and apply knowledge in socially mediated contexts, and state that knowledge is a human construction and that the learner is an active participant in the learning process. Thomas *at al.* (2014) further indicate that learning is a result of the individual's interaction with the environment, and that knowledge is constructed as the learners make sense of their experiences in the world. It becomes clear from above researchers that social environment plays a critical role in the development of knowledge. The implication of this for my study is that CER ensures collaboration of co-researchers in working together to devise ways of using a constructivist framework for rural learning.

Demirci (2012:1486) cited Smith, Stanley and Shores (1957), Good, (1959) and Variş, (1997) to define education as effective social processes in which individuals earn their standards, beliefs and lifestyles as a society, and also as a process that provides optimum individual development and social adequacy under the influence of selected and restricted environments, especially of schools. Variş, (1997) defines education as the total of the processes in which an individual acquires certain acts in society. As mentioned above, education is a social phenomenon. The existing educational system should be handled through the consideration of this phenomenon and modern programme concepts and models should be created to meet the needs of today. From the above, I see CER as relevant for this study for its collaborative nature. Co-researchers in CER are treated and handled with respect and recognition of equality between them and the researcher (Mahlomaholo 2009:225).

CER sees co-researchers as other human beings, as equal subjects like the researcher. It sees the researcher as being tasked with the role of interpreting other people's interpretations and trying to make sense thereof. I adopted CER as my theoretical framework because of its principles that will better address the aim of the study. The aim of the study is to enhance a constructivist framework to prepare teachers for sustainable rural learning ecologies through TP. Principles of CER are that it is emancipating, it is transformative, socially orientated and democratic. The

following section outlines those principles of CER in detail and how they address the aim of the study.

2.3.1 CER is emancipatory

CER is empowering, changing people's lives and station in life, liberating them from less useful practices and thoughts, and meeting the needs of a real life situation:- it is useful and also methodologically consistent (Mahlomaholo 2009:223-226) . Biesta (2010:39) emphasizes the idea of emancipation as having a central role in modern educational theories and practices. He states that people to be emancipated become independent and free as result of intervention. Co-researchers worked together throughout the study to address issues affecting education in their rural ecologies and decided on the best approaches to improve the situation. This assisted because every teacher wants learners to become independent and autonomous, to be able to think for themselves, to make their own judgments and draw their own conclusions.

The study created a space for empowering co-researchers to understand their current situation and desire to change. Co-researchers in the study learnt the skills of the research field. The principle of CER as explained above empowered co-researchers in this study to convert their knowledge into actions (Nkoane 2009:22) to improve the teaching in rural learning ecologies. This principle of CER empowered them to openly identify the need to bring improvement in the teacher training programme. In this study, student teachers and experienced teachers at a rural school as research site participated in the issues related to their own society through rural learning ecologies. There were opportunities for discussion to point out views about life experiences and how to bring about changes and improvements where there is a need.

During TP, rural school teachers and parents in the rural ecologies of the marginalized group work collectively with the main researcher and TP officer to come to a common understanding of rural learning. Their voices were heard and acknowledged by the researchers in preparing teachers for rural teaching. The marginalized group of co-researchers contributed in the teacher preparation programme. The team felt useful in addressing the needs of their life experience as part of the rural society. The results of the study became the group's effort, not the researcher's alone. All these were achieved by involving them throughout the study. The principle of CER to empower

co-researchers also assisted to openly state the possible solutions to the study, as Biesta (2010:45) describes CER as a powerful tool for emancipation and empowerment. Their openness in the study made it easy for the researcher to identify the success and the threats of the envisaged framework.

2.3.2 CER is transformative

CER is transformative (Carrington & Selva 2010:46). It is founded upon anti-oppressive philosophy and is a lens through which to identify and change the root sources of oppression (Moleko 2014:18). This study used CER to transform the TP programme to address the needs of rural learning ecologies and to transform the marginalized rural community to contribute in improving the teacher programme. Moleko further notes that the practice of a more rigorous research that overtly intends to be liberating simply calls for a critical gaze that views current practice within a wider perspective, building theory in action and acting on theory. Through CER, the modes of enquiry were fostered to convert information into actions that address the problems (Nkoane 2009:22). TP in rural learning emancipated co-researchers by gaining understanding of the power relations that constitute their situation, which in turn requires demystification (Biesta, 2010:43) and to change the status quo, overcome injustice and alienation and promote participation of the people (Stahl 2008:4). CER in the study empowered the co-researchers throughout the strategic action from the dictates of compulsion, tradition, precedent, habit, coercion and deception.

2.3.3 CER is socially orientated

Kress (2011:257) mentions that CER is undeniably useful for revealing oppressive social structures and challenging the status quo, yet useful for creating knowledge structures when deployed on the ground. The researcher further indicates that knowledge is socially constructed, negotiated and shared; it is not a collection of objects that is owned and exchanged like currency. The process of TP, though CER in the study, assisted to differentiate in 'ways of knowing' possessed by diverse groups and peoples. This was because TP in education was not about the insertion of the individual into the existing order, but entailed orientation towards autonomy and freedom. This played an important role in the establishment of education as an

academic discipline (Biesta 2010:43). Furthermore, Demirci (2012:1845) defines education as effective social processes in which individuals earn their standards, beliefs and lifestyles as a society, and cited Good (1959) to define it as a process that provides optimum individual development and social adequacy under the influence of selected and restricted environments, especially of schools. The principle of CER as explained above therefore assisted in the understanding that the rural teacher preparation programme is a social issue that can be addressed by the community. The knowledge and experience of co-researchers were converted into actions to address the social problems (Nkoane 2009:22). The emancipatory agenda that CER promoted and assisted co-researchers to take charge of their situation, because the context in which they operated was one in which they were regarded as equal partners (Murugen 2008:23), and they were afforded respect with their voices heard and acknowledged.

Social constructivist method assisted student teachers to practice the method of teaching where learners construct knowledge on their own, and then assist them to learn new concepts, based on what they were doing individually. In constructivism, teachers should promote dialogue on the material in the class, so that learners can critically think about what they are learning. This study intends to enhance a TP programme using a constructivist approach to prepare teachers for sustainable rural learning ecologies. Student teachers allowed learners to participate actively in construction of knowledge, rather than passively receiving information presented by experienced teachers. Student teachers attempted to move from a largely theory-laden teacher education programme to a more practical, research-based approach to prepare themselves for their careers (Venter & Swanepoel 2008:226).

As mentioned above, the education system should be adjusted to address and meet the needs of the society. I adopted CER as my framework in the study because the above mentioned researchers confirm the importance of freedom of participation in the society, and constructivism as it is used in the study involves the engagement of learners in learning in their society. The co-researchers employing CER in the study were always vigilant in seeking out and challenging the oppressor who could resist dominance. The use of CER transformed the marginalized co-researchers from being oppressed to be at the level of the society by working together throughout the study.

2.3.4 CER is democratic

The TP process in rural learning for the teacher preparation programme was democratically conducted through CER. CER promoted collaboration amongst co-researchers without power relations that could exist if it was not implemented. The result of the study was the effort of the whole team, rather than individuals. Different people have different meanings and solutions to a problem, and CER encouraged the voices of co-researchers to be heard, and therefore it was easy to obtain as many solutions as possible during the study. Shared debate ultimately made it possible for the researcher to be analytical, achieve deeper meaning and look into all sides of the story (Mahlomaholo, 2009:225). Biesta (2010:39) argued that in order to liberate people from the oppressive workings of power and achieve emancipation, people first need to expose how power operates.

This study formulated a constructivist framework to prepare teachers for sustainable rural learning ecologies with the expectation to come up with as many solutions as possible. I adopted CER to free co-researchers in discussing their ideas and to come up with solutions without fear of power, as they were treated equally throughout the study.

2.4 The researcher and participants

This subsection explains the relationship that exist between the researcher in the study and other co-researchers using CER as a theoretical framework. CER helps the researcher to interact with the participants on an equal basis as partners, called co-researchers (Mahlomaholo 2009:13). The researcher in the study works with co-researchers, who among others include people who are marginalized without labelling their knowledge and experiences. The researcher and co-researchers work as partners towards a common goal for better change. All stakeholders in the TP programme are free to question the process until agreement is reached. Co-researchers work together from identification of the needs, coming up with positive inputs that are relevant to the study, until the envisaged framework is proposed. By so doing, co-researchers feel proud to be part of the research because they own the output of the study, as they are part of the social system wherein there is equality of

power in relation to opportunity, authority and control, as indicated by Watson and Watson (2011:68).

2.5 CONSTRUCTIVISM

The study is based on constructivism as the conceptual framework to prepare teachers for sustainable rural learning ecologies. Powell and Kalina (2009:245) cited Vygotsky (1978) to say constructivism is a cognitive development of culture, historical and social development where knowledge is constructed from the society (Vygotsky 1978). The above researchers further mention that children often learn easiest when others are involved. I adopted constructivism because it incorporates collaboration of student teachers, rural school teachers, rural school learners and parents as co-researchers in the study, for social interaction. Student teachers practised a constructivist approach during the TP programme in a rural school, for them to become professionally skilled teachers.

2.5.1 Historical Development of Constructivism

Vygotsky is the founder of constructivism (Vygotsky 1962). He believed that learning can be created from others, both from the same age and of higher age and development (Muijs & Reynold 2011:25). Vygotsky, as cited by Muijs and Reynold, believes that knowledge is embodied in action and interactions with the environment or living representative of culture. This study will prepare teachers to facilitate learning that exists in rural ecologies through interaction with the community. Katherine (2012:234) indicates that all of Vygotsky's research and theories are collectively involved in social constructivism. They indicate that building a classroom where interaction is prominent helps develop effective classrooms where leaning will take place. Vygotsky (1962) as cited by Katherine (2012) indicates that children often learn easiest within the zone when others are involved.

“An example would be an activity where a learner works on the assignment with aid from the teacher. Once a learner achieves the goal of the initial activity, their zone grows and the learner can do more. This involves the social constructivist method where learners act first on what they can do on their own and then with assistance from the teacher, they learn the new concept based on what they were doing individually.”

Vygotsky (1962) used scaffolding in his theory, to understand that children learn more effectively when they have others to support them. Scaffolding is an assisted learning process that supports the ZPD, or getting to the next level of understanding, of each student from the assistance of teachers, peers or other adults. For example, when a child learns to count objects alone he or she may miss a number; however, if a teacher holds their finger and points directly to the object with them, counting out loud together, the child can then do the counting correctly by themselves.

According to Vygotsky cooperative learning is an integral part of creating a deeper understanding. Cooperative learning is a part of creating a social constructivist classroom. Students should not only work with teachers one-on-one, but they should also work with other students. Students have a lot to offer one another. When learners master completion of projects or activities in a group, the internalization of knowledge occurs for each individual at a different rate according to their own experience. Vygotsky believed that internalization occurs more effectively when there is social interaction. Social constructivism and situated learning confirm Vygotsky's notion that learning is inherently social and embedded in a particular cultural setting (Woolfolk 2004: 326). The student teachers must first understand constructivist theories during their training for the profession, and practice it during TP in rural school.

2.5.2 The value of constructivism in rural learning ecologies

Constructivism is a way of how learners make sense of the material and how they can learn most effectively from what they know (Kharade & Thakkar, 2012:1). I used constructivism as an educational theory supporting TP, taking into account the rural learning ecology that acknowledges knowledge generating from the needs of society (Mvududu & Thiel-Burgess 2012:108). During TP, student teachers experienced a new environment of teaching and learning. Student teachers use available materials and knowledge of learners to make teaching more meaningful to learners. They adopted teaching from experienced teachers as members of the society to adapt to new learning ecologies. Olusegun (2015:67) mentioned that when people encounter something new, they have to reconcile it with previous experience to create own knowledge. Constructivist ideas are based on the fact that all learners construct knowledge for themselves, rather than knowledge coming from the teacher and being absorbed by learners (Muijs & Reynold 2011:79). The above researchers indicate that

learners know many things around them, it is just how to make meaning out of what is known to make knowledge meaningful. The use of constructivism in the study helps student teachers to make meaningful learning in teaching as a profession.

Chicoín (2004:248) identified five implications associated with constructivism. The first one is that knowledge is constructed by the learner, as opposed to being transmitted from teacher or text. Chicoín cited Phillips (1995:8), that for learning to take place, the learner must be actively constructing rather than passively receiving. The second is that learners construct new understandings in relation to what they already know, so that prior knowledge is a key factor in the new understandings the learner comes to develop. Thirdly, it synthesizes the first two concepts: the process of knowledge construction is an active one as well as one that engages both new and previous personal experience, and concludes that the learner creates new and unique understandings. Construction of knowledge through reconstruction of experience is synonymous with creating knowledge (Brooks and Brooks 1999; Phillips 1995). Fourthly, conflict between new experience and prior beliefs is essential to motivate the learning process. Fifth, and finally, constructivism implies that learning is primarily a social process (Phillips 1995; Vygotsky 1978).

Spring (2015:5) on the other hand identified three characteristics of alternative programmes to produce effective teachers. First, they are programmes that provide frequent on-going support from strong mentors and Institute of Higher Education supervisors likely to produce teachers who are effective. Second, programmes that place candidates in schools that are collegial, well-functioning, and built on evidence-based practices are likely to produce teachers who stay in the field longer and become more adept practitioners. Finally, teachers are more likely to effectively implement evidence-based practices when field experiences remain the central focus of the teacher preparation program, and the coursework and seminars are designed to enrich their understanding of the instruction. Yull, Blitz, Thompson, and Murray (2014:4) indicated three benefits of constructivism: that it promotes active learning for learners, it emphasises collaboration and it relates to the integration of technology.

The above implications associated with constructivism by Chicoín support three characteristics of alternative programmes to produce effective teachers, as mentioned by Spring. Student teachers learn from experienced teachers not to do teaching

where the teacher is transmitting knowledge to learners, but to allow learners to construct own knowledge in learning. Experienced rural school teachers give support to student teachers during the TP programme in a rural school by demonstration, while students observe and observe students doing teaching, and reflect with them after classroom teaching with other co-researchers, then assess them to see progress. This also improves the support by the Institution of Higher Education to students to produce teachers who are effective to teach in rural schools. The evidence-based practices from the TP programme is likely to serve to produce teachers who will stay in the field longer, especially in rural schools.

Mvududu and Thiel-Burgess (2012:110) further identify two notions encompassing the idea of constructed knowledge. The first is that learners construct new understandings using what they already know. This means that learners come to learning situations with knowledge gained from previous experiences. Here student teachers learn the art of teaching, having learnt many things in the class and having observed other teachers presenting lessons. The second notion is that learners are active rather than passive. It becomes clear from the above that student teachers become active in their learning, as they negotiate their understanding in light of what they encounter in the new learning situation (Mvududu & Thiel-Burgess, 2012:110). They learn that in constructivism a teacher is a facilitator who creates the opportunity for learning. Mvududu and Thiel-Burgess (2012:110) further indicate that constructivist teachers encourage group interaction, where the interplay among participants helps individual learners become explicit about own understanding by comparing it to that of their peers. Constructivism as a learning theory empowers learners to create knowledge from the resources available through socio-cultural means (Singh *et al.*).

The constructivist approach can be a successful strategy to align university courses with the real-life professional work student teachers are expected to undertake on graduation (Biggs & Tang, 2007). Student teachers will be ready to apply constructivism in their profession as teachers after graduation if they start acquainting themselves with it while still in their study. They will make their learners enjoy the social activity of group work to share different perspectives and understandings, and they will perceive their learning enhanced when the learning is self-directed. Hopefully with further familiarity of constructivist strategy, student teachers will strengthen their profession so they become more confident to work everywhere. Feedback will clearly

indicate whether the strategy is best, as compared to that of the traditional teaching and learning process in rural schools and whether they will be motivated to work in rural schools. Implementing change is difficult, and for this reason all student teachers must receive guidance from experienced teachers during WIL about how and why they are expected to work in new ways. Such knowledge is empowering for tertiary students.

2.5.3 Social constructivism in rural learning ecologies

Kress (2011:281) cited that knowledge is socially constructed, negotiated and shared; it is not a collection of objects that are owned and exchanged like currency. The implication of this for this study is that co-researchers work together to devise ways of using a constructivist framework for rural learning. There seems to be a social link between a constructivist approach and CER, as in CER, co-researchers are treated and handled with respect and recognition of equality between them and the researcher. CER also preaches closeness between the researcher and the researched and sees co-researchers as other human beings, as equal subjects like the researcher. It sees the researcher as being tasked with the role of interpreting other people's interpretations and trying to make sense thereof.

Social constructivism is a highly effective method of teaching that all students can benefit from, since collaboration and social interaction are incorporated (Powell & Kalima 2009:243). This type of constructivism was formed after Piaget had already described his theories involving individual or cognitive constructivism. Lev Vygotsky, the founding father of social constructivism, believed in social interaction and that it was an integral part of learning. Social constructivism is based on the social interactions in the classroom along with a personal critical thinking process. Mentorship during WIL enables student teachers to become more socialized and more collaborative in their learning to teach (Yang, Hu, Baranik and Lin 2012:410). Olusegun (2015:68) characterised a constructivist learning environment by shared knowledge between teachers and learners; learning groups; and emphasised learning in social experience as pedagogical goal of constructivism.

Social constructivist method helps student teachers to practise the method of teaching where learners construct knowledge on their own and then are assisted to learn the new concept based on what they are doing individually. In constructivism, teachers

promote dialogue on the material in the class so that learners can critically think about what they are learning. This study intended to propose a constructivist framework to prepare teachers for sustainable rural learning ecologies. Student teachers allowed learners to participate actively in construction of knowledge rather than passively receiving information presented by the lecturers or experienced teachers. They moved from theory-laden teacher education programmes to a more practical, research-based approach during WIL to prepare themselves for their careers (Venter & Swanepoel 2008:226). Student teachers started practising a constructivist approach in rural learning ecologies for them to become professionally skilled teachers in diverse learning ecologies.

2.5.4 Elements of constructivist teaching

The key element in constructivism is that the learner is an active contributor to the learning process, and that teaching methods should focus on what the student can bring to the learning situation, as much as on what is received from the environment. The role of the teacher in constructivist teaching is to be a facilitator of learning rather than a director, and to provide opportunities for individual learners to acquire knowledge and construct meaning through their own activities, and through discussion, reflection and the sharing of ideas with other learners with minimal corrective intervention (Rowe 2006:6). Muijs and Reynold (2011:80) mentioned that there must be connection between new ideas to prior knowledge where the teacher needs to find out what learners know about the new topic before teaching starts. It becomes clear from the researchers that teachers need to have prior knowledge of what the learners know on the lesson to be presented, to conduct a constructivist lessons effectively. This study intends to come up with a framework that will assist student teachers during TP programme to conduct a constructivist lesson to prepare them for sustainable rural learning ecologies.

2.6 WORK INTEGRATED LEARNING (WIL)

The Minimum Requirements for Teacher Education Qualifications (MRTEQ) pays close attention to the various types of knowledge that underpin teachers' practice. MRTEQ (19 February 2015) indicates that competent learning is always a mixture of the theoretical and the practical. It describes the types of learning associated with the acquisition, integration and application of knowledge for teaching purposes as

disciplinary learning, pedagogical learning, practical learning, fundamental learning and situational learning. Practical learning involves learning from and in practice. Learning from practice includes the study of practice, using discursive resources to analyse different practices across a variety of contexts, drawing from case studies, video records, lesson observations, etc., in order to theorise practice and form a basis for learning in practice.

Learning in practice involves teaching in authentic and simulated classroom environments. MRTEQ emphasises work-integrated learning (WIL) taking place in the workplace and including aspects of learning from practice (e.g. observing and reflecting on lessons taught by others), as well as learning in practice (e.g. preparing, teaching and reflecting on lessons presented by oneself). In the study I referred to WIL as school visits by student teachers for TP. TP is an important condition for the development of tacit knowledge for students, which is an essential component of learning to teach. TP is a process whereby student teachers practise the delivery of content to learners in actual teaching. It is meant to provide for the authentic context in which student teachers are exposed to experience in the schools (MRTEQ 2000:12). I see TP as a means to equip student teachers and to prepare them to serve learners when employed in schools. In all these expectations and training to become a professional teacher, the ecology in which learning occurs, the culture, and economy of the schools need to be considered. That is why I chose to conduct a study in rural schools.

2.6.1 Purpose of WIL

During WIL in rural school, student teachers are involved as a whole in schools; their cognitions, emotions, listening to the dilemmas, doubts and fears regarding their teaching practices, as well as their drives, beliefs and their expectations about the profession are attended (Caires, Almeida & Vieira 2012:166). Students visit schools on interval occasions during their professional training to do practical teaching as part of TP. Depending on the institution of higher learning students attend, they visit schools to observe experienced teachers presenting lessons in class to learners, and in their final year they visit schools to present lessons under supervision of experienced teachers. These experienced teachers are expected to mentor the student teachers for the prescribed period and to assess them once or twice in

classroom teaching. Lecturers from the institution also visit these students at schools to monitor the process and also to assess students in teaching. Some schools request these students via the institution to assist teach learners on Saturdays and during holidays, based on their commitment and knowledge of new changes in education.

The practice is also common in Lesotho for teacher training programmes to post student teachers to different schools away from the university site for internship (Bitso and Fourie 2014:20). The purpose is to give them an opportunity to learn and practise, in a natural school setting, the theories, knowledge, skills, values and attitude of the profession learnt at the university. According to Sirmaci (2010:649), to be a good teacher, besides having the theoretical foundation from the university, it is essential to gain teaching experience before beginning a teaching career. This is achieved through direct involvement within the school experience and teaching practice activities.

Makura and Zivera (2013:4) indicate that teacher education institutions in Zimbabwe adopted the principle of mentoring for their TP exercise. The basic expectation of mentoring is that a student teacher is attached to a qualified teacher, considered experienced and knowledgeable (Makura & Zivera 2013:4). A research was conducted in 2007-2008 at Mersin University about how to improve teacher education in three countries, Turkey, Germany, and Denmark. The findings of that research indicated that more practice was essential.

Evagorou, Dillon, Viiri and Albe (2015:105) mention that in England, France, Finland and Cyprus, first year education students observe lessons given by the class teacher or other student teachers. After the lecture, students usually have a group discussion session with the teacher. The main part of the training consists of lessons given by the students themselves. During these practice periods, students first present a discussion with the teacher who describes the type of lessons the students will experience. Practice schools are located in all universities that offer teacher education programs, and they belong to the faculty of education. These schools function as normal comprehensive schools, following the national curriculum. Additional qualifications are expected of the teachers, who become experienced supervisors. Some parts of the practice are done in the field schools, which are normal schools and represent the everyday practice of schools in general.

Literature by Eppley (2015:80) indicates that successful teaching and learning in rural schools require understanding of the rural context as a unique site of practice. The need for reform in the way teachers are prepared, versus lack of consensus on the aims of teacher preparation and how teacher preparation programmes should be structured (OECD, 2011:82), determines the quality of teachers to be produced. The study extends the continuation of teacher preparation that occupies academic discourse relating to student outcomes and student achievement. Roofe and Miller (2013:2) mentioned that there seems to be an inextricable link between student outcomes, quality of teaching and teacher preparation. The study attempts to use a constructivist framework in rural schools to prepare teachers for sustainable rural learning ecologies.

2.6.2 Stakeholders in WIL

Stakeholders in WIL are the student teachers who are mentees, experienced subject teachers who are mentors, lecturers who are visiting students to check progress, and school learners who learn at the same time with students. Karamustafaoolu (2009:172) indicates two fundamental approaches through which student teachers are educated during their professional training. They are educated in teaching theories before practising, and teaching theories while practising. Student teachers go through an education process based on theories during which they acquire knowledge of the field as well as how to teach in the field. Then, they are ready to practice all the knowledge and the skills they have learnt in practice schools for several weeks. This approach is called Teaching Practice (TP). Karamustafaoolu describes the approach of teaching theories while practising as based on the statement of 'real learning comes with practice'. The researcher further indicates that experience guides a person, and practice makes learning perfect.

The USA emphasises more teaching theories while practising, rather than teaching theories before practising (Karamustafaoolu 2009:173). It is stated that teacher education should give student teachers an opportunity of using the professional knowledge and skills in a teaching atmosphere. Martins, Caires, Almeida and Vieira (2010) conducted research to identify and assess student teachers' feelings and perceptions regarding their own TP, as well as the impact of this experience on their

personal and professional development. I extend the study to further improve TP in preparing teachers for sustainable learning ecologies using constructivism.

South Africa employs TP as an important part of teacher training like in other developing countries where the effectiveness of TP can be diminished or eroded by a range of challenges, such as geographical distance, low and uneven levels of teacher expertise, a wide-ranging lack of resources as well as a lack of discipline among a wide cross-section of teachers. Consequently, as suggested by the South African Norms and Standards for Educators (2000:12), TP is meant to provide for the authentic context within which student teachers are exposed to experience in the schools. This process allows the student teacher an opportunity to establish whether the right career choice has been made or not.

Zimbabwe adopted three models for development of teacher education. The first model is the apprenticeship model or school-based model. In this model, the training of teachers is school based with the experienced classroom teacher playing the major role. All that is needed is for a trainee teacher to spend time with an experienced teacher in school to pick up “tips on teaching”. The model emphasizes the acquisition of practical teaching skills at the expense of theory. The second model is the college-based model in which much of the training takes place in the training institution with the school facilitating teaching practice for a shorter period. This has been the traditional method used by conventional teachers’ colleges in Zimbabwe. The training programme is three years. Student teachers spend the first year in college studying the theory of education and professional foundations, the second year on TP in the schools and the third year back in college to write the research project and examinations. The major limitation of the model is that it puts more emphasis on theory of education at the expense of practice and takes too long to produce qualified teachers, especially in the face of a national crisis of teacher shortage. The third model is the equal partnership model involving the training institution, the school and the government, with the training institution teaching theory, the school facilitating TP and the government providing funding. The training programme is normally four years. Students spend the first and third years in college studying theory of education and professional foundations. The second and fourth years are spent on teaching practice in schools (Muyengwa & Bukaliya 2015:53).

2.6.3 COMPONENTS OF TP

This subsection discusses mentoring and micro-teaching as components of WIL and how they influence the constructivist framework to prepare teachers for sustainable rural learning.

2.6.3.1 Mentorship

Mentorship is a process whereby an experienced, highly regarded, empathic person (the mentor) guides another usually inexperienced individual (the mentee) in the development and re-examination of their own ideas, learning and personal or professional development (Qahtani 2015:149). Qahtani further indicates that mentorship includes a dynamic, reciprocal relationship in a work environment between a mentor and a beginner aimed at promoting the development of both. Mentoring involves an integrated approach to advising, coaching and nurturing, focused on creating a viable relationship to enhance individual career, personal and professional growth and development. Student teachers as mentees in the study are attached to experienced teachers as their mentors at schools during TP. Experienced teachers are expected to support student teachers for them to implement what they learnt at work after graduating.

The three models of teacher training in Zimbabwe adopted the principle of mentoring for their TP exercise. The basic expectation of mentoring is that a student teacher is attached to a qualified teacher, considered experienced and knowledgeable (Makura & Zireva 2013:4). A research study was conducted in 2007-2008 at Mersin University about how to improve teacher education in three countries: Turkey, Germany, and Denmark. The findings of that research indicated that more practice was essential. Malaysia and the UK use modelling as essential approach in which student teachers do practice the theories of teaching during their training (Jarvis, Dickerson, Thomas & Graham 2014:96). Student teachers model the skills of teaching in practice. Loughran, Russell and Korthagen (2006:1026) has stressed the importance and value of modelling and suggested that within the context of teacher education it means teaching about two things simultaneously: the content under consideration and the teaching employed to convey that content.

Jarvis *et al.*(2014:96) identified four 'layers' of modelling used in Malaysia and the UK: modelling by staff to student teachers; modelling by student teachers to enable them to explore and gain practical experience of teaching with the lecturers and their peers in the Institute; modelling by student teachers to learners in school; and finally modelling by pupils. The researchers indicate Malaysian culture accepting the idea of modelling in relation to learning and teaching linked to the concept of the teacher providing a good example for the learners. Literature cited above indicates that teacher education institutions in many countries like the USA, Zimbabwe, Malaysia and the UK use practical teaching as part of teacher qualifications. Malaysia and UK use four “layers” of modelling (Jarvis *et al.* 2014:96) and SA is using TP. Modelling and TP are common in the sense that both are practical teaching in the institution of teacher education and in practicing schools. In this study, TP is done in a rural school which was marginalised, with experienced teachers in the school to mentor student teachers.

Mentorship is done in SA where students are attached to experienced subject teachers to mentor them during the TP programme. The mentorship is important for TP because it provides students with the opportunity to discuss content, skills and other teaching methods learnt at the university with teachers working with learners on daily bases. These teachers demonstrate teaching to student teachers in a natural classroom setting, observe them doing teaching, reflect with them on their teaching experience and assess them to monitor progress. Teachers complete assessment report forms during the TP programme for students to produce at university as evidence of mentoring. The study extends TP to a rural school which was marginalised, for experienced rural school teachers to mentor student teachers in preparing them for sustainable rural learning ecologies.

2.6.3.2 Micro-teaching

Micro-teaching is a method of TP that provides opportunity for student teachers to practise teaching skills in an artificial environment (Bakir 2014:789). Micro-teaching was first developed as part of an experimental program conducted to train high quality teachers (Bakir 2014:790). It helps students gain professional experience before employment and it enables them to apply theoretical knowledge. The micro-teaching was first applied in teacher education programmes at Stanford University in the early

1960s and early 1970s. It is used to improve prospective teachers' teaching skills and experiences in the natural classroom environment today (Bakir 2014:790). This technique provides monitoring the realization of a particular skill for students in a small learning event and enables them to follow a more objective evaluation by monitoring shortcomings and mistakes of individuals' own behaviours, and the positive and negative aspects of this method.

Micro-teaching is part of TP where student teachers prepare and present short lessons to a group of learners and then reflect on their teaching experience (Thomas & Diana 2013:151). In micro-teaching, lessons are presented on a videotape device to enable participants to analyse the footage of the lesson (Thomas & Diana 2013:152; Donnelly & Fitzmaurice 2011:335). The main objective of a micro-teaching lesson is to get feedback from peers, from the lecturer and from the self as observing the lesson from the video. Thomas and Diana (2013) indicate three steps of micro-teaching as planning, teaching and reflecting. Arsal (2014:444) defines micro-teaching as a system of controlled practice that makes it possible to concentrate on specified teaching behaviour and to practise teaching under controlled conditions. Arsal emphasises six stages of the micro-teaching model cycle, as developed at Stanford University in the early 1960s by Allen and Ryan (1969). The model consists of: Plan, Teach and Observe, Re-plan, Re-teach and Re-observe. At the plan stage the student teachers determine related objectives of the lesson. This stage also determines the assessment criteria and feedback sessions. At the teaching stage, the student teachers implement their lesson plans to a small group of learners. The lesson is observed and video recorded by the lecturer. At the observation stage, the lecturer observes the performance of the student teachers and provides them with feedback.

A video record makes it easier for the lecturer to give feedback to the student teachers about their performances. If the performances of student teachers are not recorded on a video recorder, it can be difficult to remember the positive and negative behaviours, and thus misleading and inadequate feedback can be given. At the re-plan stage, the student teacher prepares a new lesson plan for the same lesson, or a different subject, to use the teaching skills more effectively in the light of the comments and feedback of the lecturer. At the re-teach stage, a revised lesson is taught to a different but comparable group of learners. At the last stage, the teaching practice is observed and video recorded again. The lecturer evaluates the teaching performance of the student

teachers according to the evaluation criteria, which is the most important component of microteaching at which the behaviours of student teachers can be changed in the desired direction. Each stage is devoted to the practise of skills, such as setting the beginning and ending of the lesson, effective questioning, learner reinforcement and participation.

Arsal (2014:454) identified the benefits of micro-teaching by citing different researchers as follows: Micro-teaching exposes student teachers to the realities of teaching in an authentic teaching situation. The statement indicates that micro-teaching reduces the complexity of the real classroom teaching situation by allowing students opportunity to practice. Secondly, student teachers become more efficient in planning and applying teaching activities and methods because many of the factors that affect teaching can easily be manipulated in micro-teaching training. Third, micro-teaching develops the communication skills of student teachers by enabling them to experience a collaboration-based learning process. During this process, student teachers discuss, engage in dialogues with each other and have an opportunity for cooperation and knowledge sharing (Dawson, Pringle & Adams 2003:43).

Finally, micro-teaching develops the self-confidence of student teachers in the planning and implementation of teaching. Student teachers might have a fear of what to do and how to do it when they encounter learners in school. Overall, micro-teaching encourages student teachers to evaluate their teaching skills and performance. In a micro-teaching experience, student teachers encountering difficulties of teaching learn how to be successful in teaching. When watching and analysing the video recording, the lecturer and peers provide feedback to the student teachers to enable them to see their mistakes and to correct those behaviours that are unnecessary or undesired (Kpanja 2001:484). Student teachers who have experienced micro-teaching perceived feedback as a very beneficial tool to pursue their professional development more effectively.

It becomes clear from above that mentorship and micro-teaching are important for teacher training programmes. For this study, student teachers incorporate two components to prepare themselves for rural learning ecologies. They visit rural schools for TP process to gain experience of the rural environment and become part of the rural community before employment. Student teachers teach under supervision

of rural school teachers as their mentors for the period of TP. In micro-teaching class, students practice the constructivist teaching approach as part of learning to teach by not relying only on the textbooks for resources. They allow their peers, who act as learners, to construct knowledge from own experience. The process of micro-teaching is recorded for students to evaluate themselves after the class.

2.7 THE NEED ANALYSIS REGARDING A CONSTRUCTIVIST FRAMEWORK TO PREPARE TEACHERS FOR SUSTAINABLE RURAL LEARNING ECOLOGIES.

The following section discusses the challenges in TP to prepare teachers for sustainable rural learning ecologies as the first objective of the whole study.

2.7.1 Lack of collaboration between the Teacher Education Institution (TEI) and the rural learning ecologies.

The teacher education programme is effective if all education involved include mutual relationship between the institutions that are working together to prepare teachers. In this study, the TEI and rural school should work in collaboration to better prepare teachers for sustainable rural learning ecologies. Rural schools fail to fulfil their responsibilities effectively to assist in mentoring student teachers. Communication is not effective between the university and rural schools because of long distance between them. This long distance, without public transport makes it difficult for student teachers to do their TP programme there. Literature also shows that practice schools feel that counselling instructors are fully responsible for student teachers (Karamustafaoolu 2009:173). Student teachers are given little chance to put theoretical knowledge into practice in a systematic and controlled way.

Another challenge faced by HEI is that experienced teachers who are mentors are complaining about the paperwork they must complete in mentoring and assessing student teachers. They indicate it consumes their time as they have other things to do during their free time at school. Other mentors complete assessment forms without visiting students in class and these give results that are not authentic. Practice schools indicate that student teachers waste learners' time because serving teachers take advantage of sitting in staff rooms doing nothing. At the end, they realise that learners are not taught effectively and they start blaming the institution of high learning. Some

principals complain about unavailability of space (staffroom) to accommodate more student teachers.

Geographic isolation of rural schools also provides little opportunity for student teachers to do their TP in rural schools because of long distance from the campus or from their homes to schools and there is no daily transport to use. Adedoyin and Shangodoyin (2010:161) also indicate that the present educational system in Botswana has failed to adequately prepare students for life and work in the 21st century. The statement emphasises the fact that students in the 21st century need to learn work while studying, for them to be adequately prepared for the work. This shows a need for collaboration between workplace and the HEI. Therefore this study intends to contribute to the body of knowledge, to prepare teachers for sustainable rural learning ecologies using a constructivist learning approach.

2.7.2 TEIs and schools fail to involve parents in rural learning ecologies.

Parents are not adequately involved in school activities because of some reasons and their different commitments. Park and Holloway (2013:107) conducted a research in the United States and found that parents who do not speak English or who are not familiar with the educational system in the United States find it difficult to participate at the school site. This is the case with parents in rural schools; they do not participate because they feel education is for people who have qualification in the field. It is also the practice in South Africa that parents are obedient and respectful of the cultural practice within the community (Tsoetsi 2013:177). The cultural practice of parents, according to Tsoetsi, is one of receiving information from officials. Parents in rural schools are not actively involved in the school activities. They have low self-esteem and have high respect for the school authorities. Parents rely more on the school authorities for everything regarding education, which makes them not take responsibility for the education of their children. According to Wilder (2014:378), the research that manages to investigate the effect of parental involvement is rare but is valuable and able to provide a more realistic picture of the effect of parental involvement on student achievement.

In a constructivist lesson, the teacher should understand the community where learners come from and the background of their learners because learners construct

knowledge from their experience, and social interaction in the community. For this to be possible, teachers who would want to work in rural schools should do their TP in rural learning ecologies for them to understand the rural community better before employment. To learn constructivist teaching for rural schools, they should be placed in a rural school during TP to do teaching in practice. The study through CER as the framework in the study seeks to involve parents during the WIL for them to assist in preparing teachers for sustainable rural learning ecologies. The involvement will change the behaviour of the rural school's community who project themselves as not competent in rural schools. The study attempts to boost their self-esteem and not to rely predominantly on the school authorities. Parents rely on the school authorities for everything for learners which makes them not take responsibility for the education of their children.

2.7.3 Limited support from the government to rural learning ecologies.

Public schools, including the rural school under study, depend on the DBE for human resources, infrastructure and financial support for it to run effectively. Human resources include employment of staff members, infrastructure includes buildings and other equipment used for teaching and learning, Learning and Teaching Support Material (LTSM), and school transport to schools. The DBE is closing down small rural schools to place learners into bigger schools, some to schools with hostels. This closure of remote schools place greater pressure on some learners and their families because learners without transport will have to travel long distance to the nearest schools. Living expenses also increase as learners are placed in the hostels to attend the new school (Zhao & Parolin 2012:714). Some learners walk long distances to a bigger rural school.

The closure of small rural school is detrimental to learners, limits their after-school free time and presents a barrier to participation in extracurricular activities. Student teachers fail to do extracurricular activities in rural schools during TP as learners travel long distance to their home after school. The number of educators employed in a school influences the effective management of TP programme. Each student teacher should be attached to one mentor and one mentor to one student teacher. In rural schools, one teacher teaches many subjects in different grades, which results in two or more student teachers being attached to one mentor. Some rural school teachers

are teaching subjects that are not their specialisation, and this brings conflict between them and student teachers who specialise in those subjects.

2.7.4 Demotivated rural school teachers for rural learning ecologies.

The demand for teachers in most African countries leads to the recruitment of professionally unqualified and under-qualified teachers in rural schools by the government (Mukeredzi 2013:84). Mukeredzi indicates that these teachers are placed in rural schools because many qualified teachers have more choice and prefer to work in urban schools. Van Wyk (1996:35) identifies the poor level of teaching at many rural schools and the lack of purposeful planning as another challenge because of poor working conditions. Van Wyk mentions that the best qualified teachers seldom applied for posts at rural schools. Harries, Holdman, Clark and Harries (2005:23) indicated that the declining enrolments in rural schools reduce state funding to districts, and make it hard for districts to recruit and retain highly qualified teachers.

The above paragraph shows a compromise to the quality of TP programme by providing inadequate support to student teachers. Many teachers employed in rural schools are not there by choice; they are there for the sake of employment. Unqualified and under-qualified rural school teachers serve to mentor student teachers. Although these teachers have teaching experience in rural learning ecologies, they may feel threatened to correct final year student teachers teaching a specialisation subject. They may be tempted to learn from student teachers rather than mentoring them. The assessment results indicated by the teacher as a mentor may be subjective.

2.7.5 Failure to allow learners to construct own knowledge in the lesson.

The research on student teacher learning (Ahonen, Pyhältö, Pietarinen and Soini 2015:90) demonstrates that student teachers' personal conceptions of teaching and their roles as future teachers can exert a powerful influence on learning and professional knowledge construction. Teacher education lacks adequate opportunities for constructing a meaningful and coherent professional knowledge and belief system. Student teachers adopt different and sometimes contradictory beliefs from varying learning contexts in teacher education. Conceptions of learning in

particular tend to be fragmented, and the coherence or lack of it in terms of conceptions of learners and their own learning are proven to have a strong influence on teachers' pedagogical practices (Bolhuis & Voeten, 2004:78). Ahonen *et al.* believe that student teachers' learning and learning outcomes strongly depend on the pedagogical practices of teacher education, and that parts of the education is felt to be more efficient than others. The study attempts to prepare and equip student teachers for sustainable rural learning ecologies, as Quick and Sieboger (2005:2) indicate that academic programmes do not adequately prepare student teachers for the realities of the profession.

2.8 SOLUTIONS TO THE CHALLENGES OF A CONSTRUCTIVIST FRAMEWORK FOR RURAL LEARNING ECOLOGIES.

For a constructivist framework in rural learning ecologies to be implemented with great success, better solutions for the framework should be reviewed and implemented. This section outlines the second objective of the study to find a solution to the challenges of the framework in rural learning ecologies using constructivism.

2.8.1 Collaboration between the TEI and the rural learning ecologies.

Research has indicated that students tend to succeed to a greater degree when both student learning styles and the learning environment provided by teachers are consistent (Singh, Stuart, Yager, Yutakom, Robert & Ali 2012:198). These researchers indicate for student teachers' learning to teach to be effective, the practising environment need to be is accommodative. Singh *et al.* also suggest that it is only through active engagement of students that the desired learning outcomes can be achieved. Constructivist theory suggests that individuals gain real knowledge through the use of their senses. In terms of student learning, constructivist theory asserts that for real learning, students must be permitted to interact with their learning environments. From the above, I find that teachers teaching in rural schools must be familiar with the environment their learners are coming from, to interact well with them. If this interaction does not occur, learning is not maximized. Apparently, teachers must challenge learners to learn. They must encourage them to use their own experiences as they make new ideas applicable to the world in which they currently live (Bukova-Guzel, 2007:1190).

The Minimum Requirements for Teacher Education Qualification (MRTEQ 2015:8) indicates pedagogical learning and practical learning among others as the types of learning associated with the acquisition, integration and application of knowledge for teaching purposes. Pedagogical learning and practical learning are other types of learning student teachers must acquire during their professional training. Pedagogical learning includes knowledge of learners, learning, curriculum and assessment strategies, specialised content knowledge and teaching methods. Practical knowledge involves learning in and from practice. Learning from practice includes the study of practice, using discursive resources to analyse different practices across a variety of contexts, video records, lesson observations, and teaching in authentic and simulated classroom environments. The document regards practical learning as an essential component of learning to teach. Driscoll (2005:159) writes that learning is a co-constructed process in which all participants change and are transformed through their actions and relations in the world. This indicates a need for the study to afford student teachers opportunity to collaborate with people with experience of the world for them to learn about the new environment.

Wilen and Phillips (1995:135-138) indicated that in South Africa conditions were created in such a way that learners generate their own knowledge; learners discover answers which are therefore more memorable; divergent, creative thinking is encouraged; and high order thinking skills (analysis, synthesis, evaluation) are emphasized. Skills are integrated with knowledge as learners organize and analyse their data in a variety of ways using constructivism. TP in rural ecologies provides a space for student teachers to practice skills learnt in lecture class and in authentic environment. As a result of the above, the study encourages student teachers to use active strategies whereby they take responsibility for their own learning, working in groups to allow them to develop a wide range of skills. Engagement of students in their practical learning is one of the elements of constructivism to prepare teachers for sustainable rural learning ecologies.

2.8.2 Involvement of parents in rural learning ecologies.

Park and Holloway (2013:106) and Bui and Rush (2011:475) defined parental involvement in four categories, as parents' participation in school activities and programs, communication with their child about school, restrictions at home that

support learning, and educational expectations for their child. The above researchers found the parents' educational expectations for their child as important for academic development, compared to other involvements. The study conducted by Wilder (2014:393) also confirms that parental involvement significantly contributes to reduce the achievement gap between different ethnic groups. However, while the results of the meta-analyses confirmed the positive impact of parental involvement on achievement regardless of the ethnicity of students, some of these findings indicated that the impact was stronger for certain ethnic groups. Children whose parents are aware of their school work are more likely to achieve well, than children whose parents are not so engaged (Goodall & Ghent 2014:333). This study extends to involve parents in the TP programme to assist student teachers in rural schools to understand the rural ecology. Collaboration of student teachers and parents through their experience in rural ecologies assists to practice constructivist teaching and learning.

2.8.3 Government support to the rural learning ecologies.

The Department of Basic Education (DBE) introduced a bursary called the Funza Lushaka Bursary Programme to fund students that will work in rural schools after completion of their degrees. The Information Guide on Initial Teacher Education (DBE, n.d:13) indicates that students funded through this programme are expected to teach in rural schools where they will be placed. Therefore, the initiative serves as a means of recruitment for new qualified teachers to work in rural schools. The study attempts to prepare student teachers for sustainable rural learning ecologies. MRTEQ provided HEI with guidelines on the placement of student teachers for TP (Okeke, Abongdia, Adu, Van Wyk and Wolhuter 2016:210). This policy describes TP as work-integrated learning (WIL) and how the HEI should implement it for Bachelor of Education (BEd) degree and Post graduate degree (PGCE) students (MRTEQ 2015:18-29). For this study, WIL is conducted in rural school to prepare student teachers for sustainable rural learning ecologies.

Peterson, Bornemann, Lydon and West (2015:282) indicate that rural schools must often employ teachers with multiple subject endorsements to teach various classes and grade levels. They mentioned that even in the higher average teacher tenure in rural schools, the percentage of teachers with advanced degrees is smaller. This makes it difficult in mentoring student teachers in rural learning ecologies during TP,

and the university is depending on experienced and qualified teachers to mentor students. Teachers in rural schools have the burden of extra work even though they spend less time teaching (Qinyang 2013:81). Teaching is particularly onerous because teachers have extremely heavy workloads each day in correcting homework and preparing activities for different classes. Teachers in rural schools have to bear responsibility not only for learners' learning, but also for their lives and safety. They generally feel mentally and physically exhausted. With all these frustrations for rural school teachers, the teacher education institutions expect them to mentor student teachers during TP.

2.8.4 Motivation of teachers and student teachers for rural learning ecologies.

Spring (2015:5) identified that alternative preparation programmes are more likely to produce effective teachers. First, programmes that provide frequent on-going support from strong mentors and Institute of Higher Education supervisors are likely to produce teachers with effective instruction and management skills (Grossman 2010:7). Second, programmes that place candidates in schools that are well-functioning, and built on evidence-based practices, are likely to produce teachers who stay in the field longer and become more adept practitioners. Finally, teachers are more likely to effectively implement evidence-based practices when field experiences remain the central focus of the teacher preparation program, and the coursework and seminars are designed to enrich their understanding of the instruction and management practices that support the evidence-based model.

Student teachers get motivated to engage in rural learning ecologies while still studying for the profession. They are respected by learners and parents in the school as teachers. It pointed out that the teacher oversupply had run its course, that the teaching profession is an ageing one, and that South Africa is in need not only of upgraded, better-qualified teachers already in service, but also of a supply of newly graduated teachers (Mda and Erasmus, 2008:8).

These studies paved the way for a move beyond the redistribution thinking and policies of the earlier post-apartheid period, to tackling expansion and supply-side problems through different means, without losing focus on quality. NTEDC noted the need for geographic redistributive demand to fill all posts in rural and other difficult-to-fill schools. In attempting to fulfil this need, the NTEDC came up with another strategy to

increase recruitment of teachers in rural areas. This geographically differentiated demand led to a point where teachers appointed in rural schools to be effective become incentivized as to support them. All these attempts challenge the teacher education institutions to intensify their programmes in order to produce high quality teachers who will serve for sustainable rural learning ecologies.

2.8.5 Implementation of constructivist teaching and learning in rural ecologies.

Student teachers need to understand constructivism to be prepared for sustainable rural learning ecologies. The workshop on constructivism must be conducted before students go to schools for TP. Constructivism is a learning method where learners construct their own meaning to formulate new knowledge from interaction with the environment rather than receiving information from the teacher. Sharma (2011:4) confirms that in order for learners to be able to actively construct their own knowledge, rather than receive preformed information transmitted by others, curriculum emphases, classroom interactions, and classroom dynamics must change in many ways.

Student teachers must understand the role of the teachers in a constructivist classroom. Constructivist method is more relevant in the learning environment where the resources are limited like in many rural schools. The teacher as the facilitator of learning should conduct his/her lesson from what learners know. In a constructivist classroom, teachers search for learners' understanding, and then structure learning opportunities for learners to revise the understandings by posing contradictions, presenting new information, asking questions, encouraging research, and engaging learners in inquiries designed to challenge current concepts. Murphy, K.L.; Sue E. Mahoney, S.E.; Chun-Ying, C.; Mendoza-Diazd, N.V. and Yang, X. (2005:343) indicate individuals create or construct knowledge by attempting to bring meaning to new information and to integrate this knowledge with their prior experience in their communication with others. In this study, student teachers used constructivist teaching to meeting learners "where they are" and helping them move to higher levels of knowledge and understanding; through continuous assessment.

2.9 CONDITIONS CONDUCTIVE TO A CONSTRUCTIVIST FRAMEWORK IN RURAL LEARNING ECOLOGIES.

This section outlines the third objective of the study, to discuss better conditions for TP in rural learning ecologies.

2.9.1 Collaboration between the TEI and the rural learning ecologies.

The South African education system has undergone a major transformation since 1994. The curriculum changes from Outcomes Based Education (OBE), later National Curriculum Statement (NCS), and Revised National Curriculum Statement (RNCS) to Curriculum Assessment Policy Statement (CAPS) represent a radical paradigm shift. Lelliot, Mwakapenda, Doidge, du Pessis Mhlolo, Msimanga, Mundalamo, Nakedi and Bowie (2009:51) indicates that OBE was greeted with resistance by most educators. Schlebusch and Thobedi (2004:40) confirm that most educators were still using traditional ways of teaching as they did not possess sufficient knowledge of OBE, hence struggling to use other approaches to learning.

The Legislation Act 108 of 1996 of SA is the basis for curriculum changes and development. The Preamble of the Act states the aim of the constitution to heal division of the past and establish a society based on democratic values, social justice and fundamental human rights, improve the quality of life for all citizens and build a united democracy and lay the foundations for a democratic and open society in which government is based on the will of the people (NCS 2001:1). The NCS policy further stresses that OBE forms the foundation of the curriculum in SA to enable all learners to achieve to their maximum ability.

The study conducted in Britain claims that learners of today lack independent thinking skills, particularly critical thinking skills. Booth (2001:477) further indicated that in recent years the language of skills, and particularly transferable skills, has raised sharply up the education agenda in many countries including Britain. The study conducted in Nigeria (Ofoa 2011:74) found that learners after completing their schooling become inactive citizens of the country due to lack of skills, implying that learners were not taught those skills. It was also found in Nigerian Education, that learners lack interest in class due to the fact that most educators are still using the lecture method (Abdu-Raheem 2011:294). Education requires that young people be

given the opportunity necessary for the acquisition of the knowledge, skills, attitudes and values which will enable them lead happy and productive lives as individuals and discharge their social duties for the betterment of life in the society. I find all the statements indicating the need for student teachers to learn a different teaching approach of which constructivism is one, to effectively teach learners after graduating.

2.9.2 Involvement of parents in rural learning ecologies.

The study conducted by Goodall and Ghent (2014:333) shows that children whose parents are aware of their school work are more likely to achieve well than children whose parents are not so engaged. Park and Holloway (2013:105) further indicated the parents' involvement in their children's schooling has long been believed to promote a range of positive child outcomes, including academic achievement, engagement in schoolwork, and lower dropout rates. Another study conducted by Wilder (2013:177) found that school administrators, teachers and policy-makers who have interwoven different aspects of parental involvement in new educational initiatives and reforms, recognise positive impacts brought about by the parental involvement in student academic outcomes. The researcher indicates that parents are recognised as valuable when they are involved in the education of their children. Learners whose parents are aware of their school work are more likely to achieve well than those whose parents are not so involved. Goodall and Ghent (2014:333) encompass the idea that parents conceive their role to be in education and have beliefs, including ideas about their rights and responsibilities. The parental involvement also includes 'social expectations and scripts that guide group members' behaviour in various situations'. In this study, parents with their rural experience will be assisting student teachers in TP about rural ecologies. They will interact daily with student teachers who will share ideas about learners' learning.

2.9.3 Government support to the rural learning ecologies.

The Revised National Curriculum Statement (2002:22), embodies the vision for general education to move away from a racist, apartheid, model of learning and teaching, to a liberating, nation-building, and learner-centred outcomes-based initiative. At the centre of its vision are learners who will be inspired by values of a society based on respect for democracy, equality, human dignity, life and social justice. The curriculum seeks to create a lifelong learner who is confident and

independent, literate, numerate, multi-skilled, compassionate, with a respect for the environment and the ability to participate in society as a critical and active citizen. Teachers are seen as key contributors to the transformation of education in SA.

The outcomes in NCS (2002:1) encourage a learner-centred and activity-based approach to education, and constructivist learning addresses this outcome. Teachers set a problem as a challenge or idea in class for learners to solve. This promotes creative thinking for learners and a great variety of suggestions or solutions to a problem are discovered by learners (Burton 2006:203). The kind of a learner that is envisaged is one who will be inspired by democratic values, who will act in the interest of a society based on respect for democracy, equality, human dignity, life and social justice (NCS 2002:5). CAPS (2011:8) instructs that the curriculum has to inculcate the following skills in the learners: understanding, interpreting, evaluating, participating constructively and engaging critically with issues affecting society.

2.9.4 Motivation of teachers and student teachers in rural learning ecologies.

Sun, Jiang, Chu and Qian (2014:1690) indicate that with the grateful emotions, individuals with high gratitude tend to experience more optimism, vitality, religiousness, and spirituality which may result in high levels of school well-being. Mosikidi (2012:18) indicates that motivation stimulates people to act in a goal-directed way. Lunenburg and Ornstein (2012: 80) refer to motivation as an internal condition or state that activates human beings to behave in a particular manner. Berg and Theron (2001:166) also indicate that purposeful and organized behaviour in human beings results from motivation. The above researchers show that human behaviour of rural schools' teachers must be goal-directed to satisfy the needs of the teaching profession. If teachers in rural schools are motivated and their morale boosted, they will likely feel positive about their work. This will also serve to motivate student teachers doing TP in the rural school.

2.9.5 Implementation of constructivism in a rural learning ecology.

A new curriculum was launched and implemented to promote the development of rural education in mainland China and indicated a success (Wang & Zhao 2011:37). The new curriculum was aimed to be learner centred, emphasized learning to learn and learning in an active and lively way, and promoting the active participation of learners,

a willingness to explore, and an eagerness to get to work. The findings of the research indicated that the new curriculum of learner-centred and active participation stimulated the learning motivation of rural school learners which has also improved school attendance. The study revealed that the Ministry of Education in China made clear the principle of training, before starting work to implement the new curriculum (Ministry of Education, China National Commission for UNESCO 2008).

The study attempts to equip the student teachers with the skills of constructivism in order to prepare them for sustainable rural learning ecologies. Slavich and Zimbardo (2012:583) indicate that in constructivism, knowledge is generated via experiences that challenge current understanding and beliefs. Learners in a constructivist class learn by doing. Learning activities and exercises involve reflection and discourse. Teachers involve learners in the discovery process to engage higher-order cognitive skills. This statement indicates that learners get the opportunity to analyse, synthesise and evaluate the lesson taught in the classroom. Student teachers trained in constructivism practise to seek and value learners' points of view, and to give activities that challenge learners' suppositions. They pose problems of emerging relevance, build lessons around "big ideas" and do assessment of learning in the context of daily teaching. All these start in the micro-teaching where they plan the lessons and present it and are assessed by their peers before going to schools for TP. They are videotaped during micro-teaching for self-assessment. After every lesson is conducted, a reflection is done with the whole class to discuss the lesson and the student can view the video for self-evaluation.

2.10 THREATS IN THE IMPLEMENTATION OF A CONSTRUCTIVIST FRAMEWORK TO PREPARE TEACHERS FOR SUSTAINABLE RURAL LEARNING ECOLOGES.

This section outlines the fourth objective of the study, to discuss the threats associated with a constructivist framework in rural learning ecologies.

2.10.1 Lack of collaboration between the TEI and the rural learning ecologies.

The threats in the implementation of the framework are brought by the lack of collaboration between the rural school and the Institution of Teacher Education. Placement, supervision and mentoring of student teachers during the programme put

more pressure on the hosting school. More specialising teachers to mentor student teachers are required for the programme to be effective. More resources are also important for TP programme. Literature by Kizilaslan (2012:244) identified problems associated with rural schools as: insufficient teaching materials, difficult climatic conditions, poor physical conditions of schools, transportation problems, families who are unwilling to send their children to school, indifference of the rural community to education, administrative work and extra duties teachers have to carry out, teachers' lack of experience about life in rural areas, and lack of pre-service and in-service teacher training in relation to rural teaching. Kizilaslan mentioned that efforts for more effective rural teacher preparation have been too limited in Turkey. Turkey is a large country covering 814 578 square kilometres, with 25% of the total population living in rural areas.

Wang & Zhao (2011:37) indicated that over the years, rural primary and secondary schools have been influenced by a one-sided pursuit of promotion rates, combined with poor quality teachers, a shortage of curriculum resources, and common tactics like spoon-feeding students and excessive assignments. These factors have seriously affected the physical and mental development of students and even teachers. Despite all the challenges in rural areas and teachers considering it a hard task to teach (Aksoy 2008:224), learners must be taught because life goes on. Rural schools face a number of problems that hinder the education including difficulties with recruiting and retaining highly qualified teachers, offering a comprehensive curriculum and advanced courses, small size, geographic isolation, shrinking local tax bases, and obtaining equitable federal and state funding (Irvina, Hannumb, de la Varrec, Farmerd & Keanee 2012:331). All these challenges bring about the threats to the study to prepare teachers for sustainable rural learning ecologies.

2.10.2 Lack of parental involvement in rural learning ecologies.

Another threat is the lack of parental involvement in education of their children. Parents are not able or not willing to be involved in issues related to education of their children (Park & Holloway 2013:105). The researchers indicated that a number of studies found that in general, low-income and/or ethnic/racial minority parents are less likely than other parents to participate in some forms of involvement in their children's

schooling. This study is attempting to involve parents from the rural areas that were marginalised in educational issues. Parental engagement in children's learning is seen to be of great importance for children's achievement. Religious belief of parents is another factor which has also been shown to affect achievement (Goodall & Ghent 2014:334). This study is attempting to involve parents in teacher education programme and student teachers are doing their TP in rural schools, working closely with the parents in the vicinity of the school.

2.10.3 Demotivated teachers and student teachers for rural learning ecologies.

The shortage of staff in rural schools due to small number of learners has an impact on the working experience of teachers (Cuervo 2012:88). With fewer staff, teachers experience professional isolation and loneliness. They do more with less because they are spread across the curriculum. The research shows that feeling professionally and personally isolated has an impact on teachers' morale and the efficacy of their work. Kızılaslan (2012:244) identifies the main problems associated with multigrade schooling as also the basic problems of rural schooling in Turkey, due to insufficient teaching materials, difficult climatic conditions, poor physical conditions of schools, transportation problems, families who are unwilling to send their children to school, indifference of the rural community to education, administrative work and extra duties teachers have to carry out, teachers' lack of experience about life in rural areas and lack of pre-service and in-service teacher training in relation to rural teaching. All these challenges teachers face in rural parts of the country, cause teachers to consider it a hard task to teach, and this has infiltrated to student teachers not to consider teaching in rural schools.

2.10.4 Limited support from the government to rural learning ecologies.

In South Africa, provincial departments of education are closing farm schools in rural and remote communities, often forcing families to send learners to live in hostel schools in distant towns. Some of these learners are sent to hostel from a young age (seven), to live independently without their parents. I see these closures of rural schools to impact negatively on the sustainability of rural learning. A study conducted in South Wales Central found evidence that teachers and heads in very small schools are faced with pressure in delivering the curriculum. Leadership, management and

staff development suffer in small schools, particularly where the head has a teaching commitment.

2.10.5 Failure to allow learners to construct own knowledge in the lessons.

Lack of knowledge of constructivism by teachers and student teachers is a threat to implement the constructivist framework to prepare teachers for sustainable rural learning ecologies. Rusznyak and Bertram (2015:36) emphasise that specialised knowledge in South African teacher education programmes is criticised for being too decontextualized, urban-centric, and not sufficiently preparing student teachers to teach in underprivileged or rural contexts. This position insists that teaching is so contextually embedded that it cannot be understood outside of its context, and therefore decontextualized initial teacher education programmes do not generally prepare teachers to link general concepts within the curricula to locally specific issues and concerns. CEPD (2008:28) shows that the majority of farm schools are small, and many have multi-grade classes, where children of different levels of schooling are taught in the same room. From this perspective, the study attempts to encourage student teachers to construct personal theories and/or philosophies from their contextually-specific practical teaching experiences, through conscious self-reflection and experience of community engagement.

2.11 EVIDENCE OF SUCCESS OF A CONSTRUCTIVIST FRAMEWORK TO PREPARE TEACHERS FOR SUSTAINABLE RURAL LEARNING ECOLOGIES.

Evidence of success of a constructivist framework to prepare teachers for sustainable rural learning ecologies is discussed in this section.

2.11.1 Collaboration between the TEI and the rural learning ecologies.

A study conducted in Alaska by Munsch and Boylan (2008) highlighted the importance of specific teacher preparation programme requirements necessary to address rural teaching (Kizilaslan 2012:244). In the study, the researchers indicated that this intensive experience can benefit rural schools, rural communities, rural teachers and student teachers in many ways. They considered this approach as an important addition to teacher preparation programmes and concluded that even a week spent immersed in a rural cultural practicum experience can make a difference in student

teachers' perceptions regarding rural teaching. Vygotsky identified that interpersonal relations, as one of the keys of learning in constructivism, take place through collaboration and dialogic action with others in solving problems, producing a product or discussing a subject (Ashton-Hay 2006:03). Student teachers benefited extensively by applying the constructivist framework naturally and authentically with learners (Spring 2001:29). They were able to transfer their education programme into their practicing rural learning ecology.

2.11.2 Involvement of parents in rural learning ecologies.

Parent involvement in education might have different goals, agendas and attitudes between teachers and parents (De Bruine, Willemse, D'Haem, Griswold, Vloeberghs and Van Eynde 2014:411). Teachers might consider involvement of parents as a way to improve student achievement, to reduce costs or to address cultural disadvantages. Parents, on the other hand, could consider involvement as a way to discuss the progress or difficulties of their children and to share their concerns. Both different interpretations of parental involvement are in line with this study, as they are both in support of the study. The study aims at improving rural learning ecologies and positive parents' involvement is encouraged. De Bruine *et al.* (2014:412) acknowledge field experiences as the skills needed to establish effective partnerships between parents and the schools. Field experiences should include comprehensive and prolonged interactions with parents to discover the complexity of parenting and gather knowledge about the diverse cultural backgrounds of parents.

The researchers above further indicate that field experiences should not only take place within the school, but also in the community and home settings as well. Another research study has shown positive associations between parental involvement and student grades, rates of participation in advanced courses, lower dropout rates, motivation toward school work, and valuing of education. Parents can model effective learning behaviours, reinforce productive choices, and help set future goals such as college attendance (Bergerson, 2009; Hoover-Dempsey & Sandler, 1995). Communication between families and schools may promote social adjustment in addition to academic achievement (Delgado-Gaitan, 1994). Placing student teachers in rural schools for the entire period of TP allows them to interact with the parent at any time even after school hours.

2.11.3 Government support to rural learning ecologies.

The National Policy Framework for Teacher Education and Development (NPFTED) in South Africa was released with the line “*More teachers, better teachers*” (DBE, 2007). The policy is about the teacher recruitment campaign instituted, and the full-cost national Funza Lushaka Bursary Scheme for teacher education established to enable academically capable students to become teachers in priority areas of need. Full-cost, merit-based bursaries are available to enable students to complete a teaching qualification in an area of national priority, in return for teaching at a public school for the same number of years as they have received the bursary (which they have to repay if they choose not to teach). They may choose the province in which they wish to teach, but not the school. The Funza Lushaka bursary programme’s allocation is managed by the DBE, from National Treasury and is increasing annually (DBE 16 April 2014).

A report on statistics on Post-School Education and Training in South Africa indicated that the average of newly appointed teacher who are Funza beneficiaries ranges to 9% (DBE 2014:52). The majority of these teachers are placed in rural schools around South Africa and are coping well. I see this as a means for the government to recruit teachers for sustainable rural learning ecologies.

2.11.4 Motivation of teachers and student teachers for rural learning ecologies

China implemented a new curriculum that promoted changes in ideas and concepts of education in rural schools which provided a child-centred philosophy of education with its objectives of learner development and fostering learners’ comprehensive abilities (Wang & Zhao 2011:39). This new curriculum calls for being learner centred, emphasizes learning to learn and learning in an active and lively way, and promotes the active participation of learners, a willingness to explore, and an eagerness to get to work. These factors have seriously affected the physical and mental development of learners and teachers. Curriculum reform has promoted teacher professional development, improving the overall quality of rural teachers. I see the curriculum promoting constructivist learning as on the side of learners, as they are engaged in activities from the beginning through which they develop skills and acquire concepts (Bhattacharjee 2015:66). Being actively involved and eager to learn of learners,

challenges the teachers to implement a constructivist lesson where learners will make a deliberate effort to make sense of the information that comes to them.

2.11.5 Allowing learners to construct own knowledge in the lesson.

The study conducted by Mvududu and Thiel-Burgess (2012:111) compares results of three instructional groups using three different methods, one of which was a constructivist method for teaching mathematics. They found that learners in the constructivist group had larger improvements. The remaining groups showed improvements but, at the one year follow up, the improvements were not maintained. On the other hand, retention scores were significantly higher for the constructivist group. The study also indicated that a constructivist approach also improves overall participation and retention of material. Learners are more on task and active during the class hour and they are better able to connect their learning to previous knowledge by participating more in group work. The students are also better able to make connections by utilizing the examples of their peers. This increased participation in the classroom and resulted in a more permanent retention of the vocabulary.

Classroom practice in the majority of South African classrooms continues to be dominated by teacher talk; a low level of learner participation; rote learning; a lack of meaningful questioning; a lack of lesson structure; an absence of engaging learning activities; little meaningful interaction between learners; and few tasks requiring reading/writing (Rusznyak and Bertram 2015:37). Given this historical context, it is not sufficient for school-based and university-based assessors to draw only on their personal experience of teaching to make judgements about what constitutes effective teaching. Kızılaslan (2012:245) cited geographical and socioeconomic disparities that exist between rural areas and more urbanised parts of the country which make it necessary for teachers to be well equipped with the necessary skills for dealing effectively with differing needs of rural areas. Practice of constructivism by the student while in their teacher preparation for the profession will assist them to change the traditional way of classroom teaching.

2.12 CONCLUSION

This chapter explained the CER as the theoretical framework guiding the study, its principles and why it was chosen for a constructivist framework to prepare teachers for sustainable rural learning ecologies. Constructivism as a conceptual framework and operational concepts used in the study were also discussed in the chapter. The chapter discussed literature on the needs, solutions, conducive conditions, threats and evidence of success of the framework to prepare teachers for sustainable rural learning ecologies. The next chapter will focus on the research design and methodology on the constructivist framework to prepare teachers for sustainable rural learning ecologies.

CHAPTER 3

RESEARCH DESIGN, METHODOLOGY AND DATA GENERATION ON A CONSTRUCTIVIST FRAMEWORK TO PREPARE TEACHERS FOR SUSTAINABLE RURAL LEARNING ECOLOGIES

3.1 INTRODUCTION

This study is about enhancing Teaching Practice using a constructivist framework to prepare teachers for sustainable rural learning ecologies. The previous chapter discussed the theoretical framework and literature review couching the study to bring the reader close to the study. This chapter describes the research design and methodology used to enhance TP, using a constructivist framework in preparing teachers for sustainable rural learning ecologies. The purpose of describing the research design and methodology used is for the reader to locate the study within the existing body of knowledge. The chapter explains participatory action research (PAR) as the method used to generate data. Its principles and features are discussed, and their relevancy to TP and constructivism as a learning style and Critical Emancipatory Research (CER) as a paradigm that supports the study. The chapter further explains how PAR was used in the study.

The chapter outlines reasons behind the selection of PAR as a methodology for generating data and also outlines how it was used to form the structure, to identify priorities and come up with the plan of action and to generate data. Conditions prior to the commencement of the intervention are also discussed in the chapter. The chapter describes how the team was formed and engaged for brainstorming sessions. Strengths Weaknesses Opportunities and Threats (SWOT) analysis was outlined in the chapter. Co-researchers are identified and their role in the study is defined in this chapter. The chapter indicated identified priorities to the drawing of the action plan. Furthermore, the data generation procedures and the applicability to CER as a paradigm couching this study are discussed. A brief summary of the chapter is provided at the end.

3.2 PARTICIPATORY ACTION RESEARCH (PAR)

Participatory Action Research (PAR) is a research methodology that is used to change and better the lives of people, to advance the agenda for equity and to advocate social justice, peace, freedom and hope (Mahlomaholo, 2009:226). The definition of PAR by Mahlomaholo is relevant to the study, as the study brought about change to rural people who were marginalized. All members worked as co-researchers who were free and showed hope for the study from the beginning to the end. Those who withdrew participation during the study did it willingly and they were able to explain their commitments elsewhere. Eruera (2010:1) indicated PAR as an approach from the social sciences which was developed to shift away from a traditional and positivist approach, to work towards recognising and addressing complex human and social issues. It has the potential to address research and wider issues of social justice, inclusion and empowerment of the minority and often marginalised communities. The two researchers agree with one another that PAR is socially inclusive and the study employed it to include people from different background together without any marginalization.

Jordan (2003:188-190) again defines the PAR approach with three themes. Firstly, as it is against the systematic reproduction of unequal power relations between the researchers and the researched, it occurs with the conventional research methodologies, such as quantitative research. In this way it tends to align with a non-positivist approach to research as indicated by Netshandama and Mahlomaholo (2010:111). For Eruera (2010:1), PAR creates a discursive space for critically discussing matters without fear, giving power to all participants, including the marginalised and oppressed, to be listened to and express their opinions on issues that affect them on a daily basis and which are about them. Co-researchers, through PAR, voiced their concerns without leaving their fate to authorities to speculate what the school community, most importantly student teachers, needed for preparation for rural learning ecologies.

Secondly, Eruera (2010:2), Netshandama and Mahlomaholo (2010:111), and Sanginga, Kamugisha and Martin (2010:696) describe PAR as openly political. The researcher works with participants as opposed to on participants, marginalised and oppressed groups and individuals as co-researchers. This originates from the notion

that within societies, including education, there are unequal power relations, which then lead research to take a stance to look at social justice as an ethical issue which is committed to democratic engagement, transparency and openness. The study adopted a CER framework to advance the agenda for equity to co-researchers, as indicated by Mahlomaholo (2009:226) to form and advocate social justice, peace, freedom and hope. The use of PAR and CER in the study gave co-researchers a sense of belonging throughout the study. Cooperation of all co-researchers enabled them to conduct research themselves by putting into practice what is affecting their lives. Unlike conventional research methodologies, by which power is vested in the researchers, the study vested power in co-researchers who were affected on a daily basis by experiences oppressing them.

The third theme that defines PAR, according to Jordan (2003:190), is its embrace of CER, which yields some of its key conceptual practices that either influenced or directly shaped the forms of social organisation that PAR practitioners used to conduct research. The three themes became evident during the study where co-researchers were treated equally without any evidence of power differences, the researcher worked with co-researchers as people, not telling them things to do. Lastly, co-researchers became empowered to further do research in other areas. PAR has been driven by a dynamic that has been centred on a democratic, critical, and emancipatory impulse that is quite distinct. According to Kemmis (2006:462); Titterton and Smart (2008:57); Shea, Poudrier, Tomas, Jeffrey and Kiskotagan (2013: 4), PAR is driven by three distinct elements namely: a shared ownership of the research project; a community-based analysis of social problems; and an orientation towards community action. PAR in the study relied on collective participation of co-researchers with their local knowledge of rural schools and knowledge of educational issues and their collective actions.

3.3 HISTORICAL ORIGIN OF PAR

Esau (2013:3) cited Lewin (1948) that PAR originated from the work of the Tavistock Institute in the 1940s and all formulations of PAR have in common the idea that research and action must be done 'with' people and not 'on' or 'for' people. The idea of action research methodology addressing social issues was given more prominence when it became part of a formal and structured Masters' programme in the Education

Faculty at the University of the Western Cape in 1987. According to Jordan (2003:187), PAR originated from countries that were colonised in the early 1960s and it was inspired by anti-colonial struggles. In addition, Kemmis and McTaggart (2005:560) also indicated that it originated from the field of adult education, international development and the social sciences.

Schneider (2012:2334) indicates that PAR originated in Tanzania in the early 1970s, rooted in its work with oppressed people in developing areas. It is a process which combines systematic research education with the development of a practical intervention action. Agreeing with Tshelane (2013:416), co-researchers were engaged throughout the study to be orientated and emancipated by the research study and their voices were heard and respected by each other as affected by the study. This study allowed experienced rural school teachers, parents and student teachers to contribute in teacher training. The researchers above indicate PAR as more than a method of conducting research, but an orientation to research and rooted in emancipatory movements.

One of the goals of PAR, according to Cameron and Gibson (2005:317), is to ensure that everyday knowledge is used to shape the lives of ordinary people. According to Torres and Reyes (2010:195), participatory research “implies that co-researchers are entitled to be part of the decision making at every step of the research process, from defining and naming the problem all the way through to the use of the research results”. PAR as an approach from the social science research paradigm was used to shift away from traditional, positivist science to work towards recognising and addressing complex teaching and learning challenges in a rural school. The history was proven in the study, as it continued to allow co-researchers to voice their issues related to rural learning ecologies and come up with Improvements.

3.4 CRITICISMS OF PAR AND CIRCUMVENTION ON THE STUDY

PAR is not the only method of generating data, and that there are criticisms associated with it. The researcher indicated politics of power, balancing local and theoretical knowledge, and conceptualization of the community as other criticisms of PAR. According to the researcher, participation is never politically neutral and may be used

to promote a range of interests. Outside researchers may shape the production of knowledge, in moving the project toward the interests of either funding agencies or journal requirements. To circumvent power relations in the study, co-researchers were encouraged to look for the growing consensus for successful programs of social changes to work across multiple levels of analysis. The team was given the chance to lead discussions on educational issues like commenting about how teaching is affecting performance of the learners and be involved for them to develop individual political competencies.

The research team acknowledged and sympathised with the school community and appreciated the value of different ways of knowing by fostering meaningful links between its local expertise and outside theory. Other criticisms of PAR involve the inappropriate application of methods, such as poor training of researchers, inadequate time in the field, weak research relationships, and shallow participation. This was circumvented by discussing the use of PAR in research study and clarifying the rights of co-researchers in the study. We clarified the freedom of participation of co-researchers and freedom to withdraw anytime during the study before the commencement. Time was given for student teachers to practise constructivist teaching and learning in a rural school, as they were sleeping on the research site for the whole period of TP. They met after school and reflected with other co-researchers to discuss challenges experienced in class.

3.5 THE USE OF PAR IN THE STUDY

Discussions to prepare teachers for sustainable rural learning ecologies started in TP class. The discussion was taken further with other stakeholders involved in Initial Teacher Education (ITE) involving the rural schools. Through PAR, student teachers participated by embracing the research principles of participation and reflection, empowering and emancipation as a group seeking to improve the social issues. We applied the three elements of PAR according to Kemmis (2010a:19) and Shea, Poudrier, Tomas, Jeffrey and Kiskotagan (2013:4) which are; a shared ownership of the research project, analysis of TP in rural schools, and an orientation towards rural teaching. PAR allowed co-researchers in the study to share ownership of the project in analysing TP, and student teachers were exposed to rural school teaching before employment. Experience of rural school teachers, parents and knowledge of student

teachers from the classroom was used in the study to ensure that everyday knowledge is used to shape the lives of ordinary people (Cameron & Gibson 2005:317).

The research team took active research participation and ownership of the study and was motivated to identify and address issues of concern to the school community. The purpose of the study was to orientate and emancipate co-researchers to the research processes as people who are actively involved. The constructivist way of teaching and learning in a rural school was analysed by co-researchers as they worked on the study. Local and indigenous knowledge of the rural teaching and learning were accepted when PAR methodology was used. The project was conducted as a basis for revolutionary actions, which improved the lives of people.

PAR assisted to monitor the implementation of TP programme using a constructivist teaching and learning approach in a rural school during the study. This is in line with Conder, Milner and Mirfin-Veitch (2011:39) that one of the objectives of PAR is to provide the opportunity for co-researchers to take an active role and develop emancipatory skills. Pennington (2010:144) states that PAR canters on collaborative relationships and taking action to make social change by building the capacity of local communities to participate in the research, and debates that inform programmes and policy decisions that affect their lives. PAR in this study allowed participation of co-researchers in a democratic way to develop practical knowing in the pursuit of worthwhile human purposes (Reason & Bradbury 2001:1). Co-researchers were allowed to apply own knowledge of the educational issues around the school community.

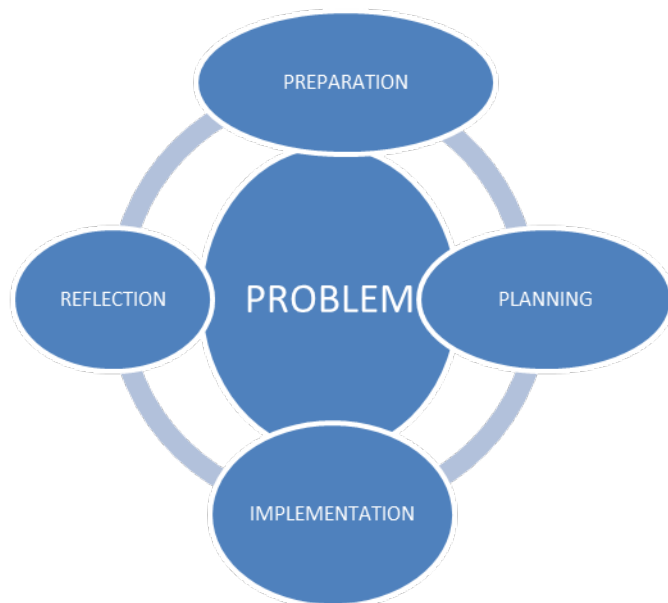
Co-researchers got a sense of ownership of the whole process of the research until the end and got the greater abilities to achieve outcomes that are seen to be useful to everybody affected (Conder, Milner & Mirfin-Veitch 2011:40). The study acknowledged a proposition of systematic social action to the change. As co-researchers engaged throughout the research process, we identified challenges in rural teaching and learning, came up with possible solutions to the challenges, looked on better conditions for the constructivist framework, identified threats that would hamper the progress, and finally found the evidence of success. This process was in line with the finding of Ozannie and Saatcioglu (2008:424-425) that grouping people to the practical problem provides workable solutions to immediate concerns and

develops local human capacity, and that solutions lie in the local. Co-researchers as people who live in the rural ecologies in the study assisted to reach the outcomes of the study, and they must be respected.

Loewenson, Laurell, Hogstedt, D'Ambruso and Shroff (2014:13) indicate PAR as a method synthesizing local experience and organizing shared collective analyses of the relationships between problems and their causes. The study acknowledged co-researchers' local experiences of the problems in the rural learning ecologies as they collectively analysed. According to Eruera (2010:2), PAR projects begin with reflection when a group of people identify a thematic concern or issue and it is turned into a common goal. Similarly, Kemmis (2007:276) explains PAR with a cycle including planning a change, acting and observing the process of change, reflecting on the processes and re-planning until positive outcomes are achieved. The cycle is repeated until change is observed. The researcher indicates that the PAR cycle is not fixed; it is a continuous cycle that can start anywhere in the cycle until the outcomes are achieved.

The above researchers explain PAR as the cyclical and spiral process from systematic experience, collective analysing and problematizing, reflecting and choosing action, taking and evaluating, to systematic learning. In this study, we used PAR as explained by Kemmis in which there is no starting point to do a research. The study started from the preparation to planning. We had to go back again to re-plan before we could continue to other stages. Sometimes the team had to reflect on the preparations before implementation to complete the cycle.

Figure 3.1: PAR cycle according to Kemmis



3.5.1 THE PREPARATION PHASE

The study began in the class with the problem from the document of DBE indicating that teachers are not prepared or not trained to teach in rural schools. In discussing the document it was highlighted that one of the reason may be that student teachers do not do TP in rural schools. We discussed with student teachers how TP could possibly be done in rural schools. Students wanted to have an understanding of the differences between rural schools and other schools. This brought the point that there are students who did not know that there are schools who are on rural ecologies and how their characteristics differ from other schools. We found that there is a need to expose students to the rural learning ecologies.

3.5.2 THE PLANNING PHASE

With student teachers, we planned to have a TP framework that would best train and motivate or improve the interest of teachers to work in rural schools. This was the planning phase of PAR cycle. In this stage, we agreed to have some student teachers do their TP in rural schools to teach and observe the learning ecologies. Many students volunteered to participate in the research study. The challenge was that rural

schools are too far from the university and there is no daily transport to the school. We agreed to have a maximum of five students in different rural schools while only one school would be used for the study. The number was determined by the facts including the size of the school, transport costs, accommodation and meals at the school. We set a date aside to visit a rural school which is the site of the research, to conceptualise the problem and to indicate the degree to which TP is conducted in schools (Singh 2012:199).

We agreed to work with teachers in rural school, learners and parents whose skills, experiences and knowledge were marginalised throughout, to accept that each person has valuable knowledge and that all can learn from each other, and share power (Condre, Milner and Mirfin-Veitch 2011:40).

Co-researchers in the study are student teachers from the university, a lecturer from the university, a TP officer from the university, experienced teachers from the rural school, grade 10 learners and parents of learners of the school. The composition was informed by the principles of school community cultural wealth, which according to Leonard, Brooks, Barnes-Johnson and Berry (2010:268) validates the voices of the marginalised communities, since a single voice, abstract idea, or thought cannot explain the experiences of an entire society. We wanted to recognize the wealth of social indigenous knowledge that rural school community members possess, as Moloï (2014:112) argued that the collective voice of the community can help find a sustainable solution to problems.

The TP officer and I went to the rural school for preliminary visits to mobilise school community members to be represented in the study, as Moloï (2014:109) writes that the PAR model concentrates on the engagement and mobilisation of research participants as active agents in the process of constructing knowledge, reaching a shared objective and solving problems. We started by requesting permission from the principal for five student teachers in different subjects to do their TP in the school. The TP officer explained the whole process of TP and the university's expectations of the participating schools to the principal, including the involvement of mentor teachers.

During discussion, the issue of concern from the principal emerged regarding why this time the university is sending students as they have never had student teachers before. We explained to the principal that we were beginning to expose student

teachers to rural teaching and learning, and intended to work with her school and her school as the only rural school close to the university with FET phase, that it has hostel facilities to accommodate student teachers, and has many characteristics of rurality which we intend to expose the student teachers to. We came up to a common goal with the principal that there is a need to prepare teachers for sustainable rural learning ecologies. Eruera (2010:2) writes that the beginning of a PAR project often occurs with a reflection when a group of people identify a thematic concern or issue and that is turned into a common goal.

We then agreed with the principal that our student teachers would come, and we would provide them with groceries for the duration of the TP process. The next phase was to engage other co-researchers with the same goal to the study. Participation therefore on the side of the principal was obtained through this shared goal and the desire to prepare teachers for sustainable rural learning, and we agreed to do something. We requested to have a preliminary meeting with all the school community involved in the study and the principal agreed without hesitation. We then agreed on the date and time of the meeting with the principal and she promised to invite two SGB members, three grade10 educators, and five grade 10 learners to the preliminary meeting. I had to invite the subject advisor and come along with my students on the set date of the meeting. Only one item was mentioned as an agenda item in the letters inviting co-researchers: to discuss the collaborative way of how to prepare teachers for sustainable rural learning ecologies.

3.5.3 IMPLEMENTATION PHASE

Invitation to take part in the project was extended to the TP officer who places students at schools for TP process. The PAR cycle in the study as cited by Kemmis and Loewenson *et al.* continued to the preparation phase with five students, the TP officer and this researcher preparing and planning to do a preliminary visit to the rural school. The main aim of the preliminary visit to the school was to understand the history, culture and local context, to build a social relationship with the rural school (Loewenson *et al.* 2014:13). We visited the school with the hope that new issues related to the study would emerge in our discussion. This visit was done for one day, to sell the idea to the school principal and also for student teachers who volunteered to see the site. There was no problem from the school principal for the students to

come for TP programme. The principal indicated to inform the education district and that we also inform the district. It was guaranteed that for the research purpose, I (the research coordinator) would request permission.

We went to the school for a research meeting with five students teachers who volunteered from the TP class to do their practical teaching at a rural school, and a TP officer, to meet with rural school communities as arranged, to address one of the objectives of PAR: to emancipate people from irrationality, injustice, alienation and the suffering found in social settings (Kemmis 2006:463). Some of the student teachers had never been exposed to rurality before and were excited to take part in the study to get experience before they can be employed or placed after obtaining qualification. We formed a research team consisting of five third year education students from the university, three experienced rural school teachers who are mentors, a lecturer from the faculty of education, the TP officer, a subject advisor, grade 10 learners and two parents from the SGB of the school. Third year students were chosen because they will still be in the university the following year when the study is completed. They were to be available to participate in the study for two consecutive years.

All co-researchers were present in the meeting and they all seemed to show interest as they were all in time, except for one parent who indicated to join the team late. During the meeting, some of the co-researchers were surprised by how they would contribute in the teacher training process; especially parents did not see themselves playing a significant role in teacher training. Teachers in the school indicated that they had never had student teachers coming for practice teaching in their school. Co-researchers' participation, enabled them to use their own experiences and knowledge as vehicles for pushing against structures of racial and class oppression and exploitation in teacher training, and become agents in their own biographies. Their participation in the study brought new understandings of critical inquiry into teacher training.

The team got the opportunity to get to know each other, to explore the PAR method and encourage the development of collective decision-making. The team was allowed to make free and informed choices, including the choice to participate, to generate personal commitment to the results of the study (Mallick 2007:253). To make co-researchers feel accommodated in the preliminary meeting of the study, we worked to

develop a climate whereby openness could be expressed and trust could be expected. The team was assured to share ownership of the project until the outcomes are achieved in implementing the action for improvement according to the three attributes of PAR (Kemmis & McTaggart 2007:273).

The TP officer opened the discussion by asking students about their experience after visiting a rural learning ecology in the meeting that was held on 20 April 2015. One student indicated that they received a good welcome from the teachers in the school and were respected by the learners and parents coming to school. They were happy that they were treated like qualified teachers. Student teachers identified the following as different from other schools they had visited in the past:

Student A:

"I noticed that there is only one class for each grade in this school and in other grades two grades use one classroom."

Student B:

"The resources in the school are limited to facilitated learning in class. Teachers teach many subjects whereby others teach subjects they did not specialise in during their teaching training."

Student C:

"Learners are disciplined as compared to other schools."

Student D:

"Life after school is difficult because there is nowhere to do shopping; the place needs transport to go to the nearest town."

Student E:

"Teachers here work hard to reach every learner in the class. They use different teaching methods. They do not show a feeling of teaching many subjects. I appreciate their commitment."

Principles of PAR were discussed to indicate the inclusion of all people in making a change (Kemmis & McTaggart 2000:563). Co-researchers were made to understand

that PAR values the contributions of everybody engaged in a research project in the struggle to make change. The answers to the questions asked would come from the whole team, not an individual person. We would work together as a team to respond to all the questions coming. Parents would contribute in the study through their experience of living for a long time in the rural area. They would assist to explain how they are surviving as human beings if there are people who think they cannot live there. They would also assist in the assessment of learners' activities.

After all the co-researchers understood the principles of PAR, I explained to them the purpose and objectives of the study to ensure that all the discussions to come would not be wasted. I highlighted what I thought was the problem of the study by citing an example from the statement of one parent saying other teachers come to teach and go to other schools in the township. We all agreed that recruiting teachers for sustainable rural learning ecologies was a serious challenge that needed to be addressed. Parents indicated that they did not want the school to shut down and their children to go to hostel schools, as is the government's intentions with other small rural schools.

How to enhance a constructivist framework to prepare teachers for sustainable rural learning ecologies through TP?

A discussion to address the research question above led the team to the brainstorm session. The team came up with many possible solutions to the challenges to be implemented and the rural schools Senior Education Specialist (SES) wrote them down.

- i. Teacher Education Institutions (TEI) to expose student teachers to rural schools
- ii. Module on rurality to be taught to student teachers
- iii. Rural teachers should be employed on probation in rural schools before becoming permanent
- iv. More intensified practice teaching for student teachers in rural schools

- v. Development of an assessment tool for student teachers who do their TP in rural schools
- vi. Institutions to introduce a course or programme on rural teaching, e.g. B.Ed.: Rural Education.

Many more ideas were raised and we decided to focus only on some. We agreed to prioritise the ideas by first doing the SWOT analysis to guide us in setting the priorities. After the brainstorming session, the team agreed to meet on 24 April 2015 to engage on the suggested SWOT analysis. Every member of the team took the list of ideas home to look at them before the next meeting and make their own priority for further discussion during the meeting.

3.5.4 REFLECTION PHASE

This stage is very important in the cycle of PAR because it monitors the progress to determine whether to continue or start with the project. Positive results show success and can also inform future improvements in the project. Negative results show failure and can indicate the area where improvements are needed. With student teachers, we discussed our observation of the rural learning ecologies and agreed that more time is needed for students to practise their teaching in the rural ecologies. This cycle of PAR was continued in chapter four where students started with the TP programme in the rural school.

3.6 THE ROLE OF THE RESEARCHER IN THE STUDY

The researcher in the study worked closely with all stakeholders involved in the rural school community by locating myself with them as a person living in their environment (Wong 2005: 259), not in a “deconstructed” or “reconstructed” geographical space. The researcher became part of the school community with other co-researchers in an equal environment for critical discussions of the ideas and in making contributions to the study. The researcher and student teachers in the study brought academic knowledge to other co-researchers about how TP is implemented at schools, as Brun (2009:202) stated that theory should inform practice, with the aim to move towards the recognition that theory can and should be generated through practice. This form of knowledge through practice was categorised as relational, reflective and action-oriented knowledge.

Brun writes that PAR is a method and field of research aiming at transformation, and can be described as a 'change methodology' because it is about tackling and changing or improving the places within which it is practised, by promoting collaboration between researchers and local stakeholders. Sharma (2011:4) confirms that in order for learners to be able to actively construct their own knowledge, rather than receive preformed information transmitted by others, curriculum emphases, classroom interactions, and classroom dynamics must change in major ways. The study resonated with the researchers because it brought the rural school stakeholders as co-researchers to search for more meanings on teaching and learning, and parents wanted to enquire further about the education of their children.

3.7 CONDITIONS PRIOR TO THE INTERVENTION

Student teachers were visiting schools of their choices during TP to observe teaching conducted by experienced teachers who were mentoring them for teaching. Final year students were allocated to schools to practise teaching under supervision of experienced teachers. In both cases, mentor teachers were assessing the students' lessons in class and the reports were used for TP marks by the university. None of the students were doing TP in rural schools, nor were they allocated a school in a rural setting. Student teachers were learning theories of teaching from the university and expected to apply them during TP. They were not encouraged to come up with their own methods of teaching, as they had to focus more on the items reflected on the assessment sheet. Student teachers indicated that they prepared only for items reflected on assessment forms to obtain high marks. Many of the students did not even know that there are schools in the rural areas; to them all schools were the same and have similar challenges.

There were no student teachers visiting rural schools in the study for TP. The school in the rural area would just receive new teachers, who were from the township area, employed at the school if there was a vacancy at the school. These newly appointed teachers would leave to go to the township again after some time. Teachers and parents in rural schools never thought that they could assist in teacher training programmes. Rural school teachers came to work in rural schools only because of permanent employment, not to assist learners. Other teachers are still in rural schools because they are beneficiaries of a Funza Lushaka bursary and must serve for the

prescribed period in rural schools. Parents thought that teachers are people from the township trained somewhere they do not know. Learners used to see only their teachers teaching them the same subjects every day for continuous years. The rural community believed in school teachers as the only people who knew everything and who could come up with the solutions to all the problems.

3.8 INTERVENTION OF CO-RESEARCHERS IN THE STUDY

CER and PAR provided a platform for student teachers and other co-researchers to transform rural experience into learning for students, by overcoming perceived dissatisfaction, alienation, ideological distortion and injustices of oppression and domination (Kemmis, 2001:97). Student teachers used a constructivist learning style in teaching rural learners to probe their level of understanding and the ways in which that understanding could be taken to a higher level of thinking (Mvududu & Thiel-Burgess 2012:108). Mvududu and Thiel-Burgess (2012) write that constructivism is how students make sense of the material and how they can be taught most effectively. Constructivism as an educational theory holds that teachers should take into account what learners know and in this study, student teachers as teachers in class used the limited teaching resources available to teach in class.

Student teachers conducted the lesson by first finding what learners know and on the prior experience of learners on the topic to be taught. Then they built on this knowledge to put learning into practice. That prior knowledge influenced the new or modified knowledge which is constructed from the learning experiences, as Mvududu and Thiel-Burgess (2012:110) indicate that new knowledge is influenced by prior experience in constructivist teaching and learning. Mvududu and Thiel-Burgess (2012:110) further indicate that the second notion of constructivism is that learning is active rather than passive. This practice of teaching allowed learners to negotiate their understanding in light of what they encounter in the new learning situation. Student teachers were able to change to accommodate new experience during the lesson if what learners encountered was inconsistent with their current understanding. Learners remained active throughout the learning process. Student teachers learned constructivist teaching skills and strategies practical to the rural school. They were able to incorporate what they learned about constructivism from the university and

what they observed from other teachers in urban schools during TP, and apply it to rural schools.

Rowe (2006:3) writes that the key element in constructivism is that the student is an active contributor to the learning process, and that teaching methods should focus on what the student can bring to the learning situation as much as on what is received from the environment. Student teachers allowed learners in the classroom to be actively involved in the learning process relating learning to their environment. Rowe describes learning that builds effectively on the students' current knowledge is within the student's zone of proximal development (ZPD). The researcher explains ZPD as what the learners already know, and can do with minimal assistance by a teacher or peer, following which the individual is expected to undertake learning tasks independently. In this study, student teachers learned the skills of rural teaching from what they already know through the help of experience teacher. Through PAR, they were emancipated by being engaged within the research project and also their voices were heard and respected. The experience of student teachers from the classroom was taken out to the rural school community for practice with people involved or affected by the situation. People could only be emancipated if they were engaged in the discussions that allow their views to be freely expressed on a platform that does not limit their social development or determination.

Kindon and Elwood (2009:20) mention that PAR recognizes and values knowledge of marginalized or traditionally hard-to-reach groups and enables them to work towards appropriate social and/or environmental change on their own terms. The marginalized or traditionally hard-to-reach groups in this study are the rural community group. The study made it easy for that group to change on its own terms by being recognised. Participation and participatory approaches became representative in academic concerns as well as worldwide shifts associated with the rise of civil society and calls for democracy, citizenship, human rights and environmental sustainability. People from the rural school communities became recognised and valued by the research team. Co-researchers aligned in the study as a group working for change in a spirit of partnership and collaboration. As Mvududu and Thiel-Burgess (2012:110) indicate that constructivism allows students to negotiate their understanding in light of what they encounter in the new learning situation, student teachers practised the constructivist teaching approach in rural schools.

Working with PAR in the study, student teachers had the opportunity to reflect with the group and re-plan until the outcomes were achieved. Whenever what they encountered was inconsistent with their current understanding, their understanding was changed to accommodate the new experience. Student teachers and learners remained active throughout this process for better change. CER as a lens of the study, constructivism as a teaching method and PAR as a methodology in the study, addressed human beings in the same way. People are treated as responsible human beings when their voices are heard and respected. They all promote emancipation, engagement and develop people socially.

The TP officer explained the meaning and the need for TP in schools generally to co-researchers. The officer explained the TP process to the team and its relevancy for rural schools. Things that were discussed included exposure to rural setting as teachers, learning from experienced teachers, and practising theory learnt in university, to mention some of the responses. Student teachers responded that they need to learn about rural teaching, as some of them have never been to farm areas.

TP officer

“TP is a module at the university, which helps to assist student teachers learn and practise teaching as process at schools. In the module, students are also sent to school to practice teaching in class under the supervision of experienced teachers called mentors. They are then assessed in class teaching by their mentors, and lecturers visit them in class to assess them. This time we have extended the process to rural schools.”

The whole team agreed to work together to do both a research study and to train student teachers. To do this, we employed PAR as a methodology that encouraged participation of all co-researchers in the study from the beginning until the last chapter. We discussed the principles of PAR to show that this research strategy responds to the call of preparing teachers for sustainable rural learning and that the challenges associated with distance, geographical location and feeling of inclusion/exclusions could be negotiated within the context of PAR (Brun 2009:202). This was done at this stage, for co-researchers to feel that they have the freedom to participate and also the freedom to withdraw at any time during the study. Co-researchers were assured that

their voices would be heard and their contributions in the study would be acknowledged.

At this stage, student teachers indicated that this would be an opportunity for them to explore the reality of rural schools as they were awarded Funza Lushaka bursary which would deploy them to work anywhere they might be placed. The opportunity would prepare them to be ready to be placed in rural schools for employment. The subject advisor was so happy to see that student teachers would do the TP in rural schools. They mentioned the challenges coming across when moving around schools to monitor the work of newly appointed teachers in rural schools. The subject advisor indicated the willingness to assist in the whole process of the study. They were then interested on the tools to be used to assess the progress of student teachers. It was explained that the study is participatory (Conder, Milner and Mirfin-Veitch 2011:40) and everybody involved shall own the outcomes of research and were expected to be given both a sense of ownership of the final product.

3.9 SWOT analysis

SWOT analysis was done in the preliminary meeting. The SWOT analysis assisted the team to identify the strengths and weaknesses of the rural school under study. It also assisted in identifying the opportunities and threats of the school under study. The team was able to see the need to enhance TP programme using a constructivist framework to prepare teachers for sustainable rural learning ecologies. This was supported by the fact that many teachers employed in rural schools do not stay for long. The cause could be that they come to rural schools not prepared to work in the environment; they only come because it was the only available employment by then. Parents mentioned that they wanted teachers who would use available resources to teach learners, not the ones who would demand materials that are hard to find for learners to come up with. The cycle of planning, reflection, and implementing was seen starting from reflection, and continued.

The upcoming paragraphs discuss how the SWOT analysis was done on the school under study.

3.9.1 Strengths

It was found that the strength of the school for this project was for co-researchers to have the opportunity to monitor the progress and interest of student teachers in rural teaching during their TP. During the cycle of PAR, co-researchers were able to prepare student teachers, do reflection with them, implement the suggestions, plan or re-plan for improvements. The school under study had dedicated teachers who were working hard in an environment with limited resources. They had obtained a 100% pass rate in their matric results for the past two consecutive years. These teachers mentored student teachers on how to teach learners for quality education.

3.9.2 Weaknesses

Teachers in the school under study were teaching many subjects and they taught subjects that they were not trained to teach during their training for the profession. Teachers were leaving the school for the whole day when they attended a workshop as departmental workshops were conducted in a town far away from the rural school. Newly appointed teachers were struggling to attend the workshops because of lack of transport.

3.9.3 Opportunities

Support from the DBE to the school was found to be the greatest opportunity. The DBE introduced a directorate that was looking at the support of rural schools in the districts. This initiative of the DBE assisted student teachers because they met with an official (subject advisor) responsible for rural schools. Sending students to do their teaching practice in the rural school was an opportunity for students to explore rural teaching and learning. The school accommodated student teachers for the period of TP. They slept over for the period of TP until the study was completed. Student teachers and learners focused more on their studies because the school is located in a remote area far away from the distraction of township challenges. Student teachers planned new ideas as they reflect on their teaching methods after school.

3.9.4 Threats

The school was functioning under limited resources. The school was far from the town, which restricts learners from buying learning resources to bring to class the following

day. The SES who promised to support student teachers was not available in some of the time. The SES would come once in a while and indicate that he was attached to many rural schools that are also far from one another. Some rural schools are near different towns. Many of the co-researchers became more aware of their role in the project, as they were able to identify and voice their ideas during the SWOT analyses. From the deliberation on SWOT analysis, it was agreed to prioritize issues for action and come up with the action plan. The team agreed to assign the roles for everybody to know what to focus on.

3.10 SETTING THE PRIORITIES

It became evident from the SWOT analysis above that there were challenges that needed to be addressed. Challenges were prioritised into the following: training student teachers how to use constructivism; training them for multi-grade teaching; motivating student teachers to teach in rural schools; motivating rural communities to be involved in school activities; and supporting the school with resources available for teaching. The strategic plan was drawn from the SWOT analysis. The team identified five activities to be addressed, to enhance a constructivist framework to prepare teachers for sustainable rural learning ecologies. The activities were recorded in phases in order of priority.

Phase1: Student teachers to learn a constructivist way of teaching

Phase2: Development of a classroom assessment tool

Phase3: Teachers conduct lesson in class

Phase4: Student teachers conduct lesson in class

Phase5: Assessment of student teachers

Reflections and discussions between the phases were done to monitor and keep the study focused.

3.11 STRATEGIC PLANNING

The following paragraphs indicate how each of the prioritised activities mentioned above was done for the strategic plan.

3.11.1 Training student teachers on constructivism

The university lecturer was assigned the task of training student teachers in constructivist teaching and learning. The lecturer's workshop on constructivism to students started in the last week of the term before students went to Easter holidays, preparing them for the coming TP in the beginning of the second school term. The lecturer explained constructivism to students; that it is a learning method where learners construct their own meaning to formulate new knowledge from interaction with the environment, rather than receiving information from the teacher. In the presentation, the role of the teachers in a constructivist classroom was emphasised. It was indicated that the method is most relevant in the learning environment where the resources are limited, like in many rural schools.

Student teachers were actively involved in the lesson, which made it evident that the lesson was a revision to them. They had done a lesson on constructivism before in one of their modules. They were happy that they knew that now they were going to do it practically in a rural school for the study. In a constructivist class, the teacher as a facilitator of learning should conduct the lesson from what learners know. The teacher searches for learners' understanding, and then structures learning opportunities for learners to revise their understandings by posing contradictions, presenting new information, asking questions, encouraging research, and engaging learners in inquiries designed to challenge current concepts.

The lecturer further identified the five principles of constructivism: of teachers seeking and valuing learners' points of view, classroom activities challenging learners' suppositions, teachers posing problems of emerging relevance, teachers building lessons around "big ideas", and that assessment of learning is in the context of daily teaching. Having done the presentation with students, the lecturer allowed students to practise how they would construct a constructivist lesson. This was done in the micro-teaching class where students taught their peers on a small scale. Students planned the lessons and presented them in a micro-class where they were observed by other peers presenting lessons to others. They were also videotaped while presenting, for them to see how they were doing the presentations. After every lesson was conducted, there was a reflection with the whole class where discussions followed.

3.11.2 Motivating rural school teachers and student teachers

Mosikidi (2014:18) indicates that motivation leads to goal-directed human conduct. The scholar further pointed out that human behaviour is an attempt to gratify the needs that motivate the individual. Teachers needed to be motivated in their work for them to continue to work hard. This study brought motivation to rural school teachers. They felt important in the study by being involved in the training of future teachers. Their positive behaviour in working in the school also brought positive change to learning in the school.

The SES was assigned the task to motivate rural school teachers and student teachers about things that would attract students to teach in rural schools. The presentation took place at the University of the Free State in the class of all final year students on 15 February 2015. The SES was given a slot of one hour to present a lesson on rural school teaching, with more emphasis on the advantages of rural teaching in South Africa from personal experience. In the presentation, the SES indicated teaching in rural schools as similar to teaching in urban schools, except that many rural schools are situated in remote areas where there are limited resources like access to public transport and internet to mention but a few. It was indicated to students that among those challenges, there are many advantages for teachers working in rural schools. The SES started with the initiatives of the DBE to attract teachers as the benefit, and introduction of the Funza Lushaka Bursary scheme for students who are intending to teach in rural schools after completion of their studies.

He emphasised the point by saying:

"I am sure many of you here are benefiting from the scheme... This simply means the department is assisting your studies. Fees are very high at tertiary institutions; not everybody can afford them. Your service to rural schools after completion will be a payment for the bursary."

The introduction of Funza Lushaka to recruit teachers is supported by the strategy used in England where the organization responsible for teacher recruitment employed a strategy to provide extra money in the form of bursaries to encourage graduates to consider spending at least a few years as a teacher (Evagorou, Dillon, Viiri & Albe 2015:108).

The SES continued by talking about the rewards that one gets by choosing to teach in rural schools. The government compensate rural teachers by giving them a rural allowance.

“This is a big saving of money for teachers because there are usually no shops around for unnecessary spending.”

It was further indicated to students that teachers working in the rural schools are having opportunities for their professional development. This included professional careers and promotion in the teaching profession. The DBE introduced the new directorate for rural education by citing his position as SES for rural schools and Circuit Managers (CM) for rural school. These positions required teachers with experience in rural teaching. Another advantage of working in rural schools as a teacher is the increase of professional responsibility. Rural school teachers are involved in mentoring for newly appointed teachers, and have strategies of making the tasks interesting for themselves, as extended responsibility. Improvement of working conditions is another advantage. Teachers improve their social and physical working conditions to be inviting and this can lead to their perceiving and experiencing the work situation as more professional and more attractive. This is done because the teachers have a lot of time staying in the rural setting and some go to their home town during month ends only.

These presentations by the SES stirred interest in many students; they were involved in discussions by making interesting contributions to the presentations.

One student from the class said:

“I was not aware that there were so many advantages in working in the rural schools. I only knew the disadvantages. From today’s presentation I have changed my mind about teaching in rural schools.”

3.11.3 Training student teachers for multi-grade teaching

Training of student teachers for multi-grade teaching was assigned to one experienced teacher in a rural school. This task was assigned to the teacher experienced in rural teaching and showed to students the importance of multi-grade teaching and how it is implemented in the classroom. The teacher started teaching while being observed by

student teachers on 5 April 2016 and they had reflection after school. The 5th April 2016 was the first day of the TP for student teachers in the second school term, until 15 April 2016. They observed the experienced teacher presenting the lesson on the first day. After school, the teacher discussed with them what, when, how, and why certain things were facilitated during the lesson as a reflection with student teachers. The teacher and student teachers opened the discussion by discussing why the lesson was facilitated in that manner. Student teachers were fully engaged in the reflection as the teacher was explaining.

Among others, the following were identified: the first, that there was an opportunity for learners in class to become resourceful. Learners got time to think about resources they can use in learning specific topics for themselves, while the teacher is focusing on the other group. The second point was that some of the learners were learning independence, while the teacher was focusing on the other group. They were able to conduct themselves responsibly without disturbing the teacher who was busy with the other group in class. They were able to control one another. Msimanga (2014:22) confirms that in multi-grade teaching learners can work on their own without interference from the teacher, especially when learners do independent learning. The last point was that multi-grade teaching addresses the problem of the shortage of teachers in school. The teacher grouped three different grades at once in one room. This usually needed three teachers and three rooms to facilitate teaching. All these were addressing access to education for rural school learners.

3.11.4 Parental involvement in school activities

All schools are placed in a particular environment, being urban, suburban, or rural (Eppley 2015:70). Eppley indicates that teaching and learning always occur in a particular place constituted by its unique social and cultural activities and relationships. The statement above shows that the community members in a place are experts in their entity with regard to their unique social and cultural activities. The study allowed community members around the rural school under study to own the project until the improvement was achieved. These people as co-researchers in the study were involved in all activities that took place in and around their school to grace the envisaged outcomes. As rural schools are placed in rural areas, the school community consists of people staying on the rural area who should be engaged to form part of the

development in the school. The task to encourage participation of parents was assigned to the CM for rural schools.

3.11.5 Engaging student teachers in rural school teaching

Mukeredzi (2013:92) points out that learning by doing presents occasions for engagement in professional development practices, relating to practical knowledge on preparation and organization of the teaching/learning process such as: teaching strategies, learner motivation, and classroom and group organization and monitoring, as well as time management. TP in rural school enabled student teachers to reflect on and interrogate their practices, beliefs, and institutional modes of TP. Five student teachers who were sent to a rural school for TP stayed at the school for the whole period of their TP. They were assigned different experienced teachers who served as mentors according to their different subjects. They presented lessons in class to learners under supervision of the mentor teachers. Every day after school they reflected by discussing the lessons with mentor teachers who were able to point out the areas where improvements were needed. Students were also assessed by the mentor teacher who developed them during the TP process. The lecturers from the university also visited the students to do the assessment of the lesson presented. The purpose of assessment by the lecturer was to report the progress of the student in Teaching Practice as a module to the university.

3.12 DATA GENERATION

Data was generated from interactions with various stakeholders and or participants in the study. Through our meetings, we agreed that data would be recorded and the records would be kept safe until the end of the study. The Free Attitude Interview (FAI) technique was used to generate data because it has elements of respect for people, and the questions were used only to initiate a conversation, as indicated by Tshelane (2013:419). In a FAI people talk as in a normal conversation (Buskens, 2011:1), unlike in cases where people respond to questions that have already been posed. In an FAI there is only one question within which co-researchers explore their own minds. The conversation among co-researchers was free, which opened a platform to everybody to participate in the discussions. The FAI was then followed by a reflective summary, thus persuading contributors and inspiring co-researchers to reason prudently about their arguments (Mahlomaholo, 2009:228). The issues of consistency and legitimacy

were not emphasised during conversation, like Buskens (2011:2) confirms them happening in positivist and phenomenologist paradigms.

The advantage of FAI was that co-researchers were saying more than they would have said in responding to closed questionnaires. The nature of a normal discussion helped them to feel free. The FAI allowed us to engage in reflexivity to regulate the effects of researcher preconception and its impact on the research process. We also used a voice recording device to make sure that the information discussed is captured correctly. We engaged in establishing the strengths, weaknesses, opportunities and threats (SWOT) to analyse co-researchers and the school environment under study. The research question on how to enhance TP using constructivism to prepare teachers for sustainable rural learning ecologies was seen as interesting, as everybody was free to intervene at any time during conversation. The study allowed a group of co-researchers, like Buskens (2011:2) indicates that FAI may be conducted between two people or as a group and these people are free to intervene and responses can be given in a flexible manner. We used it as a person-to-person method of obtaining information from among co-researchers.

3.13 FORMULATION OF THE ENQUIRY

The discussion started during TP class at the university with the document from DBE, indicating that teachers are not trained or not prepared to teach in rural schools (DBE 2007). The document indicated the strategies DBE came up with to recruit teachers to work in rural schools. The Funza Lushaka bursary programme to fund students that will work in rural schools after completion of their degrees (DBE, n.d:13) is one of the strategies. Students funded through this programme are expected to teach in rural schools where they will be placed. The rural school allowance for teachers is another initiative of the Department to recruit teachers for rural teaching. DBE established Initial Professional Education of Teachers (IPET) in 2007 to transform teacher education for student teachers while in the field of study, to overcome the challenge of teaching experience for new teachers in schools during their first year of their profession. The SA Government Gazette No. 38487, 2015 (MRTEQ) identifies practical learning of student teachers to involve learning from and in practice. Learning in practice means teaching in authentic and simulated classroom environments. The above statement indicates that any classroom where learners are taught is authentic

and stimulating. Therefore it is the responsibility of every teacher to make the classroom a learning environment.

The identified documents are silent on how teachers should be prepared to teach in rural schools for sustainability. The documents do not indicate the role of teacher training institutions in rural teaching, as some of those teachers who are currently employed want to go to urban schools or leave the system. Ngidi and Sibiyi (2003:18) wrote that TP is a tool for student teachers to get experience in the actual teaching and learning environment. TP is the practice of the art of teaching before actually getting into the real world of the profession (Makura & Zireva 2013:4). It enriches the experiences of student teachers and matures their epistemological beliefs (Alphan & Erdamar 2013:131). The discussion from above indicated a need for teacher training institutions to prepare teachers for sustainable rural learning ecologies.

Data was generated with the students in TP class at the university and taken to the rural school community to inform action and conduct methodology together with the community, as opposed to on them (Savin-Baden & Wimpenny 2007:333). Savin-Baden and Wimpenny (2007) further indicate that PAR asserts that knowledge should be developed in collaboration with local expert knowledge and the voices of the 'knowers'. Co-researchers in this study are people who are involved in education issues and experts on rural teaching and learning and they come together to "share experiences through a dynamic process of action, reflection and collective investigation". The process requires co-researchers who are directly affected by the research problem to participate in the research process. We drive the study forward as a group with shared objectives and decision-making powers. Collective investigation and analysis of experience are the most appropriate, since it is recognized in PAR that knowledge is socially constructed and embedded.

3.14 THE RESEARCH SITE

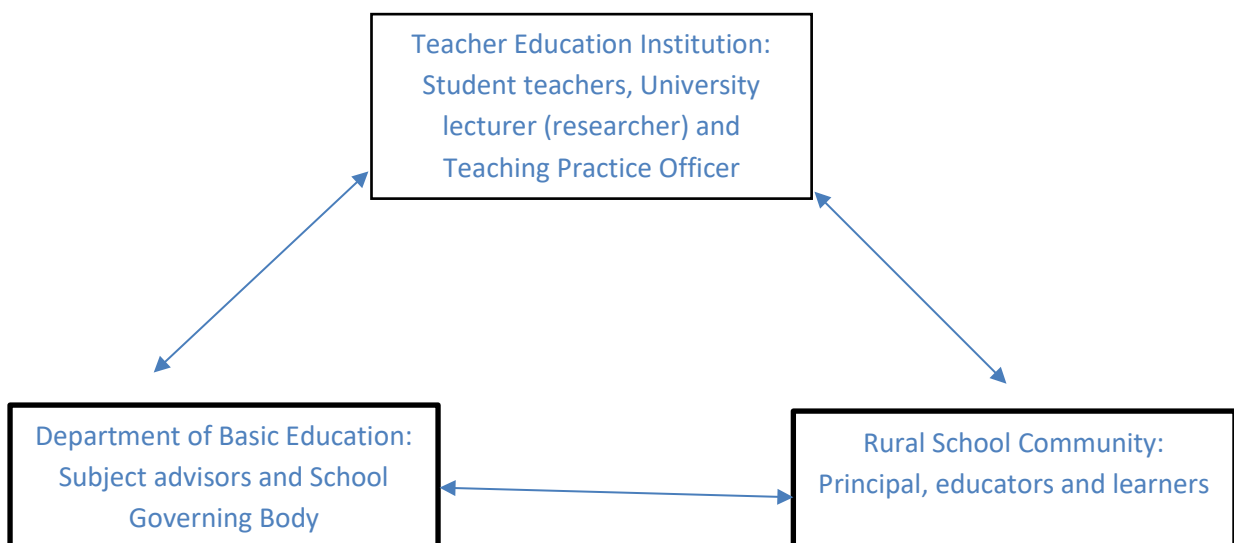
The rural school identified as a research site is situated in a remote area of Thabo Mofutsanyane district in the Free State province. The school consists of learners from grade R to grade 12 who come from farms around the school. The school introduced Grade 12 in 2013 and has produced 100% matric pass rate for two consecutive years, 2013 and 2014. It was ranked among performing schools in the province. The school has hostel facilities for only girls and all boys travel to the school. The DBE pays

transport for learners who travel long distance to and from the school. This school is selected for the study because it displays many characteristics of rurality as it is situated in a remote area of the district, has limited resources, teachers receive rural school allowances, and parents work on the farms and depend on support grants for an income. The University of the Free State established good collaboration with the school during the study whereby student teachers were given accommodation for TP. This gave time to complete the PAR circle of planning a change, acting and observing the change, reflecting and re-planning.

3.15 CO-RESEARCHERS

This section examines the co-researchers in the study with their role as people affected to bring about a change. All of them were collectively engaged in the study to enhance a constructive framework to prepare teachers for sustainable rural learning ecologies.

Figure 3.2 (below): Indicates the structure of co-researchers in the study.



The arrows above indicate that all three structures are dependent on one another. If one of the structures lacks, the other two will not function in isolation. Each structure in Figure 3.2 (above) is unpacked and the interactions between them demonstrated in the next paragraphs.

3.15.1 Teacher Education institution (TEI)

The Teachers Education Institution (TEI) trains student teachers according to policies provided by the Department of Higher Education (DHE) to align qualifications for teacher education with the Higher Education Qualification Framework (DHE 2011 No. 34467; 2013 No. 36721 & 2015 No. 38487). Within this study the TEI comprised of student teachers, university lecturer and TP officer. Student teachers were third year education students who attended TP to practice constructivist teaching and learning in the rural school. Having learnt constructivism in their modules, the study provided opportunity for them to practise its implementation in the rural classroom while they are still in their training for the profession. Their participation in the study through PAR assisted in coming up with the best solutions for rural learning ecologies. These students were to be in their final year the following year and they participated until the study was completed. The students had visited urban schools the previous years during TP and were able to compare the difference between teaching and learning in different environments. This experience assisted them to better contribute in the study during discussions.

The university lecturer is the main researcher in the study to give academic advice to co-researchers and guide the students on the policies of TEQ and SACE code of conduct. With other co-researchers, I assisted in the assessment of student teachers during the entire process of the research study until the end of the study. I was also assisting student teachers to conduct a constructivist classroom while teaching. During this study, I had ten years' rural teaching experience of which the last five were as a principal of a rural school. I also had five years' working experience in urban school as a deputy principal. The TP officer was employed at the university responsible for practice teaching and was involved in the study because of the experience in TP. The officer was responsible for placing student teachers from first year to final year into different schools and making sure that they are mentored professionally and assessed in class by lecturers and by mentor teachers. Reports from lecturers and mentors were forming part of TP marks at the end of the year. Being part of the study, the officer reported to the university on the progress of student teachers in rural schools for the TP process and TP marks.

3.15.2 Department of Basic Education (DBE)

The DBE makes sure that every learner in South Africa receives quality education irrespective of geographical location of the school. The department pays the salaries and rural allowance to educators in the school, provides professional teacher development, provides daily transport to learners of the school in the study and also provides the school with learning support materials. Within the study, the DBE comprised of the Senior Education Specialist (SES) for rural schools and the school governing body (SGB) members. The SES provided curriculum support to teachers and student teachers and made sure that activities done in class are in line with the curriculum. The SES also made sure that learners are assessed in the process of TP by unfolding the syllabus to the teachers and seeing to it that it is followed. Their involvement in the study assisted to keep the study aligned with the direction of the DBE. The SES acknowledged the interest displayed by student teachers to be part of transforming rural teaching and learning.

The SES:

“Thank you. I am happy that student teachers have made a decision to do their TP in rural schools. We experience a problem of teachers who are employed here and leave after a few months.”

The SGB represented parents of learners in a school. Two parents from the SGB were involved in this study. These parents volunteered in the preliminary meeting with the school. These parents only attended primary school up to Standard 1 (Grade 3). The parents work on the farms around the school for a living and they also depend on social grants. Apart from representing other parents, we needed their rural life experience in the study to find how rural life is sustained. Parents assisted to close the gap that textbooks leave, as Moloi (2014:117) indicates education is specific to learners, as well as the need for the participation of community members. The team listened to the voices of parents and acknowledged their contributions throughout the study because PAR views participants as human beings, not as subjects to impose ideas on and PAR intends to improve human lives.

3.15.3 Rural School Community

The rural school community in this study comprised of the principal, educators, parents and grade 10 learners. The principal had teaching qualifications and had been working in the school for more than ten years in the beginning of the study. The involvement of the principal in the study was to give permission for student to do TP in the school, to provide accommodation for student teachers to sleep over during TP, and also to give permission to hold meetings at the school. The principal also played a management role, to see to it that the school time was well managed. During the preliminary meeting the principal started the meeting by introducing everybody present and indicated the apology of one parent who would be late due to a delay from work. The principal then explained the intention of the university to expose student teachers to rural learning ecologies before they qualify or are employed in the rural schools.

The principal:

“Good day everybody, I thank you very much for honouring this meeting as we have visitors from the university I know that it is not easy for everyone to be here at this time of the day. We have many commitments after work, but you decided to be part of this meeting. The visitors are Mr X and Ms Y with the student teachers from the university, and you all know Mr Z is our subject advisor. From the school, we have SGB members Ms K and M, grade 10 educators Mr A, Mr B and Ms C and ten grade 10 learners. You are all welcomed to this school and I will hand over to the visitors to elaborate further”

We agreed with the co-researchers that we may use language one is comfortable with, so that we understand each other and that what is important are the facts of our discussion. In the discussion it was made clear to co-researchers that permission was requested and granted by the principal to bring student teachers to the school to practise the art of teaching especially in rural ecology. The aim is to prepare them for sustainable rural learning ecologies as teachers using a constructivist teaching and learning style. We are going to work together as co-researchers in the whole process in collaboration with the school community and with the involvement of those who provide support to the school.

We agreed that the TP programme must be extended to rural schools to prepare teachers for sustainable rural learning ecologies. We agreed to hold regular meetings to discuss different roles of co-researchers in the project and further engagement. The student teachers would continue to do their TP as usual and when we meet would start from what they would have experienced as different from their township teaching. The whole team was requested to take part in the process of the teacher training project from the beginning to the end, when we will be analysing the results. Co-researchers were informed about their rights in the study, the right to participate and to withdraw participation any time they may feel to. Consent forms were read and explained to co-researchers and were signed. Many questions arose about the study and how they were going to benefit from the research.

The educators in the school had education qualifications from junior degree, B.Ed., PGCE to Honours respectively. Three educators with their rural school teaching experience were involved in the study as co-researchers and served as mentors to students. Two of them were in possession of PGCE qualifications and the other one B.Ed. One has been working in the school for ten years, the others for three years and two years respectively. The teachers were included in the study because of their experience in rural teaching. The teachers in rural schools teach many subjects in different grades. They conduct classes under limited teaching and learning resources. This assisted the study for students to practise constructivist teaching and learning methods during TP. In constructivism, learners construct their own knowledge from their experience and from the society. They mentored and assessed student teachers in classroom teaching during WIL.

Parents of the learners at this rural school were unemployed and relied more on government social grants. At the beginning of the study, they were not confident that their experiences and knowledge were valuable in an education context, especially to assist in teacher training. They could not believe that they could contribute to teacher training. They thought teachers are just taught in the university up until they are qualified professional teachers appointed to schools for employment. Through interaction and workshops in the study they started contributing every time we interacted. They felt empowered by the study because they were closer through the created space of education. They asked many questions before committing themselves to be part of the study.

“Ebe rona re kena jwang re sa tsebe le hobala? Re tla thusa jwang ho kwetlisa matitjhere? Re bona feela ho aplaya matitjhere a tswang ditoropong ha ho ena le sekgeo sa mosebetsi, ebe ka mora nako titjhere ya hirilweng o se a tsamaile hoya ruta metseng ya ditoropo.”

(How are we going to be involved as parents because we cannot even read? We just see people applying to a vacant post at the school coming from townships and sometimes after employment the person has left to work in township schools.)

In responding to the questions we indicated that we need the experience of parents living in the area to assist the students. Their experience in the area is highly acknowledged in the study to prepare teachers for sustainable rural learning ecologies. There is nobody from outside who could tell how to survive life in the area except people who live in the place. Yull, Blitz, Thompson, and Murray (2014:10) write that parents play a key role and are instrumental contributors to the academic success of learners. The researchers indicated that engaging parents in school activities and learners’ learning is widely considered fundamental to high-quality education. Parents’ involvement is important for improving school engagement and learners’ performance. Incorporating parents as partners in the educational process is critical for teacher training in the study. Parental involvement in the study was important not only to individual learners but also to the greater rural community and student teachers.

It was through the increased knowledge contribution and inputs of the parents that the co-researchers had a significant learning opportunity about the lived reality of rural learning ecologies. The deeper understanding of such information and more made the co-researchers expand their sense of collective power through their collaboration with each other. There was a diversity of culture in this school with different languages used in the school, but the most spoken languages were isiZulu and Sesotho. The language of teaching and learning is English. The three structures, HEI, DBE and school community, started to work closely with one another with the same objective of providing quality teaching and learning in the school. The assessment tools to be used during the TP programme would be designed together to be in line with the PAR cycle. This was because in PAR, assessment is flexible until the outcomes are reached (Kemmis & McTaggart 2007:23); the cycle of PAR starts at any stage from planning or implementing or reflecting or preparation and so on, until outcomes are reached.

3.16 INSTRUMENTS USED TO GENERATE DATA

One teacher was assigned to take notes during discussions of the constructivist framework to prepare teachers for sustainable rural learning ecologies. Co-researchers further agreed to use a voice recorder during the discussions to make sure that the scribe would capture information correctly. We agreed that the instruments would be kept safe until the end of the study. Discussions were done in line with the objectives of the study mentioned in chapter 1.

(i) To conduct a needs analysis regarding the constructivist framework in rural learning ecologies. (First objective)

- To address this objective, the team brainstormed the ideas to find out the challenges facing a constructivist framework to prepare teachers for sustainable rural learning ecologies and how to circumvent them.

(ii) To find the solutions to the challenge of a constructivist framework in rural learning ecologies. (Second objective)

- The team discussed with the experienced rural teachers to find out how they conduct their teaching in the rural learning ecologies to improve academic performance. What strategies were they using?
- We observed classroom teaching by rural school teachers conducting their lessons.

(iii) To find out conducive conditions under which constructivism worked successfully in rural learning ecologies. (Third objective)

- Observation of experienced teachers conducting lessons in class.
- Discussion on whether the lessons presented by experienced teachers were constructivist or could be conducted in a constructivist way.

(iv) To highlight possible threats in a constructivist framework that may hamper improvement to prepare teachers for rural learning ecologies. (Fourth objective)

- Discussion as a team on what could be the threats that may hamper improvement of constructivist lessons and how to circumvent them.

- Teachers indicated the challenges they encountered in rural teaching.

(v) To provide evidence of success to the envisaged constructivist framework to prepare teachers for rural learning ecologies. (Fifth objective)

- Observation of student teachers conducting constructivist lesson in class.
- Discussion with them on the lesson taught to find the area where they could improve further.
- Observations, reflections, discussions and allowing student teachers to implement what was discussed in the class until the end of the TP session.

(vi) To propose a constructivist framework that will prepare teachers for sustainable rural learning ecologies. (Sixth objective)

- Assessment results of student teachers by experienced teachers and lecturers for the TP programme.
- Evaluation of learners' performance after the interventions.

3.17 PLAN OF ACTION

Table 3.1 explains activities identified during the strategic planning of the activities to be done, the responsible person(s), monitoring tool and the evidence to show that the activity was done.

ACTIVITIES	PERSON RESPONSIBLE	MONITORING	EVIDENCE
Lesson on constructivism	Lecturer at the university	Class attendance register	Final year students engaged in class
Discussion of assessment tool	TP officer and TP lecturer at the university	Class attendance register	Final year students engaged in class
Supervision and mentoring	Experienced teachers at rural school under study	Student teachers observe	Co-researchers discuss the lesson with student teachers after the class
Classroom teaching	Student teachers	Experienced teachers observe the lessons	Discussions of the lessons with co-researchers after class
Classroom teaching and class activities	Student teachers and Grade 10 learners	Teachers monitor the activities and evaluate students	Co-researchers discuss lessons after class

3.17.1 Constructivist lesson to student teachers

A constructivist lesson was presented to student teachers in lecture class before students attended the TP programme. Theories of constructivism with more emphasis on social constructivism were discussed with all final year students. Fundamentally, constructivism says that people construct their own understanding and knowledge of the world through experiencing things and reflecting on those experiences (Macfarlane, Hendy & Macfarlane, 2010:6). The researcher further indicated that in constructivism learning is an active process and knowledge is constructed from (and shaped by) experience. Learning is a personal interpretation of the world. It emphasizes problem solving and understanding. Different examples were cited on how to present different topics in class using constructivism. For this study, it becomes clear that constructivism is a relevant teaching method where there are limited resources to assist learners to develop knowledge from their experience. It acknowledges the experience of the learners.

3.17.2 Assessment tool

The TP officer and lecturer discussed the assessment form to be used during the TP programme with students in class. This form would be filled in by a lecturer and mentor teacher visiting the student in class for assessment purpose on the agreed date and time. The form would be brought back with the student file for recording of marks. This form was also discussed with co-researchers in the study for them to have some inputs before TP session. It was at this point where co-researchers realised that they could contribute further in the teacher training programme. The subject advisor who was a member of the team came up with other changes in the form. The team agreed to use the same form for classroom observation of student teachers.

3.17.3 Classroom teaching by experienced teacher

During the TP programme, experienced teachers were first conducting the lessons observed by student teachers. They had discussions with other co-researchers every day after school about the daily lessons. The discussions allowed students to indicate how they would improve on the lessons presented.

3.17.4 Classroom teaching by student teachers

Student teachers also presented lessons in class under the supervision of the experienced teachers who were mentoring them. They discussed the lessons presented after class with the mentor teachers and agreed on the time for evaluation. Student teachers presented the lessons in class with discussions after school until the end of the end of the TP programme. They were evaluated by mentor teachers who are experienced in rural teaching, and there were discussions of the lessons presented with the co-researchers.

3.17.5 Class Activities

Co-researchers monitored the implementation of constructivism and the impact it has on learners by checking the performance of learners daily in their class activities. While observing the activities and lessons they still observe whether the student teachers enjoy what they are doing at school. They looked at whether students are motivated or demotivated as they discuss. They observe whether or not the students in the study

could bring changes in the school if they should be employed after completion of their training.

3.18 ETHICAL CONSIDERATIONS

Permission to conduct the research was granted by the ethical clearance committee of the university. To gain access to the school, permission was requested from the Free State Department of Education (FSDoE) in writing, and the principal of the school was also requested permission to conduct research. All co-researchers were assured of anonymity in the study and that data generated would be kept safely until the end of the study. Ethical issues were highlighted for co-researchers to address the issues of confidentiality, non-identification of the co-researchers and data that will emerge in the study. Each co-researcher received details of the study verbally during the preliminary meeting and consent forms written in the language he/she would understand.

Co-researchers were asked during the meeting if they wished to be included in the study and, if so, they were requested to complete the consent form. Informed consent focused on two main areas. Firstly, all co-researchers received sufficient information about the study (Reid 2009:32) that was written in a suitable language and format so that the co-researchers could understand the implication of what they were agreeing to. Secondly, participation was voluntary and they could withdraw at any time during the study if they felt like it. Co-researchers were given the responsibility in the research proceedings and encouraged to ask questions for clarity.

3.19 CONCLUSION

The chapter paid attention to the research design and methodology to enhance the TP programme, using a constructivist framework to prepare teachers for sustainable rural learning ecologies. It described in detail how data was generated and the portfolio of co-researchers in the study. The chapter also indicated how the co-researchers did the SWOT analysis of the school under study to see the strengths, weaknesses, opportunities and threats of the school that might assist the study, and those that might hamper the process, and how to circumvent the threats. The next chapter will consist of the analysis of data, and presentation and interpretation of the constructivist framework to prepare teachers for sustainable rural learning ecologies.

CHAPTER 4

DATA PRESENTATION, INTERPRETATION AND ANALYSIS ON THE CONSTRUCTIVIST FRAMEWORK TO PREPARE TEACHERS FOR SUSTAINABLE RURAL LEARNING ECOLOGIES

4.1 INTRODUCTION

This study aims to formulate a constructivist framework to prepare teachers for sustainable rural learning ecologies. The theoretical framework and literature review to formulate the framework were discussed in chapter two. Chapter three discussed the methodology used for the framework. This chapter focuses on data analyses, interpretation, presentations and discussions. The challenges, solutions to the challenges, conditions conducive to, the threats and the evidence of success regarding the implementation of the framework are discussed in line with the objectives of the study. Critical Discourse Analysis (CDA) is used in line with CER and PAR to interpret and analyse data generated during the meetings. Each of the constructs formulated for each objective is used to make sense of the theoretical and conceptual frameworks couching the study.

4.2 NEEDS ANALYSIS REGARDING A CONSTRUCTIVIST FRAMEWORK TO PREPARE TEACHERS FOR SUSTAINABLE RURAL LEARNING ECOLOGIES.

This section examines the need justifying the proposal of a constructivist framework to prepare teachers for sustainable rural learning ecologies. The information came from the challenges pointed out by co-researchers during the meetings and brainstorming sessions. The section analyses these needs and attempts to address them to improve the teacher training programme that will prepare teachers for sustainable rural learning ecologies. The need to formulate the framework is discussed following constructs indicated in chapter 2.

4.2.1 Lack of collaboration between the TEI and the rural school.

The Minimum Requirement of Teacher Education and Qualification (MRTEQ) in chapter 2 indicates the need for the HEIs to work closely with schools for Teaching Practice. This policy insists that the institutions incorporate the types of learning during

teacher training programmes for the students to meet the requirements of the qualification (2.8.1). Empirical data found during discussions supported that, for teachers to be prepared to work in rural schools, they must practise the art of teaching while still in their training. They need to have thorough practice of the skills for rural learning ecologies. It became evident that there was no collaboration between the institution of teacher education and the rural school under study. Co-researchers did not know that they could contribute something to teacher education.

The following comments were captured from co-researchers, a principal and a subject advisor, as follows:

Principal: *“It is good that the university has decided to send student teachers in this school to practice teaching in the rural environment. We usually experience challenges about newly appointed teachers who come to teach here and later they disappear because they are not used to the environment ...”*

The SES continued to say:

“Experience is the best teacher; I am sure that if the majority of students could be accommodated in the rural schools during their practice teaching, the government would not decide to close rural schools as many teachers would understand working everywhere in the country.”

The TP officer responded to the comment from the subject advisor by saying:

“This is the only rural school with many characteristics of rurality close to the university. There are many challenges with other rural schools to place students, like daily transport to the school, accommodation and catering to mention some.”

The three co-researchers showed the need for collaboration by the teacher education institution and the rural school for learning experience, to prepare rural teachers. The principal from the marginalized rural school is happy to have students coming to the school for TP. In her text *“... We usually experience challenges about newly appointed teachers who come to teach here and later they disappear ...”* she indicated as if all newly appointed teachers in the school are not prepared to work in rural schools. The subject advisor on the other hand supported the need for the teacher education institution to work with rural schools. Talking from the side of the DBE, the subject

advisor finds that the DBE will benefit if many student teachers could be placed in rural schools for TP. The TP officer responded from the university side, indicating challenges of TP for many students in rural schools.

CER assisted teacher preparation programmes as indicated in chapter 2.3.2. If it were not for CER with its virtue of empowerment, there would not be a space for co-researchers to put their comments. CER created a space for students to do their TP in the rural school and a space for the marginalised group to contribute in teacher preparation. PAR on the other hand assisted the discussions as everybody was allowed to talk without fear of any intimidation of power. They were all free to participate.

One teacher also indicated that he never had a chance to be trained in rural schools' teaching. He mentioned that he learnt to teach in rural school by himself after being appointed at that school. The teacher further indicated that he is now used to rural teaching and does not see anything wrong. This is supported by literature in 2.4 that experiential learning typically requires reflective exercises with direct contact with the phenomenon being studied, rather than merely thinking about or discussing the potential for such contact. The teachers' subjective experience(s) led to more long-lasting and perhaps more meaningful learning.

Ms Lekau (Teacher): *"The first time when I arrived at this school was a nightmare; I was thinking I will not cope to teach in a rural school, where there are different grades in one classroom. This was because we were not trained to teach a multi-grade class during our teacher's training..."*

Using CDA to analyse the situation, it was hard in the beginning for the teacher to cope with rural teaching. He shows the need for TP in rural schools in preparing teachers for sustainable rural learning ecologies. Engagement of rural school teachers in the study on equal bases using PAR prevented power relations that might exist among co-researchers while assisting student teachers. This is supported by the statement of the teacher who responded freely about lack of training in rural school teaching. This statement supports the fact that practice is needed as part of learning. The student teachers in the study practised teaching in a school with situations similar to where they will be employed.

4.2.2 Lack of parental involvement in rural learning ecologies.

The issue of parental involvement came out in the meeting that was held on 13 April 2015 where it became evident that the South African school community makes it a culture to receive information from school officials (2.8.2). Parents from this school were so obedient and respecting of the school authorities, which caused them to not be actively involved in the school activities before the introduction of the study. They had low self-esteem and relied on the school authorities for everything and were not taking responsibilities for the education of their children. They thought they were not educated enough, and they could not do anything in education. Data here indicated that CER and PAR in the study is creating a space for empowerment because parents managed to contribute to the study by showing the need for engagement.

One parent said:

Ms Mollo (Translation): *“Teachers must teach children; we as parents must just assist children at home to see to it that they do their homework, and pay the school funds. We are not educated as parents and some of us do not know how to read.”*

The principal emphasized the lack of active participation by parents:

“Ms Mollo is saying exactly what is done by parents in this school. Parents come to the meeting to listen only; they do not participate in discussions. Even to elect the governing body of the school is a problem in this school. I like it if it comes out at the meetings like this one... Maybe parents will start to learn their roles as parents of the school after this intervention.”

Analysing from CDA, they openly indicated lack of responsibility towards the activities of the school. She placed herself out of the issues related to education. The parents consider teaching to be the responsibility of teachers only and learning as the responsibility of the children. Chapter 2.9.2 emphasises the importance of parental involvement in education. Parents must support their children at school and get feedback on the academic performance of their children. For the principal it is a norm that the parents at the school do not participate in school activities. She indicated the need of the study as *“...Maybe parents will start to learn their roles as parents of the school after this intervention...”* CER and PAR assist to empower and allow parents in the rural community to see the need of taking part in school activities to support

children (2.3.1). The community may take this as a platform without fear to realise that they are the partners in education on an equal base to bring about change as indicated (2.3.2).

4.2.3 Limited support from the Government to rural learning ecologies.

The DBE takes time to respond and sometimes does not respond at all to other needs of the rural schools, as literature has shown the need in chapter 2.

Co-researchers commented as follows in the meeting:

Mvelase (Student teacher): *“It was difficult to present some of the activities in class because there is no access to the internet at school. One cannot give learners activities that need internet.”*

Tsimu (Student teacher): *“Learners arrive late and the rate of absenteeism is high at the school for those learners who do not stay at the school hostels.”*

The two students are stating the same thing to emphasise a need for the government to assist more in the rural school. Their statements show loss of hope. They do not see that there could be improvements without government intervention. They see internet and school hostels as the only solution to the problem. The other students also expressed their observations on the support by saying this:

Tau (Student teacher): *“Another challenge is that of workshops organised by the DBE during school hours. The whole school timetable is affected for the day when teachers attend the workshop because one teacher is involved in many subjects in different grades which leads to a knock off of the school.”*

Tsimu (Student teacher continued): *“Learners do not have stationery (...), I had to buy exercise books for my learners to write activities over the weekend...”*

The principal responded while the students were identifying all these points by saying:

“I agree that learner transport is not reliable, as you are saying. The problem is old buses used by service providers to transport learners. They are often broken down while transporting learners to school and they do not reach other learners who stay far from the main road. I always report to education officials and do not see a change.

Even with finances, the school has not received money for the previous fourth term. That is why the student is saying learners did not have stationery...”

Analysing from CDA, the quick response of the principal while the student teachers are speaking shows the feeling of insecurity during these discussions. Maybe she did not want to disclose other issues about the school and now students are mentioning everything. Because CER allows freedom, equity and social justice, co-researchers were free to speak on equal base with everybody in the study. The principal expected the team to know only one side of the government; that “government is providing services to the rural school under study”. She wanted to hide the challenge depicted by students that the provision from government is not enough, according to them, and the system needs some improvements. The principal in her statement indicated loss of interest from the government in other activities.

The statement of the principal and students tells that they believe that other people in the system are informing the decisions. They do not see themselves bringing any change to improve the situation, if people have accepted the situation. This is contrary to what is said in Chapter 2, that people living in the situation need to do something to bring about change in their community. The use of CER and PAR in the study opened a platform of empowering to bring that change. This became evident where co-researchers expressed their views and the principal was agreeing that something must be done.

4.2.4 Demotivated teachers and student teachers to rural learning ecologies.

The following comments were indicated by teachers on demotivation:

Mr Keele: *“We work very hard to improve the performance of our learners in this school, but there is no recognition from who-ever. We even go the extra mile like coming to school on holidays and during Saturdays to assist learners. We produce good results but would be told that it is not enough.”*

Mr Lebitso: *“Here in the farm schools we teach many subjects in different grades and some of us do multi-grade teaching. We prepare many subjects daily in different grades.”*

Ms Lekau: *“I am teaching many subjects in one class also in different grades. I am teaching Mathematics and Natural Sciences in grades seven, eight, nine, and teach Mathematical Literacy and Life Sciences in grade ten, eleven and twelve alone. My colleagues in urban school teach only one subject...”*

Literature in 2.4 shows that teachers placed in schools with positive climates (e.g., strong professional environments and supportive leadership) are more likely to decide to stay in teaching than those in challenging school contexts. Mr Keele shows that they work hard as rural school teachers but they are not acknowledged by who-ever. His statement *“We even go the extra mile like coming to school on holidays and during Saturdays to assist learners”* shows that these teachers are committed to their work and are prepared to teach rural learners, although they need recognition for the hard work they do work. Literature in 2.4 continues to mention that quality of education is related to the quality of teaching and learning inside the classrooms and the retention of qualified teachers for having effective teaching and learning.

The rate of teachers' turnover increases when the organization's management and leadership focuses on the teachers teaching in the class without focusing on the teachers' job satisfaction, motivation and willingness to continue with their teaching profession. All the statements by co-researchers show that there is a need to formulate a framework that will prepare teachers for sustainable rural learning ecologies. CER with its empowering nature and PAR allowing the marginalised group to voice their concerns without leaving their fate to authorities make it possible for the co-researchers to work together to address the above challenges.

4.2.5 Failure to allow learners to construct own knowledge in the lessons.

Lack of knowledge by student teachers of how to facilitate learning using constructivism was a challenge in the beginning of TP. Student teachers were relying more on the textbooks and electronic resources to be used in class. This was a problem for them because there are no such resources in rural schools. For teaching to be effective in rural schools, teachers must first understand constructivist theories and how to implement them. TP in rural schools is a platform for student teachers to practise the art of teaching while studying (2.4.1). The statement of student teachers in 4.2.3 above about lack of resources hampering teaching indicates the need for a constructivist framework to prepare teachers for sustainable rural learning ecologies.

Tau: *“For the rest of the two weeks’ TP session, learners had not received stationery. Another challenge is the workshops organised by the DBE affecting the whole school timetable.”*

Mr Lebitso (teacher): *“The timetable is affecting the whole school because one teacher teaches many subjects. You will find that all other teachers are busy if one teacher has attended the workshop. They will close during the periods for the day.”*

The student teacher, Tau, talked out of curiosity to indicate that something is wrong and the situation must change. To the other teachers and the principal who did not respond to the statement it is likely that it is the norm for learners not to have stationery at the beginning of the year. They did not respond to that point. Only Mr Lebitso responded on the affected timetable during workshops. His response shows that he was defending the situation. This is seen by the point that he responded on why learners are left unattended during workshops.

4.3 SOLUTIONS TO THE CHALLENGES OF A CONSTRUCTIVIST FRAMEWORK TO PREPARE TEACHERS FOR SUSTAINABLE RURAL LEARNING ECOLOGIES.

This section focuses on the attempts to address the identified challenges. The following components were used in an attempt to address the challenges:

4.3.1 Collaboration between the TEI and the rural learning ecologies.

Student teachers were introduced to the rural school for WIL, to expose them to the rural learning ecologies. This was considered an alternative preparation programme for the teacher training programme with the characteristics which are more likely to produce effective teachers (Ross & Lignugaris-Kraft 2015:5). Ross and Lignugaris-Kraft (2015:5) indicated TP as the first programme that provides frequent on-going support from strong mentors and Institute of Higher Education supervisors to produce teachers with effective instruction and management skills. Second, it is a programme that places candidates in schools that are well-functioning, and built on evidence-based practices to produce teachers who stay in the field longer and become more adept practitioners. Finally, student teachers effectively implement evidence-based practices with field experiences and remain the central focus of the teacher preparation program. The coursework and seminars are designed to enrich their

understanding of the instruction and management practices that support the evidence-based model.

The University of the Free State partnered with the rural schools around Thabo Mofutsanyane education district by introducing TP to the rural school. During TP in the rural school, student teachers were fully engaged in teaching in the schools for a period determined. The school principal understood the need for student teachers to get exposure to rural school teaching before they complete their profession. She gave permission for them to do their TP at the school for the time allocated by the university. These students stayed on the farm during their TP period and the university provided them with food for the period. They observed the experienced teachers presenting lessons and thereafter they did the presentation of lessons under supervision. Experienced rural school teachers observed them as they presented lessons, and mentored and assessed them at the end. The students also interacted with parents who are co-researchers in the study during the TP process. Co-researchers also took part in mentoring student teachers by having discussion meetings.

Rapuleng J (student): *“Life on the farm is boring, especially after school when learners are gone. One does not have anything to do after planning for the following day.”*

Lerata P (student): *“I do not know how people survive in this set up where there are no shops to buy, even if one has some money. I am used to an environment where I can go shopping any time I want to.”*

Seeta D (student): *“I enjoyed staying on the farm; I can be happy if I can find myself employed at this school next year. It is quiet and learners are disciplined.”*

Tsimu P.A. (Student): *“It is the first time for me to experience such a quiet environment during and after school. Learners are so disciplined and after school one is able to do the preparations for the following day without disturbance. I can even work with those learners staying at hostels after school to cover the work. One can pursue further studies through distance learning...”*

Ms Lekau (teacher): *“We all started here not used to the environment and we ended up used to the situation. For the first few days I thought I would not cope, but through interaction with other colleagues I met here and parents, I am still here.”*

The student teachers, Rapuleng, Lerata and Seeta, were exposed to a remote environment where according to them there is no life for people. Rapuleng and Lerata only saw the bad side of reality in the beginning. Seeta, unlike the other two, enjoyed the stay even if it was her first time to be in a rural ecology. She saw a positive side of staying in the rural area "... *quiet and disciplined learners...*" This shows that she is used to a school environment where learner are not so disciplined. Tsimu like Seeta saw the positive side of rural teaching and may use the opportunity for further studies. The teacher responded from a social norm that the identified challenges are just temporary obstacles that can be overcome if one wants to do so. The statement by the teacher indicates that the community can influence one to improvements affecting them, which is one of the objectives of CER and PAR.

4.3.2 Involvement of parents in rural learning ecologies.

The first meeting to discuss issues related to WIL of student teachers, on how to prepare teachers, was held on 13 April 2015 with the school community, the subject advisor, student teachers and the TP officer to conceptualise ideas. Co-researchers came up with a common vision in an attempt to prepare teachers for sustainable rural learning ecologies. They planned to work on the project until the end when the envisaged change is observed.

Ms Sello (parent): "*We are happy to have teachers like these ones teaching in our school; they are keen to teach our children. We pray that they do not leave our school like others who left.*"

Ms Mollo (parent): "*The teachers in this school work very hard and they give our children reports in time. If they encounter problems with a learner, they are quick to invite the parents for solutions. We got encouraged to take part in the education of our children by the teachers and the dedicated principal. I so wish we could continue to work together to see our children receiving quality education.*"

Mr Keele (teacher): "*But sometime we struggle to get parents when we want them. (...) it is only you who are here who are always available.*"

The two parents appreciated the presence of the teachers working in their school. Ms Mollo shows that they work together with the school when there are problems affecting their children. The statement that they are encouraged to participate in school activities

shows that in fact they are not effectively involved; they do it because they are requested. With CER and PAR in the study, parents realised the importance of their contribution to education. CER created the space for empowerment of these parents through social interactions.

4.3.3 Government support to the rural learning ecologies.

To address the challenges brought by the limited support from government, the team did a SWOT analysis to find the better solution for TP in rural schools.

This was provoked by the lecturer who asked the question:

“Now that we see the support from the government is not enough, what can we do to improve the situation without depending much on the government?”

The principal: *“The school is too poor to afford all the school resources for teaching and learning. Our school is Quintile 1, where learners do not pay school fees.”*

Ms Mokoena (parent): *“There is limited space to accommodate our children; the hostel is only for girls. Boys travel long distance to school which leads to coming late.”*

The SES: *“I will assist as part of my responsibilities to support teachers, although this school is far and I am allocated many schools. I will do my best.”*

Seeta (student teacher): *“Staying here, away from home, is more expensive and we could not afford it financially as we are not getting a salary. Learners will expect us to wear fancy clothes like permanent teachers.”*

Many negative things were coming out from co-researchers until the chairperson, Ms Lekau, a teacher, intervened:

“... Hey people, don't you think that there are also good things that we can identify as positive. Everybody is mentioning only the bad things. What will people say? There are also many things positive we can tell about our school. We have support from the experienced Subject Advisor who was a teacher in rural schools for long, to assist the student teachers, for example.”

The principal: *“That is true; we have teachers that are professionally qualified. I am proud of them. They can assist in mentoring the student teachers.”*

Ms Sello (parent): *“Arrangements can be made in the learners’ hostels to accommodate teachers coming for TP.”*

TP Officer: *“I see now that we can work on what is available and avoid the weaknesses and threats of the situation.”*

All the negative things identified by co-researchers indicate the weaknesses and threats for the implementation of the programme in the school. The positive things identified indicated the strengths and opportunities that may improve implementation of the programme. Co-researchers were not aware that they are making a SWOT analysis of the TP programme in the rural school. CER brought hope to co-researchers that they can bring about change. From the strengths identified, it became evident that the programme would be implemented in the school, regardless of the weaknesses and threats.

The principal who initially talked about the poverty of the school later indicated the strength of the school to mentor student teachers *“... teachers that are professionally qualified. Can assist...”* This shows that the principal could not believe in the beginning that she has resources in hand to assist the programme. CER and PAR created a space for hope and empowerment. The SES indicated that he would assist in the programme *“...but this school is far...”* The word “but” remained a worrying factor because one cannot guarantee the first statement. Ms Lekau was hesitating to identify the rural experience of the SES as another strength of the school *“...for example.”* The reason for hesitation may be that as a teacher she knew the weak points of the SES, or maybe she was not sure how the SES would take that, whether positive or negative. Another strength of the school was accommodation of student teachers, as indicated by the parent.

The weaknesses identified were the late arrival of some learners who were not staying in the hostels, limited teaching resources and teacher workload. Parents who do not have formal education and are part of the co-researchers were cited as another weakness on the side of the school community. The other weakness on the side of the SES was inability to visit teachers on a daily basis for monitoring. Student teachers were not earning a salary and had to stay in the rural area to teach learners who would regard them as teachers. They did not have pocket money and did not have fancy clothes to go to work as teachers. The TP officer who wanted to use the results of

students from TP for module assessment was another weakness. The university lecturer would come once to assess student teachers in class, and thereafter leave. The threats of curriculum coverage were identified because student teachers were to learn, while the school's mission is to teach learners. The school would now run two parallel activities, teaching and mentoring. The SES would indicate to come to school and end up not coming with some reasons. There was a lack of confidence on the side of student teachers in the beginning. Student teachers had a different view about rural schools before the visit.

The SWOT analyses identified more strengths and opportunities than weaknesses and threats. This was taken as an opportunity for improvement.

4.3.4 Motivating teachers and student teachers for rural learning ecologies.

The strategy to motivate teachers in rural school was identified, as Khawary and Ali (2015:20-21) indicates that educational organizations should deal with their teachers more humanely. Khawary and Ali mentioned that teachers are retained and perform in an organization when they are valued, motivated and satisfied with their jobs and their professional status. In the absence of such an environment, it is likely that educational organizations in rural schools would continue to struggle to attract and retain qualified teachers. Although without job satisfaction and motivation, the teachers may continue to teach, but the passion from heart and mind to teach the learners would be missing. This passion for the teaching profession comes with the teachers' commitment to the organization where they teach and this commitment increases with job satisfaction and motivation. Low motivation and less job satisfaction aggravate the problem of teachers' turnover.

The school under study has qualified and committed teachers who are prepared to assist in the preparation of student teachers for the profession. The school got a hundred percent matric pass rate for the past two consecutive years. It was clear during discussions that the school works hard to attract and retain skilled and committed teachers.

The principal: *"The teachers in our school are professionally qualified and are committed towards their jobs. I see them as satisfied to work here, although I cannot guarantee that fact."*

Teachers responded to the team when asked how it comes about that they perform well:

Ms Lekau: *“We work as a team in this school. We are committed and we want to see our school leading at all times. We even forget sometimes that we teach in a rural school.”*

Mr Lebitso: *“It is nice here because we teach a lower number of learners, which makes us attend to the needs of individuals”*

Literature in chapter 2 by (Peterson, Bornemann, Lydon and West 2015:282) indicates that rural schools must often employ teachers with multiple subject endorsements to teach various classes and grade levels. This is supported by the principal, who mentioned that teachers in her school are qualified. Her words seemed to be appealing to teachers to stay long in the school. The statement, like *“teachers are committed towards their job”*, influences the decisions of the person affected to change their mind in support of what is said. The principal cannot confirm the commitment of other people. Ms Lekau indicated that they work as a team to make their job easier and they enjoy their job. Ms Lebitso enjoys rural teaching on the basis of the number of learners that are not many in a class. To her, this makes the job easy. Generally the comments show that teachers in the school under study are motivated. Because CER promotes social justice and PAR is empowering, the two created the platform for rural school teachers who are marginalized to assist student teachers for the profession.

4.3.5 Implementation of constructivist teaching and learning in a rural ecology.

A presentation to final year students on constructivism and its implementation in the classroom took place in May 2015. Having done the presentation, student teachers practised how they would construct a constructivist lesson. This was done in the micro-teaching class where students taught their peers. Students planned the lessons and presented them in a micro-teaching class where they were observed and assessed by their peers presenting lessons to others. They were also videotaped while presenting, for them to see how they were doing the presentations. After every lesson conducted, a reflection with the whole class followed where discussions were held.

Comment by student teachers after the presentation:

Mvelase (student): *“The presentation of constructivism was done in our class before. This second presentation was clear on how to implement it in a lesson. Last time in the class, I did not understand its implications.”*

Rapuleng (student): *“To my understanding, a constructivist teaching approach is most relevant to schools where there are limited resources. Rural schools are examples. Constructivist lessons allow learners in class to be critical thinkers, as they construct their own learning. The under-resourced schools allow learning to be facilitated using available materials around learners, to allow them come up with new knowledge...”*

Tau (student): *“This also means teachers in schools with limited resources must be creative as well, because learners may be misled by the lesson. Allowing learners to create their own knowledge may cause destruction in class, as one topic may take too much time and the teacher must complete the syllabus.”*

The lecturer: *“Remember that a teacher is a facilitator of the lesson. As a facilitator, the teacher must guide learners accordingly, to avoid chaos in the class.”*

The statement from student teachers shows that the lesson on constructivism was done in their class prior to the study. Mvelase, from above, only discovered how to apply constructivism now, during the study. Rapuleng and Tau agree with one another to say constructivism is more relevant to schools with limited resources. The comments from student teachers, three of them, may indicate that they wanted the lesson on constructivism to be repeated. It was not that they forgot the lesson, they wanted it to be repeated, which is good according to CER and PAR, which are promoting freedom, social justice and empowerment. CER and PAR made it possible for students to reflect on the lesson presented in their class and to practise it at school.

4.4 CONDUCIVE CONDITIONS TO UNDER WHICH CONSTRUCTIVISM WORKED SUCCESSFUL IN RURAL LEARNING ECOLOGIES.

The success of the implementation of the strategy as detailed in chapter 2 is dependent on a number of factors.

4.4.1 Collaboration between the TEI and the rural school.

The principal, parents and teachers in the school were happy to have student teachers in their schools.

The principal:

“It is nice to have different people teaching learners in the school. My learners are so happy, their performance has increased and the rate of absenteeism is now decreasing. I do not know whether the change is because of new faces or because student teachers do more than my teachers. What I am happy about is improved performance, and I wish we can have them more often.”

Mr Lebitso (teacher): *“I am happy to have people who are assisting us in teaching these learners. These student teachers are also assisting us because we also learn new things from them as we observe them teaching in class. The student teacher under my mentorship showed me a different method of doing the introduction to the topic after observing him for two different lessons.”*

Mr Mokoena (parent): *“My child is happy to be taught by new teachers. He told me about his surprise that these teachers are still students learning to teach. He was thinking they are permanently employed teachers at school. If children are happy, I am also happy as a parent. Send us more student teachers, our teachers here are working so hard.”*

The principal showed interest to have the student teachers in her school. Looking at her smiling was an indication that she was always wishing to have people who would assist them at school. The presence of student teachers in the school is not what the principal was expecting. They are there to practice teaching under supervision of experienced teachers, not to replace the teachers. The willingness of the school principal and the parents in the school contributed significantly for student teachers to be able to practise constructivism in their school (2.9). In the first meeting with the principal and the parents of the school, an understanding was reached that it is proper that students do their TP in a rural school for them to feel the reality of rural school teaching.

It was also easy for students to volunteer themselves to practice in rural schools. Although there were many students who wanted to go for TP in rural schools, the number was limited to five because of the financial constraints. These students had to be transported to the school on the first day and be collected after the TP. They were also provided with food for that period. The faculty of education from the

university assisted with the funding for the students to get food for the period of TP. This was brought about by the fact that TP is part of the teacher training programme. Committed teachers in the school under study and the rural school subject advisor also contributed a lot by introducing student teachers to multi-grade teaching and motivating them for rural school teaching.

4.4.2 Involvement of parents in rural learning ecologies.

In the first meeting that was held in April 2015, all the representatives of the team were present: the teachers, parents, learners, the SES for rural schools, university lecturer, TP officer from the university, and student teachers. This made the team committed to work together until the end of the study. This is supported by the following text from co-researchers:

TP officer: *“We are intending to place our final student teachers in this school to do their TP. The expectation is to expose them to rural teaching, and we hope that the teachers here will assist the university in mentoring them.”*

Mr Mokoena (parent): *“What will be our role now as parents?”*

The Lecturer: *“You are involved because you have children at this school. Any activity affecting your child at school affects you as a parent... By the way, you all have consent forms requesting your participation in the study to prepare teachers for sustainable rural learning ecologies. Can I start by asking whether we are all willing to participate in the study? Or maybe there are those that need clarity or those who are not interested?”*

The principal: *“How can we refuse to participate in this study that is assisting us, the rural schools, to have good teachers?”*

All members agreed with the principal by nodding their heads and Ms Mollo requested further clarity by saying:

“We will only participate if we can fully understand the procedures, (...) our involvement in the study and what is expected.”

From CDA analysis, the statement of the TP officer was pushing the agenda for the TP process. It was like she did not want to commit herself with the content of the study,

whereas she knew everything about the contents of the study. This statement provoked the discussion whereby the parents started to ask about their role as parents. The same occurred from the principal's statement which appeared influential to other members. It might happen that some members agreed because of the power relations of the principal. Everything she says was good and should be implemented. CER and PAR made everybody in the meeting feel free to talk without any fear of intimidation. Everybody was involved in the discussions, which indicates that a platform for parental involvement was created. Co-researchers were able to commit themselves to the programme.

Parents supported the school every time when they were requested during the project. They responded positively to the call of the principal in the first meeting and were ready to assist the school in any project for development. The composition of the team also supported participation because of its representation. The team dedicated their time to the programme from the beginning until the end. They met on the times agreed and in some cases the meeting would be extended in time without them being asked and there would not be complaints from anybody. Every member of the team received treatment that was respectful, which made parents feel that the system of higher education is valuing them. The use of PAR as a methodology opened worthwhile communication which enabled members to state their opinions clearly. The usage of the language one feels comfortable with was another aspect of success; parents used their mother tongue to express their opinions.

4.4.3 Government support in rural learning ecologies.

Commitment of the team members to the success of the study benefited significantly from the SWOT analysis. Parents wanted their children to be taught by teachers who are willing and prepared to teach in rural schools. They do not want teachers who would demean the rural lifestyle to the children.

Ms Mollo (parent): *"We are tired of teachers who always tell our children that they do not know anything because they live on the farm... The person forgets that he/she is employed because of those rural children."*

PAR and CER created willingness of the school community, including the principal, to state that the status of their schools made it easy to do the SWOT analysis of the

school (2.2). The team capitalised on strengths and opportunities of the school under study to support the project without any external interference; it was only the weaknesses and threats that needed to be twisted positively to be in line with the objectives of the study. Here the co-researchers and I suggested ways to counteract the identified challenges. Through open communication co-researchers were free to suggest, agree and disagree without hesitation.

4.4.4 Motivation of teachers and student teachers for rural learning ecologies.

Avery (2013:29) describe a rural school as a school in an extremely remote place, as well as adjacent to large metropolitan areas (2.2.3). This remote place makes teachers reluctant to go and work in the area. Teachers in rural schools are motivated by the rural school allowance.

Mr Lebitso (teacher): *“We save a lot of money by working in the rural school because of the rural allowance we receive from the government. We do not become tempted to do unnecessary shopping because we live far from the town.”*

Lerata (student teacher): *“That is nice.”*

Ms Lekau (teacher): *“It is also quiet for the person who wants to study further.”*

The SES: *“Classroom teaching is similar everywhere. Teaching is teaching, it does not change according to environment. Only the method would be affected by the environment, and a good teacher knows how to adapt to a different environment.”*

The statement by the teachers shows that they wanted to impress student teachers to be eager to work in the rural schools after completion of their profession. The SES wanted to explain to co-researchers that there is no differences in teaching, whether in rural or urban area, by making it clear to the team that classroom teaching is similar everywhere. In mentioning this, he was emphasising the point for student teachers to understand that rural teaching is possible. According to him, an effective teacher knows how to change the method to favour the learning environment. Lerata, the student teacher, was impressed by the statements made and understood the benefits of teaching in rural schools. It is an indication that some of them were not aware that there are so many benefits for teachers who are working in rural schools.

The exposure of students to rural schools by the university created the opportunity for them to meet people involved in the environment to express their feelings. CER and PAR brought reality to students who did not have information. Many of the students are funded by Funza Lushaka; these presentations by the subject advisor became relevant to them. They felt relieved because some accepted the funding without understanding the terms, only because they wanted money, but with hesitation to be placed in rural schools.

4.4.5 Implementation of constructivism in rural learning ecologies.

Student teachers practised constructivist teaching during the micro-teaching class before going to the school for TP.

Mvelase (student): *“The lecturer told us in the micro-teaching class that in a constructivist lesson, learners play an active role. The lesson becomes learner-centred. We must allow students to be active participants for them to create their own knowledge.”*

Lereko (learner): *“The teachers from the university make learning easy; they teach us from things we know. We do not use textbooks in our class... The teacher would just ask us what we know and we discussed from there.”*

The training of student teachers on constructivism improved the TP programme. The experience of the above student teacher on constructivism during the micro-class was effectively understood. The student teacher is proud to tell what she was told to do during the class. This is the evidence of learning through empowerment. CER was able to empower the student. Student teachers' understanding of what was required for the constructivist learning to be effective contributed to the success of the intervention. The application of constructivist learning theory during TP in the school made learning meaningful to learners. The point made by the learner above indicated the contribution brought about by training on constructivism to make learning effective. Student teachers were able to construct their own knowledge from available resources to teach learners, as indicated in chapter 2.4.

4.5 THREATS IN A CONSTRUCTIVIST FRAMEWORK TO PREPARE TEACHERS FOR SUSTAINABLE RURAL LEARNING ECOLOGIES.

Challenges, solutions to the challenges and conditions of success of the implementation of the constructivist framework to prepare teachers for sustainable rural learning ecologies have been dealt with in the previous sections. However, there were threats that were identified in the study for the implementation of the framework. This section outlined those threats in line with the constructs set in chapter 2.

4.5.1 Lack of collaboration between the TEI and the rural learning ecologies.

It came out that rural schools are far from the university and students cannot be transported daily to the school for TP and back. They cannot afford to stay long in the rural school because of the need for funds for food and clothes.

The SES asked:

“How are these student going to travel to schools because they are not working to hire daily transport? (...) Or maybe they will be accommodated at school... (...) There are teachers staying at school, aren't there? ...”

This statement came from the TP officer who is a co-researcher, who said:

“Teaching practice is the main focus of teacher education programme, but students need to attend to other modules to complete their profession. Students would visit rural schools more often to do their TP in rural schools if it was not because of lack of funds and long distance from the university and this school. We identified this school knowing that the school has hostels; it is just that we do not know how it is working.”

The principal said:

“Mh... It becomes extra work for teachers to mentor students for the profession while on the other hand teachers are expected to cover the curriculum. Teachers are now going to run two parallel activities, teaching and mentoring. (...) The accommodation is not an issue.”

The question from the Subject Advisor and TP officer about accommodation and distance for student teachers was a bit challenging to the principal. The subject advisor paused, wanting to hear the immediate response from the principal, who did not

respond at that time, until the TP officer intervened politely. The principal mentioned a different threat to the one asked by the two co-researchers (“extra work for teachers”) before coming to the point of accommodation. Finally she agreed to accommodate students. The interpretation may be that the principal did not want to accommodate students, or maybe she was afraid to make a final decision before consulting with other stakeholders. CER with its principle of freedom and transformation allowed the co-researchers to work to a common understanding.

4.5.2 Lack of parental involvement in rural learning ecologies.

Lack of parental involvement in school activities was indicated as a threat to teacher preparation for sustainable rural learning ecologies. The principal started the conversation on the matter by saying:

“It is difficult for parents in this school to attend activities of the school. Even to participate in the elections of the School Governing Body. They would come up with many excuses. Maybe if somebody from outside can communicate with them they would understand.”

Mr Mokoena (parent) responded:

“It is because many parents are working, I think parents will attend if meetings are held during the weekends. I, personally, am always available because I am able to make arrangements with my boss. Some parents are not living on this farm; they stay far away from here.”

The lecturer: *“At least we have an understanding from the side of parents. We can have a way forward. It is important that we have parents assisting in the preparation of future teachers. I do not see any problem to meet with parents in their convenient time.”*

From CDA, it becomes clear that the principal took a decision that parents do not want to participate in school activities. She did not look for the reasons why they do not attend. She wanted somebody to come and change the ideas of parents *“... if somebody from outside can communicate with them they would understand.”*

The parent, Mr Mokoena, responded politely to why parents are not available for school activities. He indicated their commitments and suggested solutions. This

indicates that initially the principal did not give parents a chance to respond. CER and PAR assisted the principal to understand the position of parents regarding participation. Parents got the chance to raise their voice, which it seemed was never done before.

4.5.3 Demotivated teachers and student teachers for rural learning ecologies.

Some students lacked confidence to teach in rural schools. They had different views about rurality. Some of them had not been to rural places before; they spent their lives in urban areas which made them think rural life is for poor people who do not have needs similar to them.

Lerata (student) pointed this out by saying:

“I am happy to be exposed to the rural environment. Initially I was thinking that life is extremely different in rural areas. I had a feeling that it is an abnormal place where people cannot live. Initially I would deny a post if called to teach in a rural school because I knew teachers teaching there as being professionally unqualified or underqualified.”

Contrary to Lerata was a comment from another student who was to join the rural community:

Seeta: “For me, I am happy to be here because I attended my primary school on the farm and I am prepared to go back and serve the community which bred me.”

Lerata's point supports literature by Mukeredzi (2013:84) in 2.8.4 indicating that the demand for teachers in most African countries leads to the recruitment of professionally unqualified and under-qualified teachers in rural schools by the government. These teachers are placed in rural schools because many qualified teachers have more choice and prefer to work in urban schools. Lerata had the impression that all teachers in rural schools are professionally unqualified or are underqualified. Lerata was fed with wrong information about rural learning ecologies. Seeta on the other hand is enjoying her stay in the rural area. The school reminds her of her past experience as a learner who was taught at a farm school.

4.5.4 Limited support from the government to rural learning ecologies.

Inadequate support from the government was identified as another threat to teacher preparation for sustainable rural learning ecologies. Although the government is providing for rural schools, that support seemed not to be enough.

The SES:

“I would like to work fully with the school and student teachers in this school; unfortunately I have to attend to other schools attached to me and they are far apart.”

Learner: *“We took three weeks at the beginning of the year without stationery, and transport to school is always a problem. The buses make us arrive late.”*

This was confirmed by the principal who said:

“... I always indicate to the Department that these people of transport are using old buses to transport learners to school and they always break down. I also make them aware that they provide buses they did not indicate in their contract forms, but there seems to be no follow-up...”

The SES could not give full attention to the school where there are student teachers. He indicated being provided with many schools to support which are very far apart from each other. The SES might be having his other commitments that make him to use distances apart as a reason for not fully participating in the study. The learner's statement shows that learners are depending fully on learner transport and learners are not deliberately arriving late to the school. The school has hostels and learner transport but some of the learners still arrive late. The hostels cater for girls staying here from other rural areas, far from the school under study. Other learners use learner transport provided by Free State Department of Education (FSDOE). These learners who are being transported sometimes arrive late for school because of service providers who provide old buses and they continuously break down and delay learners on their way to the school. The principal shows she has lost hope for the improvement of transport based on the fact that she always reports problems to the DBE.

4.5.5 Implementing constructivism incorrectly in rural learning ecologies.

The other threats were from the student teachers who were not sure how to teach in an environment without resources.

Mvelase: *“I wonder how teachers in rural schools work without teaching resources like internet and laboratories. We were taught to teach learners using electronic resources and by exposing them to the internet.”*

The lecturer: *“How were you taught in the past as a learner? Were your teachers using all those things you mentioned? I do not think all the schools are fully equipped with the resources you indicated.”*

Mvelase: *“Our teachers used to give us notes to refer to.”*

The lecturer: *“Teaching takes place everywhere and at any time. There can also be a class without buildings. The teacher need not have resources as the only way to facilitate learning. Teachers must be creative in facilitating learning. Another way of facilitating learning as a teacher is by implementing constructivism. You must have been taught constructivism in one of your modules for teaching. I will arrange the lesson on constructivism and how to implement it so that you do the practical on it.”*

The student teacher shows that she learnt the theory of constructivism in one of the modules but could not understand how it can be implemented. The student still had the traditional way of teaching where the teacher is the only person who knows everything about the lesson and would feed learners information *“Our teachers used to give us notes to refer to”*. The lecturer became aware that there is a need for the presentation about constructivism and he is prepared to make other arrangements for that. CER and PAR have created the space for improvement to student teachers because if it were not for the study implementing CER and PAR, the lecturer would not be aware of the situation.

4.6 EVIDENCE OF SUCCESS IN A CONSTRUCTIVIST FRAMEWORK TO PREPARE TEACHERS FOR SUSTAINABLE RURAL LEARNING ECOLOGIES.

This section of the chapter provides indicators of success to the envisaged framework to prepare teachers for sustainable rural learning ecologies.

4.6.1 Collaboration between the TEI and the rural schools.

Student teachers were placed at the rural school and taught learners under supervision of experienced rural school teachers who mentored them during the WIL. All co-researchers acknowledged collaboration between rural school and the university in the meeting as follows:

Principal: *"We are proud to be part of contributing to the preparation of teachers for the profession. We hope these students learned a lot by being part of our community in the school."*

Thabo (learner): *"We are happy to be taught by different teachers; they taught us in different ways that we understand."*

Leseli (learner): *"...we do not like these teachers to leave, we are now used to them; they do not shout at us..."*

Rapuleng (student teacher): *"I have learnt many things in this school; now I feel that if there will be a post in a rural school next year, I will accept it without hesitation."*

The principal indicated that they were happy to be part of the teacher preparation programme as a rural school community. The principal sounded happy ("*proud*") to take part in the programme. It is evident from the principal, learners and student teachers that the relationship between the university and the school is important and should continue. This shows that CER empowered the principal, who lacked confidence to be part of teacher education programme. Thabo and Leseli enjoyed the presence of the student teachers in the school. A student teacher also mentioned having learnt more about rural teaching, which was not the case in the beginning of the study. All these indicate the success of collaboration of the rural school and the university. The formation of a team which debated the problem and the extent to which it impacted on the programme made everybody understand the change. The rural school principal and parents realised how important they were in assisting the university to prepare teachers. The school community became dedicated to making a success of the programme.

CER and PAR provided a space to create strong collaboration between the rural school and the university. The TP officer, TP lecturer and the school community

worked corporately to establish a common vision to prepare teachers for sustainable rural learning. Through this collaboration, as indicated in chapter 2.3.1, they developed strong working relations which resulted in the school fully supporting the teacher preparation programme. The TP officer ensured that students are transported to the school and are provided with food during TP. She also explained the TP process as in chapter 2.5 to the co-researchers, and the responsibility of the school in mentoring students. This made it possible for all the people to know what should happen, when and how.

4.6.2 Involvement of parents in rural learning ecologies.

The involvement of parents in the study was shown to be a success. A parent, Ms Sello, spoke to the team to show her satisfaction. She also emphasized the importance of parental involvement to other parents in the parent meeting held on 15 April 2015 at the school.

Ms Sello (parent, translated): *“All along I was thinking that there is nothing I can do to assist the system of education. I was thinking that it is only educated people who are allowed to make contributions in school activities. Now I understand and wish to sell the idea to other parents. You taught me to feel respected as a human being.”*

Mr Mokoena (another parent): *“It is because we were not treated like illiterates; we were allowed to talk and our ideas were not rejected. Many people usually come to us to find information they want or already know. That made us feel small and we ended up not trusting people from outside our community.”*

The principal: *“I hope this will be indicated to other parents. We must encourage parents to take part in school activities. Sometimes I feel like a stranger as a principal, if parents do not come to the meetings.”*

Ms Mollo (parent): *“Yes, Principal, not long, in the next coming parent meeting.”*

The lecturer: *“Maybe it is the way your principal talks with parents that makes them not participate; I did not see any tension existing between our team during our discussions in this project. Maybe parents are afraid of you; they feel threatened by your position in the school. We need as people to come down to the level of everybody, and sometimes forget about our position.”*

The principal: *“I agree, maybe they are afraid of me. (...) I will try to be calm to them and see what will happen. Starting from the next coming parent meeting”*

The parent, Ms Sello, was shown to have changed the conception of looking down on herself. Her words *“... I understand and wish to sell the idea to other parents,”* indicate empowerment that was not there initially. Mr Mokoena acknowledged the way we conducted the study, as compared to other people who came before who were more positivist, where they were treated like objects to supply information required by the researcher. CER and PAR created a platform for empowering these people to have trust as parents. It became evident from the statement of the principal that she was failing to convince parents to participate in school activities. She took advantage of the study to recruit many parents to come to participate in school activities.

The principal now has hope for change in the way she will conduct parent meetings in future, starting by making use of parents who are co-researchers to influence other parents. The lecturer’s comment brought about a tense situation. The face of the principal changed a bit for some seconds, but soon she recovered herself. The two parents nodded, as a sign showing that the principal is sometimes not treating parents well. This is supported by the way the principal responded; she agreed and paused for a while and continued *“()...I will try to be calm to them ...”* It shows that there was an “I” and “them” relationship between the principal and parents. The principal showed a need to change the attitude between herself and parents because of CER with its principles of hope, equity and social justice.

4.6.3 Government support in rural learning ecologies.

Student teachers and teachers in the school acknowledged the services provided by the government for rural schools. The government provided student teachers with the Funza Lushaka bursary scheme, a rural allowance for teachers in rural schools, transport for learners staying far from the school and a feeding scheme for learners at school (2.9.4). This was supported by the co-researchers:

Lerata (student teachers): *“Now I have experienced teaching in rural school, I will not have a problem if I may find myself placed in a rural school for employment as a Funza beneficiary. I am ready.”*

The principal: *“You will also save lots of money by staying away from the town and receiving a rural allowance.”*

Parent: *“Maybe the government will reconsider not to close schools in rural areas if there are teachers that are prepared to teach in rural schools.”*

The statement by Lerata, a student teacher, indicates a positive change of mind. It shows that she accepted the bursary with hesitation of being placed in rural schools for which she was not prepared. The university used the rural school under study as an opportunity for rural school TP because it is the only rural school closer to the university matric and performing academically well. Accommodation of students during TP was also considered because student could not travel daily to that school. Some learners who passed matric at the school under study are studying teaching at the university with an expectation that they would want to teach at their home place after completion. The school accommodated students to do the TP, and the school teachers mentored the students during that period.

The FSDBE appointed a Senior Education Specialist (SES) working specifically in rural schools. This Subject Advisor is expected to work with only schools classified as rural schools. Using a lecturer who is an expert in constructivism to teach student teachers was an opportunity. The students were coming to implement what they have been taught at the university. The Subject Advisor guided the students as he was always doing with other teachers on how to do the planning of the lessons, to cover the learning programme according to CAPS documents. He visited the school more often during this period of TP to see how student teachers did and gave guidance where necessary. Student teachers were happy to learn about rural life. These students volunteered to go to a rural school for TP to learn the skills of rural teaching and learning. They got enough time to reflect and interact with parents and learners after school, as they had nowhere to go. They moved around the area of the school during their lesson planning to see which resources they could use in class. These students learned the teaching methods from the university and more precisely for them they were taught the constructivism learning approach which they practised in the micro-classes. The TP officer assisted in making sure that students were transported on the first day and were collected on the last day of the TP. She made sure that they

were provided with food while in the TP and were mentored and assessed by teachers and lecturers as expected by the university.

4.6.4 Implementation of constructivism in rural learning ecologies.

Pedagogical content knowledge possessed by the university lecturer on constructivism and his presentation skills as a lecturer assisted student teachers to understand the learning theory and the implementation of it in the classroom. Student teachers had to use everything available to present lessons in the rural school with limited resources for teaching. One student brought rocks of different sizes into the class to teach adjectives in English. This is how she introduced the lesson to the class after the greetings.

Tsimu (student teacher):

“Who of you can tell the difference between the three rocks on the table?”

Thabo (learner in class):

“The first one is heavier than the other two.”

The student teacher:

“Thank you Thabo, can somebody tell what is the word explaining a noun? (...). And which word is a noun between “stone” and “heavier”?”

Papi (leaner):

“Adjective, Mam (...) and ‘stone’ is a noun.”

The student teacher:

“Good, and how to explain the one heavier than this one?”

Banele (learner):

“Heaviest”

The student teacher:

“Good, we have heavy, heavier and heaviest to indicate the difference in weight. I thought you would respond in sizes like, small, smaller and smallest. Can we have many examples of adjectives?”

Learners came up with many examples and the teacher was only facilitating the lesson by giving them guidance. Learners were guided on adjectives like “beautiful”, “expensive”, etc. which are using “more” and “most”

The student teacher used simple things around the learners’ experience to facilitate the lesson and learners came up with other different examples to generate knowledge. This shows that the student was now able to conduct a constructivist lesson. CER and PAR created a platform for improvement. The student was able to practise what she learned during the study in a free environment, exclusive from being intimidated for marks. She knew that she was participating in the study freely and one of the objectives of the study was empowerment, not promotion, nor marks.

4.7 CONCLUSION

The first section of this chapter highlighted the challenges to the implementation of the constructivist framework, to prepare teachers for sustainable rural learning ecologies. In response to the challenges, the second section discussed the strategies that were put in place to address those challenges. Conducive conditions for the implementation of the framework to prepare teachers for sustainable rural learning ecologies were also discussed. Threats which could hamper the operationalisation of the strategy and steps taken to counteract them were also discussed. The last section provided evidence that the strategy was implemented. In the next chapter the focus will be on the findings, conclusion and recommendations.

CHAPTER 5

FINDINGS AND RECOMMENDATIONS FOR A CONSTRUCTIVIST FRAMEWORK TO PREPARE TEACHERS FOR SUSTAINABLE RURAL LEARNING ECOLOGIES

5.1 INTRODUCTION

The study is aimed to propose a constructivist framework to prepare teachers for sustainable rural learning ecologies. This chapter summarizes the whole study by first identifying the background, which describes the statement of the problem, research question, aim, and the objectives of the study. The idea is to remind the reader about the intention of the study for investigation. The chapter further presents the constructs that were identified to address the objectives and the findings of the study. The chapter also presents the recommendation for implementation as investigated during the study. The limitations of the study and the conclusion are presented at the end.

5.2 RECRYSTALLISING THE BACKGROUND OF THE STUDY

Literature consulted in the study (Roofe and Miller 2013:1; Dilek and Nilufer 2013:2; Verwey 2008:5) indicate that teacher education programmes are faced with the challenges of how best to prepare teachers for the profession. This is also supported by the establishment of Initial Professional Education of Teachers by the South African government in 2007 (DBE 2007) to overcome the challenge of teaching experience for new teachers in schools during their first year of their profession. The DBE further introduced a bursary called the Funza Lushaka Bursary Programme to fund students that will work in rural schools after completion of their degree. There is also a rural allowance for teachers working in rural schools. To me, these are the means by which the DBE recruits teachers who will teach in rural schools.

Schweifurt (2013:20) further indicates that current teaching is couched within outdated teacher-centred approaches which do not allow creativity and independence of learners. This mode of teaching runs contrary to the stated intents and purposes of the whole educational theorisation and practices in the democratic South Africa, as enshrined in our Critical Cross-field Outcomes (CCFOs) (SAQA 2000:18). Among others, the CCFOs stipulate that education should lead to citizens who can work independently, and can collaborate and work meaningfully with others from a self-chosen standpoint. Consequently Teaching Practice (TP) was suggested by the

South African Norms and Standards for Educators (2000:12) as a means to expose student teachers to experience teaching in schools while still studying for the profession. This process provided student teachers with an opportunity to establish whether the right career choice had been made or not. The study therefore extended TP to rural school by enhancing a constructivist framework to prepare student teachers for sustainable rural learning ecologies.

5.3 RESTATING THE PROBLEM STATEMENT AND THE RESEARCH QUESTION

Teacher education and training programmes have changed in South Africa to accommodate global changes in the social, political and economic spheres (Venter & Swanepoel 2008:25). It is expected of student teachers to learn to be flexible and adaptable in order to meet the demands of society and education. Newton, Harries and Bolden (2010:147) put it that teachers need to be encouraged to develop to be more active in their own teaching, to challenge, analyse and synthesise rather than to describe, and to initiate and manage change.

The challenge in the study is that teachers are not prepared to teach in the rural learning ecologies.

The identified research problem led to the following research question: **How can we prepare teachers for sustainable rural learning ecologies using constructivism?**

5.4 FINDINGS AND RECOMMENDATIONS

This section presents the findings as they emerged during the study.

5.4.1 Justification of the need for a constructivist framework to prepare teachers for sustainable rural learning ecologies.

The following section justifies the need for the framework and is supported by the following grounds:

5.4.1.1 Lack of collaboration between the TEI and the rural learning ecologies

Co-researchers discovered that there was no collaboration between the rural schools and Teacher Education Institutions (TEI) to better prepare teachers for sustainable rural learning ecologies. TEIs were running their programmes without engaging student teachers to practise teaching in rural environments (see paragraph 2.7.1). The need for the intervention emanated from the initial meeting that was held with the purpose of identifying challenges in the preparation of teachers for sustainable rural learning ecologies. The lack of collaboration between rural schools and TEI was prevalent, thus denying student teachers an opportunity to be exposed to multiple rural perspectives. This further denied student teachers the ability to understand rural teaching and learning, to be better prepared to teach in that environment, hence the need to establish collaboration.

5.4.1.2 Lack of parental involvement in rural learning ecologies.

Many TEIs do not involve parents in teacher education programmes. It became evident in the study that parents were not taking part in the school activities where their children attend (see paragraph 2.7.1). In the meeting it was then discovered that they are supposed to participate in the education of their children. This participation in children's education implies that they must also know who teaches their children, and how they are taught. As they are members of the panel during the interviews of teachers in the school, parents must know how teachers are trained for the profession. Recommended strategies to involve parents in rural learning ecologies were identified at the end of the study.

5.4.1.3 Demotivated teachers and student teachers for rural learning ecologies.

It was discovered during the study that teachers and student teachers are less motivated to teach in rural schools. Teachers working in the rural school are teaching many subjects, in different grades, and they are forced to do multi-grade teaching. These teachers lack confidence to mentor student teachers, as some were not specialising in the subject they were teaching during their training (see paragraph 2.7.4). This made the South African government come up with strategies to motivate them to work in rural schools. Introduction of the Funza Lushaka bursary scheme for

student teachers intending to work in rural schools is one of the recruitment strategies by the government. Another motivating factor is the rural allowance to teachers working in rural schools.

5.4.1.4 Incorrect implementation of constructivism in rural learning ecologies.

It was discovered in the study that teachers rely more on the use of textbooks as the only resources of teaching. These teachers fail to use teaching approaches that are engaging, meaningful and relevant to learners (see paragraph 2.7.5). Rural school teaching needs a teacher who has knowledge of different teaching approach to address the needs of learners. This is to address the challenge of the lack of resources in rural schools. A teacher who always depends on a textbook will not meet the needs of rural learners because many textbooks are only focusing on learning in urban areas and some of them may be outdated copies or be out of context in relation to the learners' everyday lives. Therefore, teachers failed to carefully choose an approach of teaching that is orientated towards what learners are currently embracing; for instance, what they know and captures their interest, while fostering a less formal learning environment, relating the lessons to real life situations and using the experimental nature of the lesson. The gap between theory and practice can be bridged in this manner. The dependency on the textbook fails to provide opportunities for the use of learner-centred approaches of teaching that require learners to identify relevant issues, gather the necessary evidence, identify appropriate arguments, and exercise judgement in order to arrive at a conclusion.

5.4.2 Some useful solutions to the challenges of a constructivist framework in rural learning ecologies may be advanced.

The section below justifies the solutions to the challenges of a constructivist framework.

5.4.2.1 Collaboration between the TEI and the rural schools need to be strengthened.

Student teachers were accommodated in the rural school and stayed in hostels during their TP for them to practise rural learning ecologies. Co-researchers decided on the vision to expose student teachers to the rural environment while still in their study for the profession. The presence of a shared vision by co-researchers brought the elements of commitment and collaboration, and a sense of belonging, since all members were involved in the development of such vision; a vision to create an ecology where student teachers practised the art of teaching in an authentic environment (see paragraph 2.8.1). This vision became the foundation of the dedicated team, since it guided and inspired the members throughout the process. There were some student teachers who enjoyed staying in the rural area and indicated that they wish to work in that environment. They liked the lifestyle in the rural area which aroused their interest as professional teachers, rather than the busy life in the cities without being respected.

5.4.2.2 It is desirable to involve parents in school activities for rural learning ecologies.

The South African School's Act makes provision to involve parents in every school and to elect the SGB. The SGB members form the panel during the appointment process of new teachers in the school. This allows parents to know all the processes of appointment of the teacher in the school, from recruiting to the appointment. The parents know the requirements of the post, like the subjects, the grade and qualifications of the teachers needed in the school. Therefore, from this study, parents that were marginalized, realised the importance of understanding how teachers are trained to meet the requirements (see paragraph 2.8.2). It was agreed in the meetings that the school should hold a parent's meeting at least once per term to update the parents about what has been happening in the school. This will also make parents meet with student teachers on TP in the school. Parents will be actively involved and want to know more and ask questions about their children's future and a way forward.

5.4.2.3 Motivating teachers for rural learning ecologies.

Student teachers were exposed to rural schools through WIL while still in their study for the profession as is recommended by the study. They were provided with on-going support by experienced rural school teachers; they learnt different skills of rural teaching while still studying. They practised on evidence-based environment for them to decide to continue to love working in the rural learning ecologies or not (see paragraph 2.8.4). They also interacted with parents from the rural learning ecologies to understand life in the marginalized area. The TEI organised the presentations to the student teachers to indicate to them the benefits of working in the rural learning ecologies. Benefits like rural allowance for teachers, opportunities for study by teachers in a quiet environment and teaching small number of learners as compared to schools in cities with many temptations disturbing studies.

5.4.2.4 Constructivist teaching and learning approaches may benefit in rural ecologies.

The study recommends the use of constructivist teaching as a suitable approach that can foster rural learning. In a classroom where constructivism is employed, the teacher uses the prior knowledge of learners as the base to introduce new concepts, procedures and classifications. Student teachers facilitated the lessons in the rural learning ecologies by promoting dialogue on the material, so that learners could critically think about what they were learning. Learners actively constructed knowledge rather than passively receiving from the teacher (see paragraph 2.8.5). Learners generated knowledge from their own experience. Therefore, through their engagements they developed an inner drive to engage deeper and learn more about the activities. Discussions with learners further enabled student teachers to develop interest and a sense of control. Student teachers and learners therefore possessed the will to learn more, which formed an intrinsic motivation that derived from the interactive learning where they were actively engaged with the task at hand.

5.4.3 Conditions under which a constructivist framework may be successfully implemented in rural learning ecologies should be borne in mind.

This section highlights some of the solutions under which a constructivist framework was implemented successfully in rural learning ecologies.

5.4.3.1 Collaboration between the TEI and the rural school.

Better conditions that support collaboration between the TEI and rural schools need working relationship of the two institutions. The two institutions in the study shared ownership of the envisaged project. The common project in this study was teacher preparation for rural learning ecologies. Stakeholders in the two institutions embodied the values and beliefs and internalised the goals, in the sense that they saw the vision of the project as their reflection. The intention of the TEI was to produce good teachers who are well trained and prepared to teach in rural learning ecologies, and the rural school, through the DBE wants to employ teachers who are ready to work in rural learning ecologies. There was a constant communication between the two institutions with a strong sense of mutual understanding and respect in their interaction and collaboration. This alliance of TEI and rural schools also stopped the prejudice that existed, of rural school learners not academically performing well. This collaboration closed the gap that existed between learners from schools in the cities and those from the rural areas, because it promoted democratic values, social justice and human rights in the learning ecology that was marginalised (see paragraph 2.9.1). Constructivism assisted the student teacher to make teaching and learning conducive even in an environment without resources.

5.4.3.2 Involvement of parents in rural learning ecologies.

Better conditions that supported parental involvement in the teacher education programme was the WIL programme for student teachers. The school belongs to the community and must serve the needs of the community (see paragraph 2.9.2). The school informed the parents about student teachers coming to the school. Parents were invited to welcome student teachers, and again to bid farewell after the WIL programme. Their involvement also gave them a chance to learn how teachers are trained to teach their children to do some recommendation in future appointments; not to be misled by the school authorities during teacher appointments. They had the opportunity to know the student teachers allocated to the school, and they were told which subjects they were going to teach during the WIL programme. It was more important for student teachers to have the opportunity to engage with parents in the marginalized environment while still in their study. This assisted student teachers

early, before appointment, to discover whether to accept appointment in rural learning ecologies or not, after applying.

5.4.3.3 Motivated teachers and student teachers for rural learning ecologies.

Student teachers were teaching under supervision of experienced rural school teachers who were motivated to work at the rural learning ecologies. These teachers were happy to teach small number of learners in a class for control and discipline. Student teachers also discovered that the number of learners in class at a rural school is small as compared to the number of learners in a class at the schools in the cities. This made it easier to handle the class and to give individual attention to learners. Student teachers discovered that they were respected and recognised as teachers by the school community, even though they were still students. They also discovered that it is not always the case that teachers working in the rural schools are not fully qualified and that they earn smaller salaries, as people say (see paragraph 2.9.4).

5.4.3.4 Implementation of constructivism in rural learning ecologies.

The Critical Cross-Fields Outcomes stipulates in SAQA (2000:18) that education should lead to citizens who can work independently, can collaborate and work meaningfully with others from a self-chosen stand point. An approach to learning requires an environment where the teacher is willing to share his power with others and learners be given some control over the learning process. This happens when learners are motivated and see the value of what they are learning because it relates to their lives. Student teachers practised constructivist teaching and learning in the rural learning ecology during WIL. They taught by encouraging participative learning, and did teaching and assessment that develop problem-solving skills (see paragraph 2.9.5). They created a conducive classroom environment to foster learning that promoted self-discovery and encouraged group work to necessitate learning.

5.4.4 There are threats that may hamper improvement of a constructivist framework to prepare teachers for rural learning ecologies.

Some threats that may hamper improvement of a constructivist framework to prepare teachers for sustainable rural learning ecologies include the following:

5.4.4.1 Lack of collaboration of TEI and rural school

One of the threats of collaboration between TEI and rural school as identified during the meetings was that the two institutions belonged to different Education

Departments. TEIs belong to DHE and the rural schools belong to DBE. The two departments have different programmes which are sometimes parallel. The TEI would send student teachers to a rural school, only to find that there were other projects organised by the DBE. To circumvent this threat, the team agreed that the TEI must inform the DBE beforehand to send student teachers to the school, to align the WIL of student teachers with the DBE programmes in the school. At the same time, it was agreed that student teachers were supposed to learn everything affecting the rural learning ecologies, hence WIL. Funding for students while in the rural school for the duration of WIL was another threat. Other threats include: placement, supervision and mentoring of student teachers for WIL (see paragraph 2.10.1). Placement was influenced by availability of accommodation for student teachers in the rural schools, since the rural schools are far from the TEI, with no access to public transport. Sometimes the space in the school was not enough to accommodate student teachers in the school hostels because of the large number of learners accommodated at that time.

5.4.4.2 Lack of parental involvement in rural learning ecologies.

The threats and risks for parental involvement in teacher education included the fact that parents are working and do not have formal education. They do not have time to be engaged fully with student teachers. Parents were feeling incapable, in the beginning of the study, to contribute to education because of their lack of education. They marginalized themselves as people who are receivers, and cannot contribute anything to change (see paragraph 2.10.2). It was agreed in the meetings that participation in teacher education did not mean a full-time job, it meant interactions to understand what is needed. It means to provide support where there is a need, like making people feel welcomed to the environment. To circumvent the marginalization, CER empowered the parents in the study to be confident, as they were part of the study that aimed at bringing improvement. They felt important throughout the study, as their voices were heard.

5.4.4.3 *Demotivated teachers and student teachers for rural learning ecologies.*

The TEIs are much too far from rural schools to send students continuously for WIL. This demanded that students stay in the area for the duration of WIL which in turn demanded food for that period. Student teachers discovered that the number of teachers in rural schools were fewer to accommodate many students with different school subjects. Two student teachers were attached to one teacher who taught different subjects. Assessment was not reliable, as one experienced teacher was to mentor many student teachers in different subjects of specialisation (see paragraph 2.10.3). The lack of teaching resources at schools, like internet, were another threat. Teachers in the 21st century are relying more on the internet for teaching to make it easier for them. Another threat to affect the attitude of student teachers was closure of rural schools by the government. Small rural schools were closed by the government, and learners were taken to hostel schools in the cities or to other bigger rural schools with hostels. Sustainability of rural schools was not guaranteed by this action of the government. Many students felt that they would not have employment if they can focused more on rural teaching and learning. Student teachers were afraid that they would teach learners that are old in class if employed in rural schools in future. Some could be of the same age as them, because children from rural areas started attending school at an older age than school-going age. They also thought that working in the rural area and living there would be leaving behind many things like fashion and other teaching methods that require internet.

5.4.4.4 *Incorrect implementation of constructivism in rural learning ecologies.*

It was discovered that when learners are given an opportunity to discover learning by themselves, they may be playful and noisy. If not well controlled, they can waste time before they actually engage with the task at hand. To control this, many teachers tend to limit learners' on generating learning by themselves and rather follow teacher-centred approaches. Student teachers were re-introduced to constructivist teaching and learning, as an interactive approach to enhance deeper learning (see paragraph 2.10.5). Having learnt constructivism in their lecture class, student teachers were able to apply the skills in rural learning ecologies. They discovered the importance and relevance of it, to circumvent the temptation of teachers to allow learners to waste time, by allowing learners to construct their own knowledge. Constructivism was learnt to address the CAPS policy that was striving towards promoting a learner-centred method of teaching.

5.4.5 There is evidence of success for a constructivist framework to prepare teachers for sustainable rural learning ecologies.

The following section justifies the success of a constructivist framework to prepare teachers for sustainable rural learning ecologies.

5.4.5.1 Collaboration between the TEI and the rural learning ecologies.

The rural school in the study collaborated with the TEI in making sure that teachers are properly prepared by the institution for rural learning ecologies. The institution was recognising the existence of the rural learning ecologies. The principal was invited by the TEI to attend activities that were involving teacher training. The principal was at some stage awarded a certificate for sustaining rural learning ecologies by the TEI. This was to recognise the marginalised learning ecology for obtaining a 100% matric pass rate consecutively. The school was also inviting TEI to their functions to increase commitment to rural learning. A representative from the TEI would attend and motivate the school community for sustaining rural learning (see paragraph 2.11.1). There were eight student teachers studying the B.Ed. programme with the TEI from the rural ecology where the study was conducted. Three of them were in their third year, and five in their first year during the study. These students were recruited during the interactions with the school.

5.4.5.2 Involvement of parents in rural learning ecologies.

Student teachers were able to interact with parents of the learners during WIL, as they were staying at the school (see paragraph 2.11.2). During this interaction with parents, they were able to discover the complexity of parenting and gather knowledge about the diverse cultural background of parents. This assisted student teachers to understand the learners' background in class for constructivist teaching and learning. Constructivism requires learners to construct their own knowledge from what they know, therefore it is important that the teachers understand the social background of the learners in the lesson. Student teachers were also able to make a decision on whether they could survive to live in the rural ecologies after employment.

5.4.5.3 *Government support to rural learning ecologies.*

The government was supporting the rural learning ecologies by providing resources. The school in the study was ranked in quintile 1 by the government, compared to other schools in the cities, to get more subsidy. The majority of teachers who were employed in the school benefited from the Funza Lushaka bursary scheme during their study (see paragraph 2.11.3). They were placed at the rural school for employment, and were happy to work there. The government employed the SES specifically for rural schools, and this person was there to support student teachers during WIL. The person was also assisting to mentor student teachers.

5.5 RECOMMENDATIONS FOR A CONSTRUCTIVIST FRAMEWORK TO PREPARE TEACHERS FOR SUSTAINABLE RURAL LEARNING ECOLOGIES

The study recommended that all stakeholders in rural learning ecologies should be involved in the implementation of a constructivist framework to prepare teachers for sustainable rural learning ecologies. This means that everybody involved must be allowed to voice an own opinion. To prepare teachers for sustainable rural learning ecologies, this study involved student teachers, TP lecturer, TP officer, the SES for rural learning, experienced teachers from the rural learning, and parents from the rural ecology. In providing the solutions to the need which were faced by the teacher education programme in this study, the SES for rural learning assisted by motivating student teachers and explaining in details of the expectations of teachers in rural learning and how monitoring is done.

Experienced teachers from the rural learning ecologies assisted by mentoring student teachers on how to make teaching and learning meaningful to learners using limited resources, and parents were able to mentor student teachers during WIL, on rural life after school without daily public transport. All these people were able to share their experience and successes in supporting student teachers for sustainable rural learning ecologies. Through those debates, student teachers were able to learn. Teamwork in the study was vital, since it made it possible for all stakeholders in rural learning to succeed in preparing teachers for sustainable rural learning ecologies.

5.6 LIMITATIONS OF THE STUDY

The study is limited to the fact that it was conducted using only one rural school in the Free State Province. Generalisation of the results is not encouraged, as conditions

may differ from one rural school to another. However, other rural schools and TEI experiencing similar challenges under similar conditions to those of the one in the study, could use the proposed framework.

5.7 THE PROPOSED CONSTRUCTIVIST FRAMEWORK TO PREPARE TEACHERS FOR SUSTAINABLE RURAL LEARNING ECOLOGIES

The tables below present the proposed framework that could be implemented to prepare teachers for sustainable rural learning ecologies using constructivism.

Elements of constructivism	Activities	The teacher	Evidence
Learning is an active process.	The teacher encourages ownership and voice during the lesson.	Provides opportunity for learners to acquire knowledge through their own activities.	Learners actively contribute to the learning process.
Learning is goal-orientated	Teachers provide learning experiences with an appreciation for multiple viewpoints.	The teacher is influenced by the learners' prior knowledge.	Learners' experience is brought into the lesson.
Learning is self-regulated	Teachers facilitate learner-centred experiential learning opportunities	The teacher is a facilitator who guides learners through activities.	Learners develop critical thinking skills and become self-regulated citizens.
Learning is collaborative	Using communicative language teaching.	The teacher is a collaborator who engages learners in open-ended inquiries.	Learners develop the notion of communicative competence.

Figure 5.1

Role players in rural learning ecologies	Responsibility	Objective(s)	Timeframe(s)
Lecturers	Teach modules related to teaching as a profession.	Prepare teachers for the teaching profession.	Continuously until students graduate.
SES for rural learning	Gives academic support to teachers and monitors the progress at rural learning ecologies.	Enforces the objectives of the DBE in rural learning ecologies.	Visits rural learning ecologies continuously.
Teachers in rural learning ecologies	Teach and assess learners at school.	To improve academic performance.	Every school day.
Parents	Check learner performance and discuss it with teachers	To improve learner performance.	Every day.

Table 5.2

Activities in TE programme	Description	Objective(s)	Timeframe(s)
Lecture class	Teaching and learning of students, including learning of constructivism	To introduce student teachers to modules related to teaching as a profession.	Continuously until students graduate.
Micro-teaching	Practise teaching in an artificial environment at the university.	To gain experience of teaching in lecture class before WIL.	Every time before students go for WIL.
WIL	Learning the skills in practice and from the authentic environment	To gain the experience of teaching from the authentic environment before employment.	From year two of the study until the graduation.

Table 5.3

Priorities	Activities	Lecturer(s)	Teacher(s)	Evidence
Collaboration of TEI and rural learning	TEI and rural learning ecologies should continuously work together to prepare teachers for rural learning.	The lecturer should invite the school community to teacher preparation activities.	Visit student teachers in class to demonstrate classroom teaching. Mentor student teachers during WIL. Assess student teachers for TP module.	Attendance register of student teachers Logbook and attendance register. Assessment tools
Involvement of parents in rural learning	Parents should discuss progress of learners with teachers and student teachers during WIL. Parents should interact with student teacher about rural life.	Interact with parents to discuss the progress of student teachers during WIL.	Continuously invite parents to discuss the progress of learners. Introduce student teachers to parents during WIL.	Attendance registers
Government support to rural learning ecologies	Provision of academic and human support to rural learning	Interact with the SES for rural learning to see that student teachers on TP teach according to the syllabus.	To follow the syllabus as prescribed by the DBE. Introduce student teachers to the syllabus.	Class activities SES' monitoring tools.
Motivation of teachers and student teachers to rural learning	To motivate teachers and student teachers to rural learning ecologies	Introduce constructivist teaching and learning to student teachers.		Good academic performance of learners.
Learning constructivism	Allowing learners to construct own knowledge in the lesson.	Monitoring implementation of constructivism during micro-teaching and during WIL.	Demonstration of constructivism to student teachers.	Student teachers implement a constructivist teaching to learners.

Figure 5.4

5.8 IMPLEMENTATION OF THE FRAMEWORK

The cycle of PAR; preparation, planning, implementation and reflection, as indicated by Kemmis, plays a vital role in the implementation of the proposed framework. This cycle is not fixed; it can start at any stage depending on the time, and the need identified to effect a change. The cycle continues until improvement is observed. For this study, it is recommended that the cycle is implemented annually for each group of students taking teaching as a profession, to prepare them for sustainable rural learning ecologies. Figure 5.1 to 5.4 should be incorporated in the cycle to implement a constructivist framework more effectively.

STAGE I: PREPARATION

PAR cycle according to Kemmis indicates that the process of change is not fixed, it can start anywhere by anyone in a team which is concerned with a particular situation. The person(s) can start by recruiting other people who might have the same problem or interest in solving the problem. To prepare teachers for sustainable rural learning ecology using constructivism, the process can be initiated by a TP officer, university lecturer, student teachers, and a rural school teacher, a principal in a rural school, local academic or any member of the community concerned with rural teaching. This stage starts off with a person who is concerned about the teachers in rural schools. The person recruits members to establish a team of people with a common vision that could join forces and contribute different skills, interests, and perspectives to the team.

At this stage, student teachers are starting to be prepared to teach in rural schools by the TEI while still studying for the profession. This can be done by learning more on constructivism as a teaching and learning approach that is more suitable in an environment where there are limited teaching resources. Constructivism is a way of learning where learners generate knowledge by themselves from their experience. Preparing student teachers at this stage provides an opportunity for them to be ready for rural teaching.

STAGE II: PLANNING

The process can also be started at this stage by an individual who is concerned with a particular situation. This individual may start planning for how to recruit other people with the same concern before the formulation of the team, or the formulated team can start the process of change from this stage. An individual can start to formulate a team having planned the process for discussion with the team, or may decide to plan together with the team after consultations. It is important that the team members have a common or shared vision. A shared vision should incorporate all the team members' expectations and interests, to guide and dictate all the activities that are to be performed by a team. The planning stage for a constructivist framework to prepare teachers for sustainable rural learning ecologies needs the TEI to collaborate with a nearby rural school for WIL.

In this study, student teachers, the TP officer and the lecturer were planning the WIL process. This is where student teachers will practise what they learned in class, by teaching under the supervision of experienced teachers.

STAGE III: IMPLEMENTATION

At this stage, team members perform an analysis of their strengths, weaknesses, opportunities and threats in relation to the common problem identified. Upon identification of the weakness and threats, new members for the team can be recruited to ensure that all the necessary human resources are available within the team. The analysis can be done in this manner; the weaknesses and strengths are mapped to ensure that all the skills and resources needed to achieve a shared vision are within the team's reach. A SWOT analysis gives the team an opportunity to expand beyond the teaching fraternity to other people whose knowledge and skills would better enable the team to achieve its objectives.

It was in this stage when student teachers visited a rural school for WIL to implement what they had learnt in class. They practised to teach in an environment where the teaching resources were limited. This is where they practised constructivism while still

in their study for the profession. At this time, student teachers taught under supervision, and they were assessed by the lecturer and experienced teachers who were mentoring them. They met with the rural school communities to discuss life in that rural environment.

STAGE IV: REFLECTION

The role and responsibilities of the team member should not be fixed, to ensure that all the team members are developing. All team members had the opportunity to experience different roles in the study, and in this way a sense of belonging and appreciation was bestowed on them. In addition, this encouraged them to look forward to their collaborative team engagements. At this stage, student teachers, rural school teachers, parents and the TP officer were reflecting on the progress made by student teachers in teaching using constructivism. Comments made by the university lecturer while observing students were discussed among co-researchers to see the area where improvements were needed. The reflection in this study indicated improvement of teaching in rural learning ecologies by the student teachers. Student teachers also indicated that they were now motivated to work in rural learning ecologies.

5.9 CONCLUSION

This chapter started by presenting the background of the study with the aim and objectives to involve the reader. The chapter further presented the findings and recommendations to propose a constructivist framework to prepare teachers for sustainable rural learning ecologies. Furthermore it provided the limitation of the study. The findings of the study justified the need to prepare teachers for sustainable rural learning ecologies. Rural school teachers who were co-researchers indicated that they were not trained to teach in rural schools during their training for the profession. The results indicated that current prospective teachers were now prepared to work in rural schools. The chapter concluded with the presentation of a summary of the proposed

stogy to enhance a constructivist framework to prepare teachers for sustainable rural learning ecologies through WIL.

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A. CONSENT FORM: LECTURER

Cell No.: 079 340 6956
Email Address: dlaminime@ufs.ac.za
Office No. : 058 718 5483

751N BLUEGUMBOSCH
PHUTHADITJHABA
9869

Date: 15 March 2015

Dear Dr

REQUEST TO PARTICIPATE IN RESEARCH

I am currently doing research with UFS on constructivist framework to prepare teachers for sustainable rural learning ecologies. Based on your experience as a lecturer in constructivism, I request you to take part in this research in order to give it credibility. Your role in the study will be to conduct lessons on constructivism to student teachers who are co-researchers to implement it during Teaching Practice. You are free to withdraw participation at any stage of the study should you feel not to continue. We will discuss the issues of confidentiality, anonymity and other legal issues about this study with you, as it is important that you fully understand the nature and purpose of this study.

This study complies with the rules and regulations of conducting a research.

If you would like any additional information, you are welcome to contact me on the contact details provided.

Details of my supervisor:

Name: Prof. DJ Hlalele
Tel. No.: 058 718 5003
Email: hlaleledj@ufs.ac.za

Please indicate by cancelling what is not applicable and sign below to give consent and return it to me if you would like to participate in this study.

Thank you



M.E Dlamini (Mr)

B. CONSENT FORM: PARENT

Cell No.: 079 340 6956
Email Address: dlaminime@ufs.ac.za
Office No. : 058 718 5483

751N BLUEGUMBOSCH
PHUTHADITJHABA
9869

Date: 15 March 2015

Dear Sir/Mam

REQUEST TO PARTICIPATE IN A RESEARCH

I am currently doing research with UFS on constructivist framework to prepare teachers for sustainable rural learning ecologies. Based on your experience in rural environment as a teacher, I request you to take part in this research in order to give it credibility. Your role in the study will be to encourage student teachers sent to the rural school for Teaching Practice. Participation is not compulsory and you are free to withdraw participation at any stage if you feel like. We will discuss the issues of confidentiality, anonymity and other legal issues about this study with you, as it is important that you fully understand the nature and purpose of this study.

This study complies with the rules and regulations of conducting a research.

If you would like any additional information, you are welcome to contact me on the above contact details.

Details of my supervisor:

Name: Prof. DJ Hlalele
Tel. No.: 058 718 5003
Email: hlaleledj@ufs.ac.za

Please indicate by cancelling what is not applicable and sign below to give consent and return it to me if you would like to participate in this study.

Thank you



M.E Dlamini (Mr)

I **agree/not agree** to participate

Name _____

Signature _____

Date _____ Contact details _____

CONSENT BY PARENT REPRESENTATIVE (SESOTHO TRANSLATION)

HO MOTSWADI

Ke moithuti ya etsang dipatlisiso ho ntshetsa thuto ya ngwana wa mapolasing pele. Jwalo ka motswadi wa ngwana ya kena sekolo mapolasing le tsebo ya hao e batsi ka thuto mapolasing, ke o kopa ho nka karolo dipatlisisong tse, ele ho etsa hore diphuputso tse di nkuwe di nepahetse e le tsa nnete ke ba ka sehlohoong ho nna. O na le kgetho ya ho nka karolo phatlalatsong ena, ha se setlamo hohang. O ka boela wa tlohela ho tswela pele mahareng a dipatlisiso ha o bona ho hloka hloka, ha hona bothata. Re tla boela re boisana ka botebo mokgwa wa tshireletso le tse ding tsa molao maelana le diphuputso jwaloka ha ho hloka hloka ke molao.

Dipatlisiso tse di tsamaelana le melao yohle e amahanang le tsa diphuputso.

Ha eba o dumela ho nka karolo, ke tla kopa o hlakole seo o sa dumellaneng le sona, ebe o tekenya mabitso a hao. O ka ntsetsa mohala ha o hloka tlhakisetsa e fetang mona dinomorong tse latelang 058 718 5483 kapa wa nngolla ho email ena: dlaminime@ufs.ac.za

Dintlha tsa mookamedi wa ka:

Name: Prof. DJ Hlalele
Tel. No.: 058 718 5003
Email: hlaleledj@ufs.ac.za

Ke a leboha

M.E Dlamini (Mr)

Ke a dumela/Ha ke dumele ho nka karolo

Lebitso _____

Sign _____

Mohla _____

Dinomoro tsa mohala _____

C. ACCENT FORM: CHILD

Cell No.: 079 340 6956
Email Address: dlaminime@ufs.ac.za
Office No.: 058 718 5483

751N BLUEGUMBOSCH
PHUTHADITJHABA
9869

Date: 15 March 2015

Dear Sir/Mam

PERMISSION TO ALLOW YOUR CHILD TO PARTICIPATE IN RESEARCH

I am currently doing research with UFS on constructivist framework to prepare teachers for sustainable rural learning ecologies. As student teachers from the University of the Free State will be teaching your grade10 child during Teaching Practice at Sebonakaliso Combined Farm School and your Child is still a minor, I request you to give permission to him/her to participate in this research. The child will be learning as usual in class only the assessment results will be used to assess the progress of student teachers.

Participation is not compulsory and you may withdraw your child's participation at any stage. We will discuss the issues of confidentiality, anonymity and other legal issues about this study with you, as it is important that you fully understand the nature and purpose of this study.

This study complies with the rules and regulations of conducting a research.

Details of my supervisor:

Name: Prof. DJ Hlalele
Tel. No.: 058 718 5003
Email: hlaleledj@ufs.ac.za

Please indicate by cancelling what is not applicable and sign below to give consent and return it to me if you would like to participate in this study.

Thank you



M.E Dlamini (Mr)

I **agree/not agree** to participate

Name _____

Signature _____

Date _____

Contact details _____

CONSENT BY PARENT (SESOTHO TRANSLATION)

HO MOTSWADI

Ke moithuti ya etsang dipatlisiso ho ntshetsa thuto ya ngwana wa mapolasing pele. Jwalo ka ha ngwana wa hao ya etsang grade 10 a sa le monyane dilemong ho nka diqeto, ke kopa tumello ho wena hore ngwana wa hao a nke karolo diphuputsong tsena. Ngwana o tla nka karolo ka ho ithuta jwaloka mehleng phapang ke hor feela o tla rutwa rutwa ke mesuwe e romelletsweng ke University sekolong. Mosuwehlooho o a tseba ka ditlhophiso tsena, mme le wena o tla tsebiswa ha morao. Ha se setlamo ho nka karolo mona, o ka tloheda ngwana wa hao ha o sa kgotsofale neng kappa neng ha o bona bothata.

Re tla boela re boisana ka botebo mokgwa wa tshireletso le tse ding tsa molao maelana le diphuputso jwaloka ha ho hloka hloka ke molao.

Dipatlisiso tsena di tsamaelana le melao yohle e amahanang le tsa diphuputso.

Ha eba o dumela ho nka karolo, ke tla kopa o hlakole seo o sa dumellaneng le sona, ebe o tekenya mabitsa a hao. O ka ntsetsa mohala ha o hloka tlhakisetsa e fetang mona dinomorong tse latelang 058 718 5483 kapa wa nngolla ho email ena: dlaminime@qwa.ufs.ac.za

Ke a leboha

M.E Dlamini (Mr)

Ke a dumela/Ha ke dumele ho nka karolo

Lebitso la Ngwana _____

Sign _____ Mohla.: _____

D. CONSENT FORM: THE PRINCIPAL

Cell No.: 079 340 6956
Email Address: dlaminime@ufs.ac.za
Office No.: 058 718 5483

751N BLUEGUMBOSCH
PHUTHADITJHABA
9869

Date: 15 March 2015

Dear Mam/Sir

I am currently doing research with UFS on constructivist framework to prepare teachers for sustainable rural learning ecologies. Based on your experience in rural teaching and learning, I requested you to take part in this research in order to give it credibility. Participation is not compulsory and you are allowed to withdraw participation at any stage. We will discuss the issues of confidentiality, anonymity and other legal issues about this study with you, as it is important that you fully understand the nature and purpose of this study.

This study complies with the rules and regulations of conducting a research.

If you would like any additional information, you are welcome to contact me on 058-7185483 or at the following e-mail address: dlaminime@ufs.ac.za.

Details of my supervisor:

Name: Prof. DJ Hlalele
Tel. No.: 058 718 5003
Email: hlaleledj@ufs.ac.za

Please indicate by cancelling what is not applicable and sign below to give consent and return it to me if you would like to participate in this study.

Thank you



M.E Dlamini (Mr)

I **agree/not agree** to participate

Name _____

Signature _____

Date _____

Contact details _____

E. CONSENT FORM: THE TEACHER

Cell No.: 079 340 6956
Email Address: dlaminime@ufs.ac.za
Office No.: 058 718 5483

751N BLUEGUMBOSCH
PHUTHADITJHABA
9869

Date: 15 March 2015

Dear Sir/Madam

REQUEST TO PARTICIPATE IN RESEARCH

I am currently doing research with UFS on constructivist framework to prepare teachers for sustainable rural learning ecologies. Based on your experience in rural school teaching, I request you to take part in this research. Your role in the study will be to mentor student teachers on rural teaching during Teaching Practice. Participation is not compulsory and you are allowed to withdraw participation at any stage if you feel like. We will discuss the issues of confidentiality, anonymity and other legal issues about this study with you, as it is important that you fully understand the nature and purpose of this study.

This study complies with the rules and regulations of conducting a research.

If you would like any additional information, you are welcome to contact me on the contact details provided.

Details of my supervisor:

Name: Prof. DJ Hlalele
Tel. No.: 058 718 5003
Email: hlaleledj@ufs.ac.za

Please indicate by cancelling what is not applicable and sign below to give consent and return it to me if you would like to participate in this study.

Thank you



M.E Dlamini (Mr)

I **agree/not agree** to participate

Name _____

Signature _____

Date _____

F. CONSENT FORM: THE TEACHING PRACTICE OFFICER

Cell No.: 079 340 6956
Email Address: dlaminime@ufs.ac.za
Office No.: 058 718 5483

751N BLUEGUMBOSCH
PHUTHADITJHABA
9869

Date: 15 March 2015

Dear Participant

I am currently doing research with UFS on constructivist framework to prepare teachers for sustainable rural learning ecologies. Based on your experience in Teaching Practice (TP), I requested you to take part in this research in order to give it credibility. Participation is not compulsory and if you are allowed not to participate or withdraw participation at any stage. We will discuss the issues of confidentiality, anonymity and other legal issues about this study with you, as it is important that you fully understand the nature and purpose of this study.

This study complies with the rules and regulations of conducting a research.

If you would like any additional information, you are welcome to contact me on 058-7185483 or at the following e-mail address: dlaminime@ufs.ac.za.

Details of my supervisor:

Name: Prof. DJ Hlalele
Tel. No.: 058 718 5003
Email: hlaleledj@ufs.ac.za

Please indicate by cancelling what is not applicable and sign below to give consent and return it to me if you would like to participate in this study.

Thank you



M.E Dlamini (Mr)

I **agree/not agree** to participate

Name _____

Signature _____

Date _____

Contact details _____

APPENDIX :LANGUAGE EDITING CERTIFICATE

Anne Kruger Language Practice

- ❖ 19 Nooitverwacht, 105 Main Street, Paarl 7646
 - ❖ tel 072 374 6272 or 021 863 2315
 - ❖ annekruger25@gmail.com
-

To whom it may concern

DECLARATION OF LANGUAGE EDITING

I, Elsje Anne Kruger, hereby declare that I have personally read through the dissertation of MOEKETSI DLAMINI titled "A constructivist framework to prepare teachers for sustainable rural learning ecologies" and have highlighted language errors and checked references. The track changes function was used and the author was responsible for accepting the editor's changes and finalising the references. I did no structural rewriting of the content.

Yours sincerely

Date



23 May 2017

Enquiries: BM Kitching
Ref: Notification of research: M E Dlamini
Tel. 051 404 9221 / 082 454 1519
Email: berthakitching@gmail.com and B.Kitching@fseducation.gov.za



education
Department of
Education
FREE STATE PROVINCE

The Acting District Director
Thabo Mofutsanyana District

Dear Ms Mabaso

NOTIFICATION OF A RESEARCH PROJECT IN YOUR DISTRICT BY M E DLAMINI

1. The above mentioned candidate was granted permission to conduct research in your district as follows:

Topic: A constructivist framework to prepare teachers for sustainable rural learning ecologies.

Schools involved: Sibonakaliso, Thabo Mofutsanyana District.

Target Population: 3 Grade 10 educators, 3 parents and 1 subject advisor for rural education. (SES)

2. **Period:** From date of signature to 30 September 2017. Please note the department does not allow any research to be conducted during the fourth term (quarter) of the academic year nor during normal school hours.

Research benefits: Teachers will be well trained on rural teaching, have rural experience and be willing to work at rural areas.

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: 03/03/2017

A. ETHICAL CLEARANCE: FACULTY OF EDUCATION AND DBE



Faculty of Education

25-Aug-2016

Dear Mr Moeketsi Dlamini

Ethics Clearance: **Constructivist framework to prepare teachers for sustainable rural learning ecologies**

Principal Investigator: **Mr Moeketsi Dlamini**

Department: **Office of the Dean: Education (Qwaqwa 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-HSD2016/0343**

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

Dr. Juliet Ramohai
Chairperson: Ethics Committee

Education Ethics Committee
Office of the Dean: Education

