

Evaluation of a constructivist teacher education programme

By

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Declaration

This study is an evaluation of a teacher education programme on the basis of the constructivist principles. The teacher education programme under investigation is a one-year school-based full time programme to qualify for the Postgraduate Certificate in Education (PGCE) in the Faculty of Education at the University of Pretoria. Where other authors' ideas have been used, such authors have been acknowledged.

My Devotion of Faith

I believe in God, the father Almighty, creator of heaven and earth. I believe in Jesus Christ, his only Son, our Lord and that He was conceived by the power of the Holy Spirit and born of the Virgin Mary. I believe in the Holy Spirit, the Holy Catholic Church, the communion of saints, the forgiveness of sins, the resurrection of the body, and the life everlasting. Amen.

Dedication

To my family

The world “family” implies warmth, a place where the core of the feelings of my heart is nurtured. We are one big family of people attracted to each other based on heart resonance and mutual support. More than any other force you shape my attitude, my hopes, my ambitions and my values.

Connecting with this ultimate source of love is possible through the power of love from my late grannies; TND and Connie.

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Summary

The study addresses the issues and pursues arguments related to teachers' competence in South Africa. The study presents a curriculum analysis of a Postgraduate Certificate in Education (PGCE) in the Faculty of Education at University of Pretoria, based on a constructivist learning principle. The research questions addressed were:

- What are the theoretical principles underpinning the curriculum design of the PGCE programme?
- How does the process of teaching and learning in the PGCE programme align to the constructivist principles?
- How do the experiences displayed by the beginner educators indicate an alignment with the constructivist principles?

Using a critical theory's propositions, the research approach was qualitative, designed as an evaluative case study. The evaluation process was facilitated through various forms of data collection strategies; document analysis, observations, informal conversational interviews and standardized open-ended interviews.

This study has substantiated and argued the interplay between theory and practice on the constructivist learning principles. The key principles to teacher education are; building of an individual practice theory through reflection and action research, monitoring and encouraging learning from experience, emphasising the importance of understanding 'self' if one wants to become a professional educator and the seriousness of establishing working partnerships in training teachers.

Because teacher education is a point of contention over competing issues and because there are several stakeholders involved, it all needs to be put together when conceptualizing teacher professionalism. Tracer studies on professional development of the beginner educators from this constructivist teacher education programme throughout the school practices and into the first year of teaching can be worthwhile to research.

Keywords:

Teacher education; teacher professionalism; educational change; transformative learning; constructivist learning principles; inquiry learning; curriculum design.

List of Acronyms:

OBE----- Outcomes-based education

PGCE-----Post Graduate Certificate in Education

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Chapter One

Overview

1.1. Introduction

I introduce the study with the background of my professional development, because the experiences I had during my professional development are the reasons I found myself undertaking this particular study. I started teaching professionally in 1992 at Lesotho's National Training College. The central point in our teacher training was to be trained as teachers who will become competent with detailed knowledge on the specialized subject area and who will have the moral basis that is necessary for the teaching profession. My professional development was further enhanced in 2001, when I did my Bachelors of Education at the University of Lesotho. Teaching professionally was a little bit different from the teacher college. There were still some modules for professional development of teachers, but the subject content was more occupational-based and the professional modules involve action research.

My professional development was further elucidated when I arrived at the University of Pretoria in South Africa. It started in 2004, when I was doing BEd Honours in Curriculum & Instructional Design & Development. This was like a new world for me; I was totally unfamiliar with the South African education system, Outcomes-based Education (OBE), based on the constructivism learning theory. We were introduced to several modules which entail different disciplines on curriculum design and development. These modules emphasized the changing roles of teachers, who are expected to be facilitators. I found OBE to be quite interesting, especially for educators. I was interested to see what the classroom environment looks like when the teacher facilitates learning.

Besides the modules within a programme, I also have an opportunity to attend seminars and lectures of the people who are very crucial in the implementation of OBE in South

Africa. For instance, in August 2004 I attended the seminar of Dr. William Spady, whom I have known to be ‘the Father of OBE’. The presentation was based on his article “Using SAQA Critical Outcomes to empower learners and transform education”. The focal point of the presentation was on clarification of the OBE principles, which he called the “four power principles”; Clarity of Focus, Expanded opportunity and support for learning success, High Expectations and Design Down from Your Ultimate Curriculum Outcomes. The implication of the principles of OBE is that the curriculum should be designed around those principles. This also raises concerns on the teachers’ work as the curriculum implementers.

What also became interesting during the seminar were the scholarly debates about the practical experiences of OBE. Most of the attendants agreed that, although OBE is in policies, it has not yet been effectively implemented in South Africa. One of the attendants from New Zealand commented that the system of education in South Africa is different from the one used in her country. Although both countries are doing OBE, the system in South Africa is more quantitative while in New Zealand it is of a more qualitative nature. I began to think and question what might be the causes of the ineffective implementation.

The experiences I had during my professional development emphasized the changes in the teaching profession. Transformative education implies transformation of the teacher’s role and thus this also implies changes in his/her professional development. As a teacher and a curriculum-designer-to-be, I was interested in the curriculum issues that shape teacher professionalism for OBE. My interest lies in tracing the changes in teacher professionalism, what characterizes this recent teacher professionalism and what the role of teacher education is in this regard.

1.2. Central Arguments

The transformation of OBE means changes in the education system and changes in the

curriculum, as such changes in the teachers' role as the deliverers of the curriculum. Teachers' competence takes centre stage in the transformation of education and training systems. Hence, professional development of teachers becomes very crucial. In response to the transformation of education, teacher education programmes have developed and implemented innovative strategies to empower teachers who will be able to teach with competence, using OBE. However, following the implementation of OBE, teacher competence became one of the challenges in South Africa.

The recent studies show that superficial preparation of teachers, lack of resources and large classes led to failure, as the foundation on which the curriculum was structured and introduced to the teachers was not effectively introduced to the teachers. The study conducted by Onwu & Stoffels (2005, p. 79) indicated that most school teachers teaching reform-based science in large classes have little experience, meagre training and operate in poorly resourced science classrooms. Uchitelle (2000, p. 224)'s study also highlighted that South Africa and the United States face similar problems: teachers' inadequacies in educating an increasingly diverse population, a culture of poverty that undermines public support, urban decay and declining tax bases, insufficient resources, inadequate school facilities, and unrealistic expectations for the allotted resources, faculty, and facilities.

In spite of the foundational problems, teacher educators argued that they have re-conceptualized and redesigned the teacher education programmes in response to new national policies. The concern identified by Robinson & McMillan (2006, p. 327) was that the identities that teacher educators construct for themselves is not considered as central to effecting innovation within a changing policy environment. The study by Harber & Serf (2006, p. 986) also confirms that the problem with curriculum implementation can be seen as a contradiction between the structures and practices of teacher education and democratic forms of education. The potential tension was also noted between reform through legislation and reform through personal and institutional vision-building, from the study conducted with a sample of teacher educators from various institutions by Robinson (2003, p. 5).

Contrary to this, the report of the Ministerial Committee on Teacher Education, a National Framework for Teacher Education in South Africa (2005, p. 13), states that:

Newly qualified teachers are frequently criticized for being under-prepared in the knowledge content of the subjects or learning areas they teach. Perhaps some interpretations of OBE and the valorisation of learner-centred education have contributed to the under-emphasis on content knowledge and the ability to make it accessible to learners. But whatever the reason, it is clear that no-one can teach something they themselves do not know, and a re-emphasis on the key importance of content knowledge, especially in the formal qualification phase of the Initial Professional Education of Teachers (IPET) programme, is needed at this time. Initial teacher education materials tend to over-emphasize theoretical rather than practical strategic actions that novice teachers require. Learning material (print, electronic, etc) that targets the kind of challenges and practical interventions possible for novice/newly qualifying teachers in resource-scarce institutional setting is not widely available. (Department of Education: The report of the Ministerial Committee on Teacher Education: A National Framework for Teacher Education in South Africa 2005, p. 13).

Moletsane (2002) also highlighted that the problem often lies in the lack of interpretation and integration of OBE principles in the curriculum development for teacher education. Transformation in teacher education programmes is hampered because teaching and learning have had to overcome the impact of years of traditional paradigms of education in schools and programmes. Moletsane further argues that, instead of engaging in transformative curriculum development for teacher education, the drive behind individual and programme change is mostly policy mandates and economic considerations. This results in adapting to rather than re-conceptualization of the transformative curriculum development. Accordingly, the problem is the lack of holistic interpretation and integration of the OBE principles as the transformation graded aspects of the new curriculum.

In the face of these competing issues, confusions, blame being shifted between policy and implementation, resources, conflict between teacher educators and government, and lack of holistic interpretation, it is clear that teacher education is the central focus. I address the issues and pursue arguments related to the curriculum design of teacher education programmes. My choice to address the curriculum design relates to my professional development. It also relates to my hope that, through curriculum analysis, knowledge can be contributed to the field of teacher education against the backdrop of the emerging teacher professionalism.

1.3. The Backdrop to the Inquiry

In order to understand the innovative strategies that have been implemented by teacher education, I presented this study as a curriculum analysis of one teacher education programme in relation to the transformative professionalism. The purpose is to create a framework against which the programme under study can be evaluated. The teacher education under investigation is a one-year, school-based, full-time programme to qualify for the PGCE in the Faculty of Education at the University of Pretoria. The PGCE programme is designed on the principles of the constructivist learning paradigm which conforms to OBE. This teacher education programme was established specifically to address the impact of educational change on teacher education curriculum studies and implementation strategies. The PGCE programme was introduced in 2002 as a school partnership model based on a transformational approach to learning. The mission statement of this programme reads as follows:

...the PGCE is to provide opportunities for students to become independent, lifelong learners, who will practice facilitation of learning effectively, with confidence and in a professional manner, within a complex, multidimensional, continuously changing context nationally and internationally (Programme Information; PGCE 2005, p.3).

Explicit in this mission statement is the intention of the PGCE programme to educate future educators as professional educators who will be able to distinguish themselves as competent facilitators of learning.

Drawing from the background of the study, the objective is therefore to analyse the curriculum design of the PGCE programme, in order to determine the extent to which it aligns to the constructivist principles. For this reason, the main research question addressed is:

To what extent does the PGCE programme align to the constructivist principles?

In pursuit of the main research question, the following sub questions have been identified

to facilitate data collection and data analysis:

1. What are the theoretical principles underpinning the curriculum design of the PGCE programme?
2. How does the process of teaching and learning in the PGCE programme align to the constructivist principles?
3. How do the experiences displayed by the beginner educators indicate an alignment with the constructivist principles?

1.4. Methodological Orientation

To address the above research questions, I adopted critical theory as a baseline theory for this research. According to Cohen, Manion & Morrison (2000, p. 33), critical theorists argue that not all knowledge can be included in the curriculum; the curriculum is a selection of what is deemed to be worthwhile knowledge. The critical theorists assert that curriculum research should be subject to ideology critique and, at the same time, it should promote ideology critique of the students and teachers.

Based on the critical theory, the research approach adopted was qualitative. The qualitative research approach is characterized by its 'naturalistic' focus, participation and interpretation. The research is conducted in the natural settings to allow the researcher to build theory from the information interpreted from participants with reference to the literature (Creswell 2003, pp.182). For the current study, the qualitative research approach was suitable, because evaluating the PGCE programme involves the process of analysing and interpreting its curriculum design from the perspectives of the teacher educators and the beginner educators.

The evaluation process in the current study involves multiplicity of data collection strategies; document analysis, observations, informal conversational interviews and standardized open-ended interviews. I used document analysis to understand the theory

underpinning the curriculum design of the PGCE programme. I also used the documents as a baseline to my observations and informal conversational interviews to analyse the process of teaching and learning in the PGCE programme. I used standardized open-ended interviews to describe the experiences of the beginner educators in relation to the learning outcomes of the PGCE programme.

I analyzed the data collected from the documents, informal conversational interviews and standardized open-ended interviews on the basis of curriculum analysis; the intended curriculum, the implemented curriculum and the attained curriculum. These three levels of curriculum analysis gave a holistic picture of the PGCE curriculum design. Having developed a theory for the PGCE curriculum, I then use a conceptual framework, created in Chapter Two, to determine the extent to which the PGCE aligns to the constructivist principles.

1.5. Outline of the Study

In this chapter, I provide the reason that motivated me to undertake this study, the central arguments, the backdrop to the inquiry and the methodological orientation for the study.

The basis, on which the conceptual framework that was used to evaluate the teacher education programme under study was created, is discussed in Chapter Two. To be able to construct the criteria, I draw on the origins of postmodernism to show the impact of postmodernism on educational changes. Related to this argument, I discussed the postmodernism road into teaching and learning and its relationship with constructivism, which gave clear evidence to the changing roles of the teacher and the principles that governs a constructivist learning pedagogy. Having explored the constructivist learning pedagogy, I then discuss the changing nature of teacher professionalism, from the old to a new professionalism. These aspects provide a baseline to explore the nature of the synergy between constructivism and its impact on the curriculum design of teacher education. As a result, I concluded the chapter with a conceptual framework that will be

used to determine the extent to which the PGCE programme aligns to the constructivist principles.

In Chapter Three, the research methodology and the research design was discussed in detail. The chapter starts by asserting how the nature of the study influences the choice of the research methodology, after which I state the ideas of critical theorists that I took into consideration, regarding the curriculum research. I used the critical theory's propositions in the research approach and research design. Hence, the research approach was qualitative in nature and the PGCE programme represents a case study. Looking at the purpose of the study, the research design was an evaluative case study. Various forms of data collection strategies were used; document analysis, observations, informal conversational interviews and standardized open-ended interviews. The data analyzed from these various forms of data collection strategies provide a comprehensive report. The comprehensive report and the procedures that were followed during the study enhance the quality of the study. Taking human rights into consideration, precautions were made for ethical matters. The chapter concludes by acknowledging the limitations of the research methodology.

Chapter Four presents the results of the three levels of the curriculum analysis; the intended curriculum, the implemented and the attained curriculum. The intended curriculum represents the theoretical principles underpinning the curriculum design of the PGCE programme. The implemented curriculum describes how the curriculum was interpreted by teacher educators and the actual process of teaching and learning. The attained curriculum presents the actual learning experiences of the beginner educators and the resulting learning outcomes. Apparently, a relationship was established between the intended curriculum and the implemented curriculum. This synthesis and the interpretation of results represent a curriculum design theory of the PGCE programme.

Chapter Five address the main research question: "To what extent does a PGCE programme align to the constructivist principles?" The results from the previous chapter (Chapter Four) were then evaluated against a conceptual framework created in Chapter

Two. Looking at the conceptual framework, there is a shared commitment by the PGCE programme to train teachers in alignment with the constructivist principles.

Chapter Six draws on conclusions and recommendations. The chapter concludes by drawing on the practical implications of the study and my professional development in conducting this study.

Chapter Two

Creating a Conceptual Framework

2.1. Introduction

My decision on the literature reviewed was based on the perspective of the curriculum design theory. Smith & Lovat (2003, p. 43) define the curriculum design theory as an area of study which reflects back on the disciplines of education. It is concerned with measuring how well each of these disciplines, in their current form, actually contributes to teacher understanding. Thus, the curriculum design theory examines how one's experiences of designing, developing and evaluating curricula can, in itself, be enlightened showing up weaknesses in one of the foundational theories which might, after all, have been formulated from a teaching context. In other words evaluating the curriculum design is mainly concerned with how the curriculum responded to the educational disciplines. For the current study, the educational disciplines are constructivism and teacher professionalism.

The aim of this chapter is therefore to clarify, substantiate, compare or inform the construction of criteria against which I will validate the constructivist learning of the PGCE programme. To be able to construct the criteria, I firstly draw on the origins of postmodernism to show the impact of postmodernism on educational changes. Secondly, I discuss postmodernism and its relation to constructivist pedagogy and transformative learning, and then identify evidence clarifying the changing roles of the teacher. Thirdly, I contextualize teacher professionalism and discuss the changing nature of teacher professionalism from the old professionalism to a new professionalism. The above mentioned fields provide a baseline criterion to explore the nature of the synergy between curriculum design theory, constructivist learning and teacher professionalism. Finally, the chapter creates a conceptual framework that supports the evaluation of the curriculum design of the PGCE programme.

2.2. The Origins of Postmodernism

Postmodernism in this study deals with the conditions of life as we experience it in the interactive technology period. There are various contexts for the term “modernism”, which expresses the consequences of an age that relates to the past of an antiquity, in order to view itself as the result of a transition from the old to the new (Habermas 1981, pp. 3-14). The transition from modernism to postmodernism needs to be illustrated, normally, the changes in society is seen from its culture. Culture can show how values from one society differ from another’s. According to Lemert (1997, p. 21), cultures are sensitive enough that when one suspects the changes in the world, including its economic and political arrangements, its changing cultures are where one might first encounter the changes.

Most of the postmodernists’ argument originates from the cultural critiques of modernist forms of art. Art in the West was seen as a form of presentation of reality and it can be used to differentiate modernism and postmodernism. Lyotard (2001, p. 64) explains the differences between post-modern art and modern art as follows: “a post-modern artist is in the position of the philosopher; the work he produces is not in principle governed by pre-established rules and it cannot be judged according to a determined judgment or by applying familiar categories to the work”. The point that was made by Lyotard is that there are no specific procedures to be followed for the postmodernist artist and his art is not open for judgment, nor can it be classified according to artists’ categories. Since the art was used to represent reality, the differences explained by Lyotard highlighted that, from the postmodernism perspective, reality is subjective; it is open for interpretations and there is no right or wrong way of viewing reality. This is opposed to the objective reality of modernism, where there are rules, judgment, and classification of similar things by categories.

The subjective reality of post modernists are also expressed from the writings of French

theorists like Jacques Derrida, Jean-Francois Lyotard and Jean Baudrillard. Derrida emphasises the importance of interpretivism. According to Derrida (2001, p. 76), “post-modern cultural life is viewed as a series of texts intersecting with other texts, producing yet more texts.” The text producer, like the cultural producer merely creates raw materials, which can be recombined by readers in any way they wish. Lyotard emphasises the construction of knowledge. According to Lyotard (1984, p. 23), “post modern knowledge is a question of competence that goes beyond the simple determination and application of efficiency.” This means that knowledge has a social basis and is supported by the shared culture of the society in which knowledge is produced. Baudrillard (2001, p. 64) contends that today the world of culture is cut loose from any basis or reality. Social life is a vision that creates much more reality than reality itself. What is common in these postmodernists is that there are various ways of representing reality or understanding the world. Postmodernists understand the world through interpretation, visionary insight, imagination and construction of knowledge.

Postmodernism became the current philosophical stance in many disciplines. Its denial of truth, subjectivism, interpretivism and imaginary construction of knowledge has come to inform the current educational theory and practice. Therefore, postmodernism has an impact on the curriculum design of teacher education. This would mean the curriculum design of the teacher education programme should be open to multiple interpretations by the teacher educators and the student teachers when training novice teachers.

2.3. Postmodernism, Educational Changes and the Purpose of Education

Today’s society is also referred to as the post-industrial society. The post-industrial society is a progression from traditional agriculture society to industrial society and this progression is based on the industrial revolution introducing a modern manufacturing industry. Moving away from the post-industrial society, the emphasis on the production of goods has been overtaken by a knowledge society and a service driven economy with major implications for formal education (Burke 2000, p.5).

In the knowledge society, the type and organization of work and the skills required for employment changes. Tuijnman (2003, p. 472) states that the demands of the knowledge society requires a dynamic view of education. The features of this dynamic view are: in-depth knowledge in a field of expertise, continuous learning, flexibility, excellent literacy and numeracy, problem-solving skills, and the ability to acquire and apply new ideas and use knowledge creatively. The implication is that learners in formal education should be provided with the skills applicable to the new world of work.

The knowledge society views education as the principal instrument for providing the skills required by the economy. Smith (2003, p. 38) puts it this way:

Education as a business with aggressive attempts to commercialize the school environment as well as make it responsible to outcomes or product-based measures education as a commodity in which people can invest in.

In accordance to Smith's view, Preston & Dyer (2003, p. 434) argue that education or learning is a capital conversion process, transforming interacting financial, social and human resources into corresponding tangible and intangible effects. Thus the knowledge society is seen as a way of creating more productive human capital.

The changes in society mean adopting a human capital resource model for education to serve a global industrial competitiveness. The idea of human capital draws back to the human capital theory. The human capital theory originates from the idea of Schultz, who proposes to treat education as an investment in man and to treat its consequences as a form of capital (Olssen, Codd & O'Neill 2004, pp.146-147). Education is referred to as human capital because it becomes part of the person receiving it and because it renders a productive service of value to society and the economy.

In relation to the economy, technological innovations have been one of the major influences in the changes in society. The developments of information and communication technologies have made major significant changes in society. Currently, the electronic mediation and computerization have set off new, powerful energies that

have resulted in an explosion in the proliferation of new images, identities and subjectivities now facilitated by the Internet, TV, film, radio, newspapers, popular music and aesthetic culture generally (Matus & McCarthy 2003, p. 73).

When considering education, the technological innovations have had a great impact. Information technology is seen as a means to globally transmit knowledge. This is reflected by developments that have been made in countries. Many countries employed technology to enhance delivery systems and introduced open and flexible learning opportunities for students to cope with both individual and mass educational needs (Malan 1999, p. 59). These technological innovations provide the opportunity for learning to take place in different places in society; in school, the home, the community and the workplace.

The impact of technology on education has been envisaged from the early 80's. For instance, Lyotard (1984, p. 4) describes the impact of technology on learning:

The miniaturisation and commercialisation of machines is already changing the way learning is acquired, classified, made available and exploited. It is reasonable to suppose that the proliferation of information processing machines is having, and will continue to have, as much of an effect on the circulation (transportation systems) and later in the circulation of sounds and visual images (the media).

The implication of technology that Lyotard foresaw is the reality of the age we live in. Currently, new technologies enable many students to reach out and connect with other students, teachers and worlds. Through the use of computers, e-mail and the internet, people can access information, interact with it and with others without attending schools. Thus, learning can take place anywhere and it is no longer limited to time and place. Put another way, technological innovations create the conditions for and necessitates lifelong learning.

Preston & Dyer (2003, p. 431) describe lifelong learning as a philosophical and a policy device. Lifelong learning is related to philosophy as it provides a continuous process of interacting formal and informal learning, taking place cumulatively over time and represents a shift from a supply to a demand-led approach. The countries adopted lifelong

learning as a predictable response to the emergence of instant global communications and its implications for knowledge as the prime generator of wealth. Thus, adapting lifelong learning meant providing more places of learning and giving children the skills that they will need to cope with a fast changing world.

Implementing lifelong learning is seen as an element of a policy strategy aimed at facilitating the transition to the new economy, while easing some of the pressure this transition is expected to bring for individual citizens and communities. But it has been argued that children who are raised in it lose the capacity for sustained attention. The principle of lifelong learning that under girds the new economy keeps people off-balance, ready to move at a moment's notice, ready to leave one job to take another, to reskill and adapt. What is emphasized is the capacity for a job to be more than just a means of income, but a life and a place to grow, develop character, learn about living, and share relations with others deeply and complexly (Smith 2003, p. 49). A framework approach to lifelong learning might, therefore, be built around three basic dimensions of what Hodgson & Spours (2000, p. 200) called "all-thoroughness". The dimensions are a vision of a holistic, through system, the creation of an infrastructure for lifelong learning and the development of personal capacities for learning within the compulsory education system.

Producing a rendering service for a global economy in a postmodernist curriculum would mean a teaching force that will ensure that there are closer links between school and the workplace, in order to develop skills training and to promote lifelong learning. Developing teachers to be lifelong learners requires a flexible and dynamic view of curriculum which will not only facilitate learning by innovative ideas, but which will enhance the ability of such knowledge to be applied in different contexts. This curriculum also needs to enrich the student teachers with the skills that will help them sustain competition in the changing world.

2.4. Postmodernism Inroad into Teaching and Learning

Postmodernism shows a transition of changes in culture and society from modernism. But it has been argued that, while many parts of our culture operate in the post modern paradigm, some have not left modernism. Many of the educational practices and beliefs to date are firmly rooted in modernism (Lewis 2004, p. 2). Franzsen (1997, p. 105) also asserts that the platonic assumption that a corpus of knowledge consists of truths that are consistent and unambiguous still prevails in scientific thinking and popular opinion. It is therefore necessary to first revisit the modernist way of teaching and learning, as this will provide clear evidence on how it differs from teaching and learning in post modern times.

2.4.1. Modernism and Teaching and Learning

Modernism is viewed as an objective philosophy searching for truth. Modernist teaching and learning is based on the basis that knowledge consists of truths that are consistent and definite. According to Franzsen (1997, p. 105) this idealistic view of reality relates to a philosophy of essentialism, which proposed that a search for knowledge was a search for everlasting truths. Thus, the modernists view the world as consisting of truths.

In relation to education, for the modernists, the function of the school is to provide the basis for development of the children. A school is a place where a more knowledgeable person transmits knowledge to those with less knowledge (Lewis 2004, p. 2). Modernists argue that children are easily influenced and that they need to be taught in such a way that they gain competence. The child's prior abilities are typically seen as distracting to educational purposes because the skills are not innate, but valued by society (Gaudelli 2002, p. 199). Accordingly, the learning environment in the modernist classroom tends to be closed, with limits to the teachers' instruction. The ruling government and education departments present a curriculum with the information regarded as important for teachers to teach and learners to learn, and little emphasis is placed on learners' interests. This is what DeVries & Zan (1996, p. 107), called an adult-child relationship. In this relationship the adult prescribes what the child must do by giving ready-made rules and instructions for behaviour. The conviction especially prominent in postmodernism that the school is

not a place for social interaction is specifically rejected in modernism.

The curriculum design of a teacher's education, for the modernists, would then be characterised by a list of skills and knowledge that needed to be taught to student teachers; the teacher educator is the knowledge provider and the student teachers are passive recipients, and objective evaluation methods are used to measure the learner's knowledge.

2.4.2. Constructivist Learning Pedagogy

Postmodernism gives rise to the uncertainty that denies the core knowledge and skills that are taught to learners. For the postmodernists, learners encounter the acquisition of knowledge through interpretation, lateral thinking, imagination and construction of meaning. The postmodernists express disapproval of transmission of knowledge, because it does not relate to reality. However, they do acknowledge that the transmission of learning can be part of the scaffolding process for constructivist learning based on the constructivism philosophy. Constructivism became the major influence on teaching and learning in the postmodern world. It has challenged some of the dominant aspects of modernity in teaching and learning. However, there are different interpretations, different types and different characteristics of constructivism. Based on the purpose of the study, I am not going to explore the relationship of these differences. I am going to focus on the constructivist learning pedagogy. The constructivist learning pedagogy describes the learning process.

Howe & Berv (2000, p. 30) outlined the two basic premises of a constructivist learning pedagogy: (1) learning has as its point of departure the knowledge, attitudes, and interests students bring to the learning situation, and (2) learning results from the interaction between these characteristics and the experiences that help learners to construct their own understanding from the inside, as it were. In short, the two basic premises of constructivist learning pedagogy, according to Howe & Berv, entail the psychological aspect and theoretical aspect of constructivism.

Constructivist learning pedagogy, as a psychological concept, is embedded in cognitive science. The cognitive scientists believe that the purpose of education is cognitive development and social transformation. The idea of cognitive development takes its name from the Piaget's research, which shows that children actively interpret their experiences in their physical and social worlds and thus construct their own knowledge and morality (De Vries, Edmiaston, Zan & Hilderbrand 2002, p. 35). Piaget indicates that children do construct their own knowledge, because they have so many ideas that have never been taught to them. On the other hand, social transformation is rooted in Lev Vygotsky's social development theory, which emphasises social interaction, language and a culture of learning. The Vygotskian theory of learning and development suggests that social interaction is important for learning because higher mental functions such as reasoning, comprehension and critical thinking originate in social interactions (Woolfolk 1998, p. 350). The critical aspect that is being contested by Piagetian and Vygotskian theories of learning is that learning is the construction of knowledge through experiences and this is facilitated when learners work together within a specific context.

The theoretical aspect of constructivist learning pedagogy is embedded in the 'construction of knowledge'. According to Richardson (1997, p. 8), constructivist learning pedagogy has the potential to transform educational theory. In contrast to modernist opinions, in which knowledge is separated from the individual, the constructivists assumes that prior knowledge can be used to further develop understanding, instead of remembering stored knowledge. Constructivist learning pedagogy is also opposed to the modernist idea that the child's prior abilities are a hindrance to educational achievement because the skills valued do not go hand-in-hand with societal values. As a result, for the constructivists, the purpose of education is to provide opportunities for the learners to develop the existing knowledge and to construct new knowledge.

Furthermore, Richardson (1997, p. 3) emphasises that the focus of attention in a constructivist learning environment is very important. The learning environment is the

basis of the theoretical differences in the various constructivist approaches. For instance, there are those who focus on individual activity as the sole agent in the process of constructing and reconstructing meaning. Others focus on the sociocultural context in which an individual lives, and yet others on both the individual and social by suggesting that it is not useful to separate the two analytically. For the current study, it is essential to consider both the learning environment and the learner's activities; these aspects will give clear evidence on the student teacher's engagement in the learning process and the roles of the teacher educator.

A Constructivist Learning Process

The focal point of the constructivist learning pedagogy is to develop learner's ability to use their existing knowledge and existing experiences to construct meaning and/or new knowledge. The teacher encourages the active involvement of learners by establishing the authentic learning environment and promoting learning that engages learners into discussions.

The teacher enhances the active engagement of learners by establishing a social atmosphere in the classroom. The social atmosphere is different from the socio-moral context of modernism. In the socio-moral context, the child's reason for behaving is outside his or her own reasoning system of personal interests and values. But in the social atmosphere, the teacher provides opportunities for learners to pursue their own interests and encompasses the entire network of interpersonal relations in a classroom (DeVries & Zan 1996, p. 107). The interpersonal relations include every aspect of the child's experience in school and profoundly influence social, moral, intellectual, personality and emotional development (De Vries, Edmiaston, Zan & Hilderbrand 2002, p. 35). This means that in the social atmosphere, the moral basis in education starts by helping learners to develop a sense of identity. Thus, the learning environment in a constructivism classroom is open as opposed to the modernism classroom.

The learner's active engagement and interaction during the learning process is the focal

point to the construction of knowledge. The learning process requires invention and self-organisation on the part of the learner. The learner's intention must guide the learning process (Fenwick 2000, p. 249). Hence, learning becomes a process of inquiry. The following quotation provides an example of the inquiry learning process in the classroom:

During the inquiry learning, the learner is actively engaged in learning, independently follows a process to locate, use, and evaluate information to construct new knowledge, engages in interacting with other learners to enable knowledge construction, works collaboratively with other learners, gathers information using multiple resources of the learning community, values all forms of literature and creative expressions, practices ethical behaviour when using information or technology, engages her/his natural sense of curiosity to solve problems or gather information about personal interests, self-evaluates the inquiry process (Pappas & Tepe 2002, p. 34).

The inquiry learning process is a long process which requires enough time to be allotted to the learners. First the learners construct meanings individually, then they construct it collaboratively with other learners and then they use multiple forms of data, engage in problem-solving and self-evaluate their learning, and finally they give feedback for their meanings to their teacher. Thus inquiry learning is characterised by metalearning, cooperative learning, meta-cognitive tasks and reflective practices.

2.4.2.2 Inquiry Learning in Practice of Teacher Education

(i) Metalearning

The process of learning whereby the learner learns independently is referred to as metalearning. Jackson (2004, p. 78) identifies the three features of metalearning:

- The strong connection of metalearning to metacognition, self-awareness, self-identity as a learner, and reflection as a process for achieving this self-awareness as a learner.
- Metalearning as knowledge it is a way of thinking to create routes to new learning, a way of engaging in learning and life more generally perhaps and a process of active regulation of behaviour in ways that will enhance learning.
- A way of growing knowledge about learning by imagining and thinking about the future, the present and the past.

Implicit with Jackson's conception of metalearning is that student teachers should regulate their thinking and behaviour in ways that will develop self-awareness.

Metalearning encourages the student teachers to control and manage their own learning. According to Hawykey (1995, p. 4), the student teachers can manage their own learning, only if they are aware of how they learn. If they understand their own ways of learning, they will have positive attitudes about thinking and acting on their own teaching styles. It is through understanding and articulating their own particular teaching style that teachers will acknowledge that they learn and teach in different ways.

(ii) Cooperative learning

Self-regulated learning can also be improved as student teachers work collaboratively with others. Collaboration stimulates peer interaction and enhances cognitive development. Adams & Hamm (1996, p. 46) show that self-awareness can be improved as small groups try to define and construct their own understandings. When student teachers work together they can actively integrate new information with existing knowledge, select what is important, deal with the unexpected and learn to make inferences beyond the information given. The motive for cooperation begins with a feeling of mutual affection and trust that becomes elaborated into feelings of sympathy and consciousness of the intentions of self and others.

Cooperative learning has as its basis in Lev Vygotsky's social development. Vygotskian's argument is that social interaction enables learners to accomplish mental tasks with social support and scaffolding that students need to move learning forward (Woolfolk, 1998, p. 350). According to Singh & Richards (2006, p. 168), the key concepts in the Vygotskian perspective is that social interactions are the zone of proximal development and mediation. These two constructs present a view of learning as a process of 'apprenticeship', where apprentices collaborate in social practices with teacher educators, critical friends and peers to acquire and construct new forms of interaction and thinking. The task of the teacher educator is to offer the necessary support that is needed for developing teachers.

Cooperative learning makes the greatest contribution in training the student teachers.

Cooperative learning improves the student teacher's understanding, it helps the student teachers to appreciate the different individuals and cultures in classrooms. Hawkey (1995, p. 4) asserts that the affective and emotional aspects of learning to teach is likely to be characterised the nature of interaction between student teachers. Because of their shared position as student teachers, along with equal status between peers, cooperative learning can improve and facilitate diversity on the learning and teaching styles through collaboration with others.

(iii) Meta-cognitive Tasks

The teacher creates the culture of inquiry by challenging learners' intellectual abilities with meta-cognitive tasks that enhance cognitive development and promote learners' reasoning through problem solving. When using Piaget's concept of disequilibrium, Fosnot (1996, p. 29) indicated that problem-solving can be promoted by disequilibrium. Disequilibrium facilitates learning in that errors need to be perceived as a result of learners' conceptions and therefore not minimized or avoided. This means that learners should be offered challenging tasks to enhance their intellectual growth. But because of the unique aspects of the challenging tasks, they might not correspond to the learners' prior knowledge. As a result, learners will make errors in the process of learning, but errors should be seen as necessary actions in the process of cognitive development. Problem-solving enables learners to create routes to new learning and engages them in tasks that enhance cognitive development. The learners feel a need to change their approach in problem-solving if they realise their strengths and weaknesses with their first approach to solving a problem.

(iv) Reflective Practices

The inquiry learning necessitates learners to gather information using multiple resources of the learning community, value all forms of literature and creative expressions and practice ethical behaviour when using information or technology. Using information to construct new understanding requires students to engage in reflection. Pappas & Tepe

(2002, p. 31) describe reflection as a process of thinking about what the learners know, questioning new information, making connections to prior knowledge or evaluating the information. Reflection develops the learner's critical thinking.

In the practice of teacher education, teaching and learning through reflection becomes a process that encourages student teachers to construct knowledge from their experiences. Through the lens of Schön (1987, p. 29), reflection cultivates activities that connect the reflection-in-action of competent teachers to the theories and techniques taught as professional knowledge in academic courses. According to Schön, the immediate significance for action is what distinguishes reflection-in-action from other kinds of reflection. Teaching and learning through reflection-in-action becomes a process of encouraging student teachers to engage with different forms of professional knowledge, derived from formal propositional knowledge and from experience (Schön 1987, p. 29). Reflection enables the student teachers to critically assess their teaching and learning so as to find what sounds like professional practice to them.

The student teachers can critically reflect on their learning as individuals or in collaboration with others. Self-reflection builds student teachers' inner confidence and encourages them to challenge or affirm their professional learning. Self-reflection originates from Habermas' self-reflexivity. Habermas views self-reflexivity as a critical or self-reflective type of knowledge. According to Habermas, self-reflexivity can help student teachers to scrutinize and appraise the adequacy of the information (Smith & Lovat 2003, p. 90). Self-reflection enhances the student teachers' cognitive development by enabling them to critically examine how their prior knowledge and personal experiences are linked through the construction of meaning. In this manner, the student teachers apply their experiences to improve the construction of knowledge in a different situation.

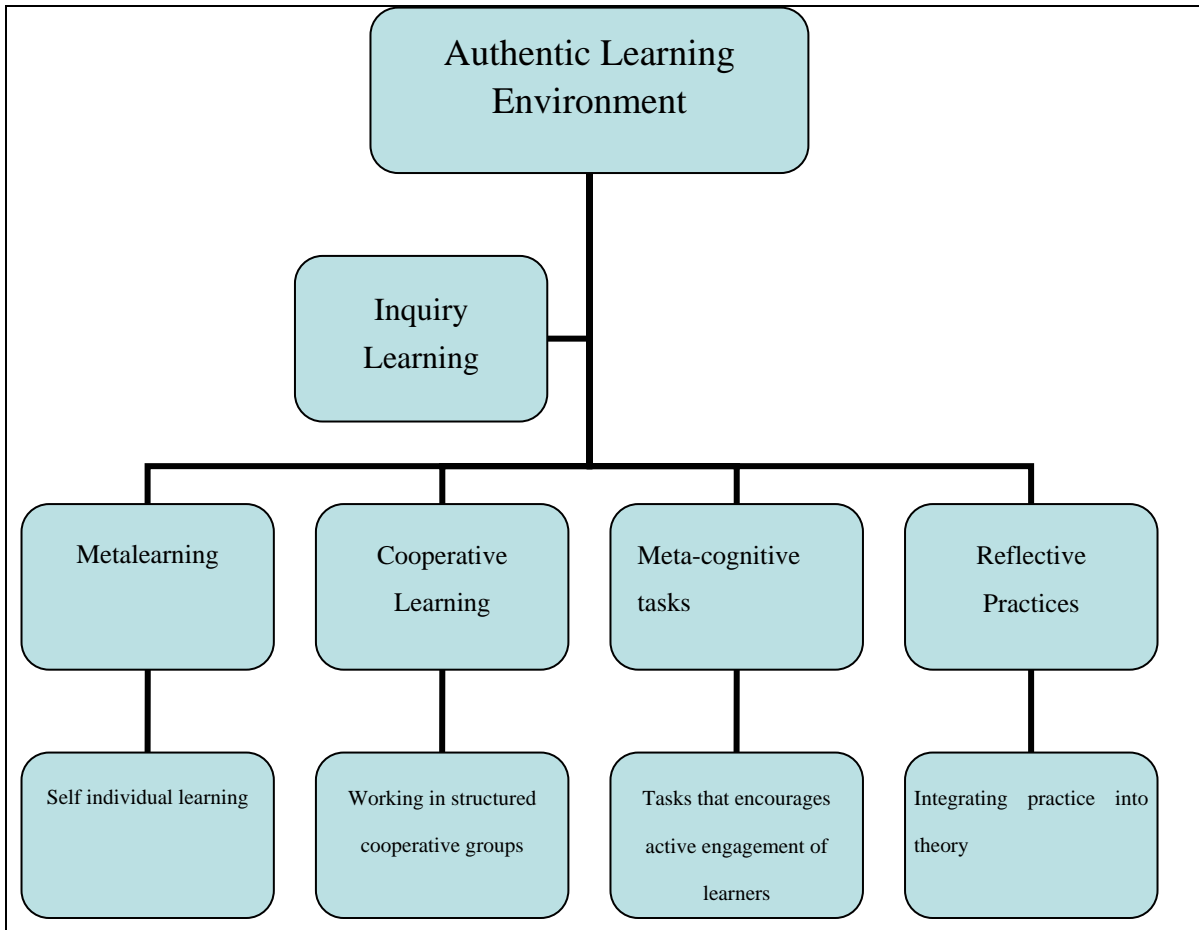
The student teacher can also take the initiative to understand and improve their own situations in collaboration with other student teachers. Smith & Lovat (2003, p. 213) argue that most teachers find it difficult to detach themselves from the situations they are

in; they find it difficult to identify the deeply-held beliefs and perceptions that motivate their actions. To overcome this problem, the student teachers can review their practice in the light of evidence and with the help of critical judgement from others through action research. Consequently, Davies (2002, p. 209) argues that action research is a better tool in democratization in the way it stimulates reflection and collaboration. The advantages of action research is that it allows the student teacher to work with others to define their situations, share experiences, develop common strategies and confront each other with differences in perceptions and interpretations.

Reflection builds to practice theory; theory and practice are combined through reflection. The student teachers are able to re-evaluate their teaching and enhance research skills. The student teachers can develop their knowledge in the process of reflection in practical situations, which creates a concern and a personal need for learning. Teaching and learning through reflection encourages the student teachers to continuously evaluate their learning. The assessment becomes a dual process; it addresses learning processes as well as learning outcomes because it is integrated with instruction.

The learning process in constructivist pedagogy takes the form of an inquiry and this is facilitated in an authentic environment. The important features of constructivist learning pedagogy are: the active involvement of student teachers through an authentic learning environment, metalearning supported by the teacher educator who motivates student teachers to develop self-awareness and control their learning, cooperative learning by working in structured cooperative groups that interact and share the work, challenging the student teachers' intellectual abilities with meta-cognitive tasks to enhance cognitive development, and promoting reasoning through problem-solving and reflective practices that encourage the student teachers to use experiences to enhance learning. The figure below illustrates the constructivist pedagogy learning process.

Figure 2.1 The Constructivist Pedagogy Learning Process



The inquiry learning process accommodates different activities and provides a distinctive approach to the roles of the student teacher and the teacher educator.

Table 2.1 The roles of a student teacher and a teacher educator

Student Teacher	Teacher Educator
Active involvement in the learning process	Creates an authentic environment to enhance involvement
Independently construct knowledge	Motivates learners to control their learning through metalearning
Works with other learners to share meaning	Facilitates learning by using provocative questions that guide learners to think critically and reach a depth of content (metalearning questions)
Gather information from literature and many different resources in their community	Encourages learners to reflect and evaluate the information they have collected
Engages in problem-solving	Encourages active engagement of learners by challenging learners' intellectual abilities to promote their reasoning and uses strategies to maintain learning
Self-evaluation of learning	Continuous assessment; observes, keeps records and interprets the activities and practices of learners during problem solving

These roles have a significant impact on the teacher's professionalism and hence it is very crucial in evaluating the curriculum design of a teacher's education.

2.5. Postmodernism and Teacher Professionalism

When assessing the state of a new professionalism in teacher education, it is necessary to first look at the meaning of the concept professionalism.

2.5.1. Teacher Professionalism

Collins & O'Brien (2003, p. 285) define professionalism as the conduct, aims or qualities that characterize or mark an occupation or a person working in a particular occupation. Mothata (2000, p. 131) defines professionalism as the manner in which a practitioner executes his/her practice and incorporates the concepts, knowledge, skills, values and judgment involved therein. Thus, the concept of professionalism is characterized by knowledge, skills, values, aims and qualities that characterize a person in an occupation.

Light (2000, p. 186) noted that professionalism resides in the ability to situate oneself and one's practice critically within an environment of changing academic roles, knowledge bases and ways of knowing student needs, departmental requirements, institutional demands, external agency demands and professional accreditation demands. For these reasons, Furlong, (2000, p. 27) contends that professionalism depends on the commitment to create and maintain those spaces within professional life where critical discourse can flourish. Thus, professionalism is subjected to the public and collaborative scrutiny.

In the same manner, professionalism in the context of teaching, like any occupation, has its own distinctive kinds of actions which define and describe the core of teaching professionalism (Hargreaves & Fullan 2000, p. 50). Hence, an understanding of professionalism in teaching rests on the identification of what is important in teaching as far as practicing teachers are concerned (Shacklock 1998, p. 188).

The following definition describes the nature of professionalism in teaching and teacher education:

The term professionalism refers to the status of teaching as a profession, the extent to which individual teachers act in ways which are deemed to be professional, and the professional status of teacher education programmes, as a source of professional development, learning and certification (Morris 2004, p.107).

According to Morris, professionalism in teaching can be judged against the actions of individual teachers and the quality of their training programmes. The knowledge, skills and values that teachers are exposed to determine the status of teaching as a profession and, as professionals, teachers are expected to demonstrate their professional competence. The ability of teachers to demonstrate their professional competence determines the status of teacher education programmes. Thus, professionalism in this manner consists of the three key principles: the status of teaching as a profession, teachers' professional competence and the status of the teacher education programme. It is, however, the status of the teacher education programme that is of interest in evaluating the PGCE programme benchmarked against a new professionalism.

2.5.2. Changing Nature of Teacher Professionalism

In order to address the state of a new professionalism, it is necessary to make a distinction on the changing nature of professionalism from traditional to postmodernist professionalism. Of special interest in this study is the work of Hargreaves (2000, pp. 151-182) and Day & Sachs (2004, p. 7) that clarifies the professional change process from different angles. The work of Hargreaves (2000) describes the four historical phases of the changing nature of teacher professionalism as follows: (a) the pre-professional age, (b) the age of the autonomous professional, (c) the age of collegial professional, and (d) the fourth professional age. Another perspective on the changing nature of professionalism in teaching and its effect on the status of the teacher education programme can be depicted by managerial professionalism and democratic professionalism (Day & Sachs 2004). The distinction which has been drawn from the approaches of Hargreaves and Day & Sachs indicate a transition in the role of teacher education. Common in both these forms of professionalism, is the tendency to explore the insights of professionalism within teacher education programme.

➤ Hargreaves: the Four Ages of Professionalism (Hargreaves 2000, pp. 151-182)

Hargreaves argues that the evolution of the idea of professionalism in teaching has occurred in several stages, each phase carrying significant residues and traces from the past.

(a) The pre-professional age

During the pre-professional age, teaching was seen as managerially demanding but technically simple. One learned to be a teacher through practical apprenticeship and improved by trial and error. In a pre-professional image, teachers need little training or ongoing professional learning. They learn to improve on the job within the confines of the classroom, which they control.

(b) The age of the autonomous professional-

During the age of autonomous professional, the terms professional and autonomy became increasingly inseparable among teachers. The spread of teacher pre-service education in the universities and the growth of in-service education provided by experts added weight to the claims to expertise on which the rights to autonomy would rest. Hence, the knowledge gained from in-service training seldom became integrated into classroom practice, as individual trained teachers were reluctant or unable to stand out from their colleagues. The age of professional autonomy provided teachers with poor preparation to cope with the dramatic changes that were headed their way, against which their classroom doors would offer little protection.

(c) The age of the collegial professionalism

During the age of the collegial professional, teachers learn to teach in new ways. Professional learning was seen as continuous process, grappling with complex and evolving issues. Continuous learning was both an individual responsibility and an institutional obligation. The implications for initial teacher education were that professional learning was found as an active integration of and synergy between the school-based and course-based modes. Collegial professionalism meant working with, learning from and teaching colleagues. Teaching was framed and informed by professional standards of practice that define what good teachers should know and be able to do, and what qualities and dispositions they should possess to care for and connect with their students.

(d) The fourth professional age

This is the edge of an age of postmodern professionalism, where the social geographies of schooling are changing in ways that shape the boundaries between schools and the world. Hence, the social geographies of professional learning are also changing. For this

reason, teachers have to deal with a diverse clientele and an increasing moral uncertainty, where many approaches are possible and more and more groups have an influence. But the concern is whether this postmodernism age will see exciting and positive new partnerships being created with groups and institutions beyond the school, and whether teachers will learn to work effectively, openly and authoritatively with those partners in a broad social movement that protects and advances their professionalism, or whether it will witness the de-professionalisation of teaching as teachers crumble under multiple pressures, intensified work demands, reduced opportunities to learn from colleagues and enervating discourses of derision, is something that is still to be decided (Hargreaves 2000, pp. 151-182).

The distinction of the changing nature of teacher professionalism, which has been drawn by Hargreaves, shows a transition in the professional development of teachers from learning through classroom practice, individualism, continuous learning enhanced by integration of school-based and course-based modes, to the age where teacher professionalism is determined by the changes in society. What is essential in Hargreaves' changing nature of teacher professionalism, is that for the first three phases, namely the pre-professional, the autonomous professional and the collegial professional, professional learning was characterised by certain factors. But during the post modern age there are no overriding factors to determine the professional learning of teachers. This implies that professional learning of teachers is determined by the context of teacher education, because it has to relate to the changes in society. Thus, professional learning is now enhanced by the partnership between schools and teacher education institutions, because it depends on the changing societal environment and aims at integrating practice and theory.

- Day & Sachs: Managerial Professionalism and Democratic Professionalism (Day & Sachs 2004, p. 7)

Day & Sachs (2004, p. 7) describe the changing nature of teacher professionalism as a transition from managerial professionalism to democratic professionalism. They assert

that managerial professionalism regards teachers as systems to be controlled through external regulation. Managerial professionalism relates to behaviourist, in that not only teaching and learning, but also the entire work of a professional consists of behaviour that is visible and observable and which can therefore be monitored and measured. Democratic professionalism, on the other hand, places emphasis on professional development and activism. It accepts professional behaviour as self-regulating and minimizes the control mechanisms, being profession driven rather than systems driven and relying on professional regulation rather than external regulation (Day & Sachs 2004, p. 7).

Day & Sachs (2004, p. 7) summarize the differences between managerial and democratic professionalism as follows:

Table 2.2 Managerial and Democratic Professionalism

Managerial Professionalism	Democratic Professionalism
<ul style="list-style-type: none"> • System driven/ends • External regulation • Drives reform agenda 	<ul style="list-style-type: none"> • Profession driven/ends • Professional regulation • Complements and moves beyond reform agenda
<ul style="list-style-type: none"> • Political ends • Competitive and market driven • Control/compliancy 	<ul style="list-style-type: none"> • Professional development • Collegial and profession driven • Activism

The main emphasis Day & Sachs place on the changing nature of teacher professionalism is the administration of teachers. Managerial professionalism can be linked to Hargreaves' two ages of professionalism, namely the pre-professional age and the age of autonomous professional. On the other hand, the age of the collegial professional and fourth professional age can be related to democratic professionalism. The focal point of democratic professionalism is on professional development that is self-regulated, to correlate with the changes in society. This changing nature of teacher professionalism as defined by Hargreaves and Day & Sachs indicates a transition in the role of teacher education. Common to both these forms of professionalism is the emphasis on the changes of teacher education. Hence, these changes can be characterized as a transition

from the old professionalism to a new professionalism.

The changing nature of teacher professionalism also highlighted a trend in professionalism which can be characterized as the old professionalism and a new professionalism. Table 2.3 summarizes the difference between the traditional professionalism and a new professionalism, using the nine indicators. The nine indicators is representative of the holistic significant changes in teacher professionalism.

Table 2.3 Traditional Professionalism and New Professionalism

Indicators	Traditional Professionalism	New Professionalism
Philosophy	Modernism	Postmodernism
Learning theories	Behaviourism and cognitive	Constructivism and cognitive
The Status of Teaching	Managerial; autonomously controlled	Democratic; collegial profession and professionally driven
Characteristics	Knowledge, autonomy and responsibility	Reflection, participation and contestation
Professional learning	Standards of excellence and mastery of knowledge, skills and values through external regulation	Self-regulated and determined by the changes in societies
Professional development	An individual responsibility of teacher education, theory is linked to practice	Collaborative learning partnership between schools and institutions, socially contextualized objectives, practice leads to theory
Teacher's behaviour	Controlled through external regulations	Self and professionally driven
The role of the teacher educator	Teach according to teachers' professional standards	Provide support; create a social learning environment in which learners are engaged.

2.6. Conceptual Framework for Evaluation Purpose

It can be concluded that the main thinking processes that underpin the professional development of teachers for a new professionalism can be characterized by personal transitions, self-regulated learning, meta-cognitive tasks, reflective practices and practical experiences, as represented in Table 2.4.

Table 2.4 Conceptual Framework

Criterion	Description	Features
1. Personal transitions	Changes in teachers' perceptions, attitudes and beliefs through professional development.	Safe environment Practical knowledge Developing self-awareness
2. Self-regulated learning	Self-organisation and active involvement of learners in learning that enhances continuous learning.	Metalearning Collaborative learning
3. Meta-cognitive tasks	Creating challenging tasks that enlces cognitive development, and promotes learners' reasoning and critical thinking.	Contextualized content High task complexity Problem-solving tasks Performance-based tasks
4. Reflective practices	Cognitive processes of learning which assert the importance of experience and critical reflection in learning and on learning.	Reflection Self-reflection Action research Performance-based assessment Incorporation of theory
5. Practical experiences	Integration of course-based and school-based modes in a school environment.	Occupational heteronomy Professional authentic practices Professional behaviour

The above conceptual framework will be used to evaluate the curriculum design of the PGCE programme to determine the extent to which it aligns to the constructivist principles.

2.7. Conclusion

In order to enable the novice teacher to understand the major difference between the modernist approach and the postmodernist approach, the programme will have to be rich in experience and the construction of meaning. A post-modern conception of curriculum takes into account the interactions and the nature of the learner with the world of knowledge and society. The curriculum should then focus on the self-development of teachers and be a dynamic process of individual and social growth. This implies that the professional education of teachers should be a continuous learning process.

There are various types of connections to prepare teachers for a new professionalism. Constructivism requires a strong core curriculum, taught in the socio atmosphere context, grounded in knowledge of the child's development, and facilitated by a relationship between teachers and learners. Designing a curriculum in such a way that it reflects careful thought about the teacher-student relationship is relevant to the learners' interest. The curriculum must allow time for this internal relationship to take place, as it enhances the student teachers' engagement during the learning process. There should also be a connection on the professional practices of student teachers within teacher education that determiners their professionalism. Therefore, teacher educators must take into consideration all the essential elements in a constructivist learning pedagogy and they must become integral to the curriculum design of the teacher education programme.

The purpose of the literature review was twofold. Firstly, the different fields mentioned above; provided the framework against which the nature of the synergy between curriculum design theory, constructivist learning and teacher professionalism were explored. Secondly, a synthesis of the relevant literature was given for the purpose of illuminating research strategies and procedures that could be provide relevant information in relation to the research questions. In the next chapter, the research strategies and procedures will be introduced.

Chapter Three

Research Methodology and Design

3.1. Introduction

In this chapter I am going to discuss the research methodology and design. The chapter will firstly explain the research theory that informed the study and secondly the research approach, the research design, data collection strategies and the procedures that were followed when conducting the study and the framework for data analysis. Thirdly, the chapter will discuss the strategies employed to ensure the quality of the findings and fourthly, the ethical consideration for the study. Lastly, the focus will be on the limitations of the research methodology and design.

3.2. Research Theory

The research is informed by critical theory. Critical theory in education seeks to empower teachers and students so that they can emancipate themselves from ideologies and practices which exploit and oppress them. Understanding and analysing the linkages between day-to-day practices in schools and larger domains, and values that are often linked to social and political realities is central to the generation of critical theory for teaching and teacher education (Beyer 2001, p. 154). Therefore, critical theory is concerned with the day-to-day interaction of the beginner educators and teacher educators that shape teaching professional development.

In relation to curriculum, critical theory is concerned with the critical meanings of experiences as they relate to the curriculum development. According to Cohen, Manion & Morrison (2000, p. 33), critical theorists argue that not all knowledge can be included in the curriculum; the curriculum is a selection of what is deemed to be worthwhile

knowledge. The justification for that selection reveals the ideologies and power in decision making in society and through curriculum. In other words, critical pedagogy regards the curriculum as a form of cultural politics in which participants in curricula question the cultural and dominating messages contained in curricula, replace them with a language of possibility and empower often community-related curricula. For this reason, the critical theorists assert that curriculum research should be subject to ideology critique and, at the same time, should promote ideology critique of the students and teachers.

Critical theory is appropriate for the current study. The reason for conducting the study was to evaluate a one-year, innovative, postgraduate teacher education programme based on the philosophy of a constructivist learning. The objective was therefore to understand and analyse the curriculum design of the teacher education programme from the perspective of the beginner educators and the teacher educators. Accordingly, critical analysis enables me to understand the dynamics of the relationship between the beginner educators, the teacher educators and the curriculum. As a result, I was able to come up with a synthesis of interpretation that helps to determine the extent to which the teacher education programme adheres to constructivism.

3.3. Research Approach

For critical theorists, the research should allow the participants' voices to be heard. But the choice of the research approach depends on the nature of the problem to be investigated. Cohen, Manion & Morrison, (2000, p. 22) indicate that there is no single blueprint for planning research. Research design is governed by the notion of 'fitness for purpose'. This means, the nature of what had to be investigated should determine the methodology of the research, which will in turn dictate the research design and the design will determine the approach to be applied and the selection of different sources for collecting data. Based on the purpose and the context of the study, the research approach adopted was qualitative.

Creswell (2003, pp.181-183) argues that the qualitative research approach is used for the following reasons:

- The study takes place in a natural setting to enable the researcher to develop a level of detail about the individual and to be highly involved in actual experiences.
- The researcher uses multiple methods that are interactive and humanistic, e.g. interviews and documents analysis. These methods of data collection increasingly involve active participation by participants and sensitivity to the participants in the study. The researcher looks for involvement from his/her participants in data collection and seeks to build rapport and credibility with participants in the study.
- The research is emergent rather than tightly prefigured. Several aspects emerge during a qualitative study.
- The study is interpretive; the researcher makes an interpretation of the data.
- The researcher uses complex reasoning that is multifaceted, iterative and simultaneous.
- For the reasons mentioned above, the qualitative researcher adopts and uses a case study inquiry as a guide for the procedures in the qualitative study.

Qualitative researchers often align themselves with interpretivism. To the interpretive researcher the purpose of research is to advance knowledge by describing and interpreting the phenomenon of the world in an attempt to get shared meanings with others (Bassegy 1999, pp. 43-44). It is also apparent that the researchers using interpretivism are interested in the synthesis of understandings that come about by combining different individuals' detailed reports of a particular event (Rubin & Rubin 2005, p. 29). For this reason, the researcher can also support or explain an argument by using evidence from the data and from the literature, about the phenomenon being studied (Henning, van Rensburg & Smit 2004, p. 3). Thus, the researcher builds theory from the knowledge gained from participants with reference to the literature.

Given the nature of a qualitative research, it allows the researcher to be actively involved in the research process. The researcher has much greater flexibility in both the strategies and techniques he/she uses and the overall research process itself (Ary, Jacobs & Razavieh 2002, p.22). On the other hand, Creswell (2002, p.57) highlighted that the active involvement of the researcher might dictate shortcomings and biases that might have an impact on the study. To enhance the reliability of the results, the researcher reflects on his biases, values and assumptions and actively writes them into his research.

Aligning itself to the qualitative research approach, this study was conducted as follows:

- The study took place within a selected teacher education programme referred to as the Post Graduate Certificate in Education (PGCE). I participated and observed some of the activities to have a first-hand experience. I also analysed the documents and interviewed beginner educators.
- The research design was emergent and I incorporated relevant aspects that emerged during the study.
- I studied the PGCE programme holistically, analyzing the historical background of the programme, the theoretical background, the aspects of curriculum, mode of delivery, assessment, and familiarized myself with the experiences of beginner educators.
- The nature of the data collected dictates two ways of analysis interpretation and evaluation.

Through the use of qualitative approach, I was able to come up with a synthesis of interpreted data from documents, observations and interviews, which were analyzed against the conceptual framework constructed in Chapter Two.

3.4. Research Design

Creswell (2002, p. 58) defines a research design as the procedures for collecting, analysing and reporting research. Furthermore, Edwards & Talbot (1999, p. 33) state that

each research question, practical consideration and the environment in which the research is undertaken, will lend itself to a variation in the research design and methods adopted. The current study represents a single case study in which the PGCE programme was evaluated against selected criteria represented in a conceptual framework established in Chapter Two.

3.4.1. A Case Study

According to MacMillan & Schumacher (2001, p. 398), case study design means that the data analysis focuses on one phenomenon, which the researcher elects to understand in-depth, regardless of the number of sites or participants for the study. The purpose of the case study is therefore to investigate a phenomenon within its real-life context. Central to the case study is the need to capture the circumstances and conditions of an everyday or commonplace situation (Yin 2003, p. 13). As a result, the context becomes the central focus in designing a case study. Edwards & Talbot, (1999, p. 56) emphasize that the context allows a focus on the local understandings and sense-making of participants in the case, and gives an opportunity for the voices of participants to be heard.

The qualitative researcher seeks to develop an in-depth understanding of the case study. This in-depth understanding requires that only a few cases be studied, because for each case examined the researcher has less time to devote to exploring the depths of any case (Creswell 2005, p. 439). In addition, Edwards & Talbot (1999, p. 51) argue that when one case is being studied the data analysis focuses on one phenomenon, which the researcher selects to understand in-depth, regardless of the number of sites or participants in the study. As a result, the report of the case study provides a thick description that represents a significant contribution to knowledge and theory building on the phenomenon under study. The thick description report gives data that is coherent and that gives more facts and empirical content, but also interprets the information in the light of other empirical information in the same study, as well as from the basis of a theoretical framework that locates the study (Henning, van Rensburg & Smit 2004, p. 6).

Merriam (1998, pp. 38-39) contends that case studies can also be described by the overall intent of the study. Merriam outlines the purposes of the case study as descriptive, interpretive and evaluative. A descriptive case study is the one that presents a detailed account of the phenomenon under study. Interpretive case studies also contain rich, thick descriptions. This descriptive data, however, is used to develop conceptual categories or to illustrate, support, or challenge theoretical assumptions held prior to data gathering. Evaluative case studies involve description, explanation and judgment. Bennett (2003, p. 116) states that the purpose of an evaluative case study is to make an inquiry on the phenomenon to determine its worth as judged by the researcher and to convey this to interested audiences.

The current study represents an evaluative case study of the PGCE programme. I incorporated the procedures of an evaluative study identified by Lapan (2004, p. 237). According to Lapan, the logic of evaluation consists of four steps:

1. *Established criteria of merit* – for the study, the criteria to be used for evaluating the PGCE programme was a theoretical framework informed by the theoretical perspective of postmodernism and constructivism.
2. *Constructing standards* – The construction of the standards was established in Chapter Two. The focus of Chapter Two was to explore the educational disciplines that inform a constructivist learning paradigm. Postmodernism was used as a baseline to explore the nature of the synergy between constructivist learning paradigm and its impact on the curriculum design of teacher education. I deduced the five criteria from the literature reviewed and created a matrix as standards that will be used to evaluate the PGCE programme.
3. *Measuring performance and comparing it with standards* – the findings from the intended curriculum and the implemented curriculum gives a description of the PGCE curriculum design. Based on the five criterion of the established conceptual framework, I discussed the curriculum design of the PGCE programme.

4. *Synthesizing and integrating the performance data into conclusions of merit and worth* – while establishing a link between the PGCE curriculum design and the literature, I use some of the ideas that were raised in Chapter Two to support my arguments.

3.4.2. Sampling

3.4.2.1. The Use of Purposeful Sampling

The teacher education programme under study was selected with a purpose to provide a sample of key informants. Key informants are the participants that are representative of or informative about the case being studied (Struwig & Stead 2001, MacMillan & Schumacher 2001, Yin 2003, Merriam 1998, Creswell 2003). Merriam (1998, p. 61) explains that ‘purposeful sampling’ is based on the assumption that the investigator wants to discover, understand and gain insight and therefore must select a sample from which the most can be learned. MacMillan & Schumacher (2001, p. 401) noted that the power of and the reason for purposeful sampling is that a few cases studied in-depth yield many insights about a topic. This is further supported by Creswell (2005, p. 203), who states that the information provided by the knowledgeable participants can develop a detailed understanding that might provide useful information and help people learn about the phenomenon. However, Yin (2003, p. 46) highlighted that there should be evidence provided to ensure that the sample is in fact relevant to provide the evidence that is needed. For this reason, Yin suggested that an operational definition needs to be made and some precaution needs to be taken before a commitment is made to the whole study.

The study was conducted from 2005 to 2007 at the PGCE teacher education programme, at the Faculty of Education, University of Pretoria. The PGCE programme distinguishes itself in that it is designed on the principles of the constructivist learning paradigm, which informs the contemporary curriculum, and focuses on closing the gap between practice

and theory. It was introduced in 2002 as a school partnership model based on a transformational approach to learning. Besides these features there are other additional qualities of the PGCE programme that shows its innovation Programme Information for the PGCE 2005:

- The PGCE programme is a one-year, full-time course, based on a holistic approach to educating future educators.
- The aim is to educate students as teacher educators who will be able to distinguish themselves as leaders in education and in society.
- The curriculum is threefold; the professional curriculum, the specialization curriculum and the value-added curriculum.
- Assessment is done continuously on competence-based criteria. The final examination is done in the following format: beginner educators give proof of their achieved professional status by presenting and defending their professional development portfolio before a panel of internal and external examiners.
- The outcomes of the PGCE programme are professionalism, leadership, knowledge, comprehension, insight and independent, lifelong learning.

The above features form an essential and integral part of the curriculum design of the PGCE programme on the fundamental basis of teachers' professional development, subject knowledge, instructional process and competence in teaching practice.

3.4.2.2. Background of Participants

I have three categories of participants for the study. The first category is the beginner educators who participated during the informal conversational interviews. The second category is the beginner educators that I observed during the progress and final assessment, and the third category is the beginner educators who participated during the standardized open-ended interviews. The tables below show the detail of participants.

(I) The Participants for Informal Conversational Interviews

The participants of informal conversations were selected on extreme characteristics to enhance the study. During the observations I informally interviewed two outstanding beginner educators after the facilitation of learning introduction. During the induction component at a remote site of the University of Pretoria called Hammanskraal one looked a bit pessimistic and seemed to be confused and the other looked certain and seemed to understand the concept facilitation of learning.

Table 3.1 Participants for Informal Conversational Interviews

Participant Number	Gender	Phase	Specialization Area	Interview Date	Characteristics
ICI-1	Male	FET	Science and Maths	15 February 2005	Confident
ICI-2	Female	FET	Science and Technology	16 February 2005	Pessimistic

(II) The Observed Participants; Progress and Final Assessment

I observed the beginner educators during the progress assessment and final assessment. I used convenience sampling when selecting the beginner educators. I was guided by the name list and looked for a convenient time for the beginner educators, whose presentations were in English. I observed five beginner educators during the progress assessment and two during the final assessment.

Table 3.2 The Observed Participants: Progress and Final assessment

Participant Number	Gender	Assessment	Date
OB1	Female	Progress	20 June 2005
OB2	Female	Progress	21 June 2005
OB3	Male	Progress	21 June 2005
OB4	Female	Progress	22 June 2005
OB5	Female	Progress	22 June 2005
OB6	Female	Final	02 November - 2005
OB7	Female	Final	03 November 2005

(III) The Participants for Standardized Open-Ended Interviews

I used quota sampling to select the participants. The researcher uses the available information on the population with regard to another characteristic (Edwards & Talbot 1999, p. 133). For the current study, the participants were purposefully selected based on gender, phase and specialization area, and unique characteristics.

Table 3.3 Participants for Standardized Open-ended Interviews

Participant	Personality	Gender	Phase	Learning Area	Interview Dates
(Pilot testing)		Female	Further Education and Training	Hospitality studies	23 August 2006
1	Passionate	Female	Intermediate	English & Life Orientation	31 August 2006
2	Eloquent	Male	Senior	English & Technology	06 September 2006
3	Eloquent	Female	Intermediate	Language & Life Skills	09 September 2006
4	Does not voice her thinking	Female	Intermediate	Life Orientation & Economic Management and Sciences	11 September 2006

3.4.3. Data Collection Strategies

According to Edwards & Talbot (1999, p. 59), there is no single method that can act as “a catch-all for all studies”. Rather, the emphasis should be upon the selection of a variety of techniques that will enable the researcher to explore the research question in more detail and provide greater weight to any generalisations that the researcher feels able to make in his/her conclusions. In addition, MacMillan & Schumacher (2001, p. 538) assert that in the case of evaluation study, the multiplicity of data is used to provide an understanding of the divergent values of a practice from the participants’ perspectives. For the current study, I used document analysis, observations, informal-conversation interviews and standardized interviews. These data collection strategies provide an intensive database, which made the report of the study very descriptive.

3.4.3.1. Document Analysis

According to Mertens (1998, p. 324), the qualitative researcher uses documents to get the necessary background of the situation and insights into dynamics of everyday functioning. Since the researcher cannot be in all places at all times, documents give the researcher access to information that would otherwise be unavailable. Thus the purpose of using the documents, as compared to other data collection strategies, is to get access to information that would otherwise be unavailable.

The advantages of the documents are:

- They provide the advantage of being in the words of the participants, who have usually given thought and attention to them (Creswell 2005, p. 219).
- They eliminate the researcher's biases. The researcher does not have to alter what is being written and his/her presence could not affect the data (Merriam 1998, p. 25).

Furthermore, Wolff (2004, p. 284) pointed out that an important aspect that needs to be taken into consideration when using documents. Because documents are an objective source and represent an independent level of data, it is problematic to use statements in documents as opposed to other analytical results from interviews or observation, concerning relevant facts that were obtained at other data levels. Wolff suggests that analysis of the documents should be recognizable with its meaning in content; the analysis should relate to the purpose of the documents to match it to a situation and to contextualize the documents to the focus of the study.

For the context of the study, I used the following documents to get the necessary background of the PGCE programme and insights into the dynamics of the everyday teaching and learning of the participants in this study. The following documents were used:

- The Norms and Standards for Educators 2002; explains and prescribes the type of teacher education programme that will be acceptable for registration with the NQF and they provides guidelines or options for the development of these programmes.
- The report of the Ministerial Committee on Teacher Education; A National Framework for Teacher Education in South Africa 2005; aims to develop clarity and coherence across the various authorities and policies that play a part in the education of professionally committed and competent teachers who are able to contribute to a quality education system for all.
- The National review of the Post-Graduate Certificate in Education (PGCE) 2006; describes the overall criteria that the PGCE programme is based on.
- The Programme Information for the Post-Graduate Certificate in Education (PGCE) 2005; consists of the mission statement, the outcomes of the programme, administrative information, the timetable, the partnership schools, the curriculum, the school-based experience and the assessment files.
- The Study Manuals 2005 contain the information about the lecturer, contact sessions, learning materials, the goal and learning outcomes, the format of presentation and assessment.
- The Professional Development Portfolio Assessment 2005 contains the assessment process, criteria for examination, example of examination assessment instruments and external evaluators and examiner reports.

The documents helped me to get the theoretical background of the PGCE teacher education programme. The information I got from the documents was used to facilitate the observations and interviews. The documents eliminated my biases as I did not have to alter what was written and my presence could not affect the data. After looking at the first set of documents, I found that there was a need to see the actual instructional process within the PGCE programme.

3.4.3.2. Observations

The purpose of my observations was to gain insight into the actual procedures in the teacher education programme. This involves understanding the language of interaction between the teacher educators and the beginner educators and observing the teaching and learning activities in the teacher education programme.

According to Adler & Adler (1998, p. 81), qualitative observation is fundamentally naturalistic in essence. It occurs in the natural context among the actors who would naturally be participating in the interaction, and follows the natural stream of everyday life. What is prominent is that the researcher observes activities which are known to the group. This implies that the researcher is involved in the setting's central activities, assuming responsibilities that advance the group, without fully committing himself/herself to members' values and goals (Merriam 1998, p. 101). Observations and intuitive understandings from the field help the researcher to build towards theory.

Though the observation allows the researcher to interact with the participants, the extent of the interaction depends on whether the researcher is known or unknown to the participants. Merriam (1998, p. 98) argues that when the participants know the observer's role, the problem can be between the levels of confidentiality promised to the group in order to obtain the information. On the other hand, when the researcher's role is hidden, there might be loss of respect from the participants, being labelled a spy or traitor when the research activities are revealed. To eliminate the problems encountered in each role, Creswell (2002, p. 200) suggested that it is important for the researcher to adapt and change the observational role. A changing observational role is one where the researcher adapts his/her role to the situation. Adapting the changing roles also helps the researcher to understand the phenomenon from the inside perspective, while reporting the study as an outsider. For this reason, the changing observational roles correlate to the perspective of qualitative research that the context of the study is very crucial as it provides knowledge on specific incidents and behaviour.

Since the observation focuses on the interaction of the participants, the observation is facilitated by discourse analysis. According to Struwig & Stead (2001, p. 14), discourse analysis is used to show how certain discourses (ways of talking and behaving) can be employed to achieve certain effects in specified contexts. Furthermore, Cohen, Manion & Morrison (2000, p. 298) affirm that it is possible to consider the discourse analysis in observation, because the emphasis is on the construction of meaning, which indicates the action perspective of discourse analysis. In other words, the researcher explores the organization of ordinary talk and everyday explanations and the social actions performed in them. The discourse itself is the educational reality and the issue becomes that of educational reality and the issue becomes that of examining how teacher and children construct a shared account or a common interpretative framework for curriculum knowledge (Bergman 2004, p. 203).

Given the nature of the observation for the current study, my observations were done for discursive purposes. The purpose of my observations was to get a holistic picture of the PGCE programme; interaction and language used between the beginner educators and teacher educators. The observations were also based on the changing roles; I was a participant observer and then a non-participant observer. I observed the PGCE programme's activities for eight weeks; for the first five weeks I was the participant observer and for the last three weeks I was the non-participant observer. I first entered the field as the participant observer to get the overall picture of the programme and to understand the language that is used by both teacher educators and beginner educators for the first five weeks. I participated in some of the activities in the programme, joining the beginner educators. I sat in the first semester contact sessions with the beginner educators, engaged in their discussion, participated in groups and joined the beginner educators for the first school observation and the induction programme. Then, for three weeks I was the non-participant observer during the progress assessment and the final assessment. I sat in with the individual assessments of the beginner educators, observing the interactions between the beginner educators and teacher educators, the procedures and questions, and listened to the feedback from the beginner educators.

My observation report consists of a description of the events, activities done by teacher educators and beginner educators, and reflection on my personal thoughts that relate to the insights, hunches or ideas that emerged during observation.

3.4.3.3. Interviews

The face-to-face interview is one of the best sources of information. Perspectives gained through the interview give-and-take process represent more than points of view; they offer insights into special knowledge that only participants possess (Lapan 2004, p. 241). MacMillan & Schumacher (2001, p. 444) state that the purpose of the interview is as follows: to obtain the present perceptions of activities, roles, feelings, motivations, concerns and thoughts, to obtain future expectations or anticipated experiences, to verify and extend information obtained from other sources and to verify or extend hunches and ideas developed by the participants. In short, the interviews allow the researcher to get detailed descriptions of the experiences of the participants. For this particular study, I adopted the informal conversational interviews and standardized open-ended interviews.

Informal Conversational Interview

The informal conversational interview is an integral part of the observations. What differentiates this interview form other forms of interview is that the interview is built on and emerges from observations and the interview can therefore be matched to individuals and circumstances (Cohen, Manion & Morrison 2000, p. 271). Thus, the questions emerge from the immediate context and they are asked in the natural course of things; there is no predetermination of question topics or wording (MacMillan & Schumacher 2001, p. 443). This increases the salience and relevance of questions. Since the interview is not planned ahead of time, the researcher asks questions as the opportunity arises and then listens closely and uses the subjects' responses to decide on the next question (Ary, Jacobs & Razavieh 2002, p. 434).

I used informal conversational interviews during my observations. I did informal conversational interviews with the beginner educators at the induction programme in 2005, at Hammanskraal. I interviewed two beginner educators who were outstanding during the discussions after being introduced to learner-centred approach. One beginner educator looked a bit pessimistic and seemed to be confused and the other looked certain and seemed to understand the facilitation of learning. The purpose of our informal conversations was to provide a baseline for beginner educators' experiences at the early stages of their professional development.

Standardized Open-Ended Interview

The standardized open-ended interview comprises a set of formally structured questions that are based on theory, research and the experience of the interviewer. The strengths of this interview are that the participants answer the same questions in the same order. The questions are formally structured; the wording is not altered from one participant to the next (Struwig & Stead 2001, p. 98).

The strengths of this interview according to (Cohen, Manion & Morrison 2000, p. 271) are:

- Respondents answer the same questions, thus increasing the comparability of responses; data is complete for each person on the topics addressed in the interview.
- It reduces the interview effects and bias when several interviewers are used.
- It permits decision makers to see and review the instrumentation used in the evaluation.
- It facilitates organization and analysis of the data.

I used standardized open-ended interviews to get more comprehensive data with the 2006 group of beginner educators. The interviews started towards the end of the second school-

based education and were completed during the contact session. It was almost towards the end of the year, because after the school practice the beginner educators were left with three weeks of lecture classes, followed by the final assessment. Hence, this was the correct time to get a fuller picture of the beginner educators' professional development.

I pilot tested the interview questions with one beginner educator to validate the quality of the questions. After the pilot test I made some changes to improve clarity and format. Pilot testing gave me an estimated amount of time for the interviews and provided an initial idea of responses that are likely to be heard from the beginner educators. I then incorporated the changes from the pilot test and developed a new interview schedule (See Appendix A & B).

I did the actual interviews with four beginner educators. I sent them emails to inform them about the study and followed up via Short Message Service (SMS) and telephone calls to agree on a convenient time and venue. The interviews took approximately 45 to 60 minutes. I used a digital tape recorder during the interviews. However, I tried to take notes to help me to probe and reformulate questions and to record nonverbal communications which facilitates data analysis. It was very difficult because I also had to pay full attention to the interviewees as they talked. Immediately after the interview, I organized and elaborated my field notes so that I would be able to recall and understand what had happened. I transcribed the tape, wrote down the beginner educators' reactions during each interview, additional information, and expanded on the interview meanings.

3.4.3.4. Triangulation of Data Collection Strategies

The use of different data collection strategies, including documents, observations and interviews, helps to overlap the evidence from the three perspectives rather than obtaining information from one perspective. Considering the flaws of each data collection strategy, it was crucial to incorporate the all three data collection strategies.

Document analysis

The documents of the beginner educators were prepared to serve a different purpose related to motivating, with evidence, their professional development over time. If they prepared the documents for the purpose of this study the information they provided might have been different. In other words, the documents could not explore the depth of meaning that interviews and observations do. It was thus difficult to analyze the documents.

Observations

- Most of the observations were done at the early stage of my research; incompetence and/or uncertainty might have caused bias in my analysis.
- As I am a novice researcher and as this is the first time that I conduct this particular study, I used the unstructured observation, meaning that I did not look for specific occurrences. It is thus important to be aware of the possibility of biasness on my account when sifting through the field notes for relevant data.
- Being the observer participant might also have influenced the results, as my role was known by the teacher educators and the beginner educators.

Informal Conversational Interviews

The informal conversational interviews couldn't provide a comprehensive picture of the beginner educators because the questions emerge from what I thought was crucial at that particular moment. The interviews were also not recorded on tape and I had to take notes while conducting the interview. It was difficult to organize and analyze data because the interviews were less systematic and comprehensive. I presented data in the form of a summary as I collected different information from different beginner educators.

Standardized Open-ended Interviews

There was little flexibility when relating the interview to particular beginner educators and circumstances. The standardized wording of questions might have limited the genuineness and relevance of questions and answers. Though the questions were standardized, I had to have a different approach with each interviewee, which might have ended up affecting the purpose of the standardized open-ended interview.

Using different data collection methods and different groups of beginner educators gave me the opportunity to critically analyse data and to establish coherence on the information. As a result, triangulation of data collection strategies enhances validity of the results.

3.4.4. Data Analysis

Qualitative data analysis is primarily an inductive process of organizing the data into categories and identifying patterns among the categories (MacMillan & Schumacher 2001, p.461). The basic idea behind inductive category formation is that the procedures of summarizing content and discourse analysis are used to develop categories gradually from some material (Mayring 2004, p. 267). In other words, data is first analyzed using inductive analysis to generate a more abstract descriptive synthesis of the data.

The data analysis was based on the qualitative content analysis strategy and discourse analysis. Analyzing documents and interviews involves the process of content analysis. In view of the content analysis, Struwig & Stead (2001, p. 14) define it as messages, for example; words, meanings, symbols and themes and the text can refer to that which is written, spoken or visualized. On the other hand, I used the observation for discursive purposes and hence the data collected was analyzed through discourse analysis procedures. Discourse analysis is used for observations to show how certain discourses (ways of talking and behaving) can be employed to achieve certain effects in specified contexts (Struwig & Stead 2001, p. 14). However, the procedure for data analysis in discourse analysis is the same as in content data analysis. The researcher first captures

discourse or content from field notes raw data, identifies and organizes codes, composes the categories and then establishes a pattern from the categories and other data (Henning, van Rensburg & Smit 2004, p. 121).

For the current study, I did preliminary data analysis. I organized data; all pages of field notes and transcripts were numbered sequentially to help locate data. I scanned for possible categories and the topics within the data. I looked for themes, patterns and ideas. I read the literature concerning the topic and looked for useful concepts, models or theories to help understand the data.

Analyzing Documents

I analyzed documents based on the four questions:

- How is the curriculum documented?
- What situation resulted in the development of the curriculum?
- What perspectives does the curriculum represent?
- What are the instructional procedures in the teacher education programme?

Analyzing Observations

The field notes for observations were categorized in relation to the type of learning activities that illustrated the instructional process which indicate the usage of language in the programme. After incorporating the data from the documents, the themes were identified and categorized as phases of learning in the programme.

Table 3.4 Themes illustrating the learning activities

Learning Phases	Phases	Description
Learning to teach	Orientation	The phase focuses on establishing a rapport about the culture of the teacher education programme.
	School-based observation	The purpose is for the beginner educators to get a holistic view of the function of the school.
	Induction	It is an induction phase, on which the beginner educators are confronted with the responsibility of being teacher educators.
	Theory-based	The main focus during the theory-based period is on content knowledge and understanding how it contributes to the practice of teaching.
Learning to facilitate	School-based practice	The phase enables beginner educators to learn through experience the interaction between their practice theory which facilitates learning and the actual facilitating learning practice
Learning consolidation	Accountability	The beginner educators give account on their practical experiences.

Analysing the Standardized Open-ended Interviews

I analysed the standardized open-ended interviews and I presented the data in the form of beliefs and constructs that are apparent to the interview questions; sense of purpose, sense of commitment and sense of fulfilment.

Sense of Purpose

The theme investigates the beginner educators' sense of purpose in the teaching profession. The purpose of the theme was to elicit the responses with the following interview questions (appendix B):

1. What were your thoughts and feelings about teaching before you became a student teacher?
2. How, if at all, have your thoughts and feelings about teaching and feelings about

- teaching changed since you became a student teacher?
3. What is your understanding of being a beginner educator?
 4. In what ways, if any, has the programme contributed to your development as beginner educator?

Sense of Fulfilment

The sense of fulfilment refers to the beginner educators' ability to perform their roles of facilitators of learning. The purpose of the theme was to elicit the responses with the following interview questions (appendix B):

5. What are your experiences on the school-based education?

The data analysis reveals the role played by the beginner educators as change agents, the teaching approaches they implemented during the school practice, the examples of how they initiated the learner centred approach, and the achievements and challenges they experienced during their school practices.

Sense of Commitment

The sense of commitment refers to the beginner educators' commitment to the teaching profession, that is, their willingness and determination to teach. The theme was based on the responses to the following interview questions (appendix B):

6. Could you describe the most important lessons you learned about educators through the experiences you have in the programme and in partnership schools?
7. Where do you want to see yourself in two years time?

The three themes highlighted the different aspects of professional development and I used them to determine the extent to which the beginner educators displayed the learning outcomes.

3.5. Ensuring Quality in the Research Methodology and Design

A variety of concepts of qualitative research exists, with competing claims as to what counts as good quality work. Henning, van Rensburg & Smit (2004, p. 5) argue that the qualitative research approach indicates the type of inquiry in which the characteristics of the participants and the phenomenon are examined for better understanding and explanation. Accordingly, Ary, Jacobs & Razavieh (2002, p. 452) assert that trying to apply the indicators of reliability and validity to qualitative work distracts more than it clarifies. Instead, researchers judge the quality of the research by its credibility, transferability and dependability, and by the conformability of the findings. Credibility is equated with internal validity, transferability with external validity, dependability with reliability and conformability with objectivity.

3.5.1. Credibility

Credibility in qualitative research concerns the truthfulness of the inquiry's findings. This involves how well the researcher has established confidence in the findings based on the research design, participants and context. The researcher has an obligation to represent the realities of the research participants as accurately as possible and must provide assurances in the report that this obligation was met (Ary, Jacobs & Razavieh 2002, p. 452). The credibility of the research findings was accomplished through the triangulation, extended observations and different groups of beginner educators.

- Triangulation

Using different data collection strategies, namely observations, documents and interviews and data collected from different groups of beginner educators in 2005 and 2006 enhance the credibility of the findings. Using different data collection methods enhances critical reflection and provides adequate information about the teacher education. The different data collection strategies and sources provide different points of view on the teacher

education programme.

- Extended observations

The observations were conducted for almost eight weeks. Credibility of the results might have been threatened by errors in data collection caused by participants providing socially acceptable responses or acting differently because of my presence. But the extended observations reduced this possibility, because I had opportunities to check perspectives and allow the beginner educators and teacher educators to become accustomed to my presence. The study was a longitudinal study, from 2005 until 2007.

- Different groups of beginner educators

The quality of the findings was also enhanced by collecting data from different groups of beginner educators. I observed and did informal interviews in 2005, while the standardized interviews were conducted in 2006 with a different group of students.

3.5.2. Transferability

Transferability is a process in which the researcher and the readers infer how the findings might relate to other situations. The transferability of the findings relies on information being provided about the people, events or data being studied. This information should be sufficiently detailed to allow an informed judgement about how far and how well the findings map on to other situations (Denscombe 2002, p. 149). I enhance the transferability of the findings by using purposeful sampling and providing a thick description report.

- Purposeful sampling

The use of purposeful sampling increases the effectiveness of information obtained from one teacher education programme. I purposefully selected the PGCE programme as an

example of a teacher education programme which has been established under the principles of constructivism and which entails innovation through the construction of practice theory. The PGCE programme was established specifically to address the impact of educational change on teacher education curriculum studies and implementation strategies. It was introduced in 2002 as a school partnership model based on a transformational approach to learning.

- Thick description

I collected data with multiple data collection strategies, namely document analysis, observations and informal conversational interviews. This variety of data collection strategies provides a thick description report. The report gives an in-depth description of the curriculum design of the PGCE programme, as well as the education disciplines of a new professionalism and constructivism. In addition, the evidence of data in the form of quotes from documents, field notes, and participant interviews, have been included in support of the findings of the study. The report has enough detail for readers and other teacher educators to determine how closely their situations match my research situations, and whether the findings can be transferred.

3.5.3. Dependability

The quality of the data collection can be determined by means of a dependability audit in which the change process can be inspected to attest to the quality and appropriateness of the inquiry process (Mertens 1998, p. 291). Audit trails provide a mechanism by which others can determine the uniqueness of the situation and how decisions were made.

- Audit trail

All materials that were used during data collection, namely field notes, interview schedules, letters of informed consent, e-mail drafts, tapes, transcripts and reports, were

kept in a safe place. This will provide a mechanism by which others can determine how decisions were made and the uniqueness of the situation.

3.5.4. Confirmability

Confirmability refers to the extent to which the research is free from bias in the procedures and the interpretation of results. Mertens (1998, p. 184) describes confirmability as the explicitness in the way that data is collected, categorised, reconstructed and interpreted, and refers to the quality of the data produced by the procedures for collecting and analysing data. I am concerned whether or not the data collected and the conclusions drawn would be confirmed by others investigating the same situation. To enhance confirmability, I incorporated and followed the principles governing the empirical study to try and eliminate subjectivity and bias in the procedure and the interpretation of results.

3.6. Ethical Considerations

I followed the ethical clearance procedures used at the University of Pretoria. I was given permission by the department of curriculum studies and programme coordinators. After getting permission for access to the study from the Head of Department in Curriculum studies, I established trust and rapport with the programme coordinators. I debriefed the coordinators about my interest on teacher education. However, on the basis that actual ethical practice comes down to the individual researcher's own values and ethics (Merriam 1998, p. 218), I used the guidelines of MacMillan & Schumacher (2001), Merriam (1998) and Creswell (2003) to support me concerning the ethical issues throughout the research process.

Ethical Consideration in Data Collection and data analysis

The consent of all the participants was communicated orally and in written form. I asked

the permission of individual beginner educators by sending the emails conveying the purpose of the study, the extent of time involved the potential impact and the outcomes of the research (See Appendix C). This was followed by telephone calls and Short Message Service (SMS) to some beginner educators. Before the interviews started, I gave the beginner educators the opportunity to read the informed consent and they agreed by signing the document before they engaged in the research (See Appendix D).

We conducted the interviews in the lecture rooms to minimize the disruption during the interview and to make the beginner educators feel comfortable. The lecture rooms were the usual rooms that they used for their lectures. I told the beginner educators that the information shared will be held in confidence, will not be open for public inspection and that only the researcher will have access to it. I protected the confidentiality of their information by separating or deleting personal information from the data. I did not use their real names, but used codes, numbers and the date of the interview to account for the information that was provided in the form of quotes.

Ethics in writing and disseminating the research

I used language or words that are not biased against persons in terms of gender, sexual orientation, racial or ethnic group, disability or age and I have acknowledged all participants in the study. I will release the details of the research study design so that readers can determine for themselves the credibility of the study.

3.7. Limitations to the Research Methodology

The nature of the study dictated the selection of different sources for collecting data, which also dictated the research design and the design, in turn, determined the approach to be applied. In this manner the choice of the research methodology and research design fit the purpose of the study. However, the complexity of research experienced from the data collection instruments might have impacted on limitations of the methodology. One

of the major criticisms of qualitative study limitations proved to be subjectivity. As a researcher I was the primary instrument and an integral part of data collection; my judgment and influence on those being observed might have influenced the data collected. But I tried to eliminate my subjectivity by following and engaging in all the necessary procedures, steps, criteria or rules that are needed for a scholarly empirical research to make my findings as objective as possible. The results and the findings of the study are presented in the next chapter.

Chapter Four

The Intended, the Implemented and the Attained Curriculum

4.1. Introduction

The reason for conducting this study was to evaluate the PGCE teacher education programme based on the philosophy of constructivist learning. To address this study, the process of curriculum analysis is necessary. Posner (1995, p. 13) describes curriculum analysis as an attempt to tease a curriculum apart into its component parts, to examine those parts and the way they fit together to make a whole, to identify the beliefs and ideas to which the developers were committed and which either explicitly or implicitly shaped the curriculum, and to examine the implications of these commitments and beliefs for the quality of the educational experience. Posner implies that the process of analysing the curriculum requires examining the components of the curriculum to give a fuller description of the curriculum design.

With regard to this study, the components which present the PGCE curriculum are classified as the intended curriculum, the implemented curriculum and the attained curriculum. van der Akker (2003, p. 3) describes these three curriculum components as the three levels of curriculum representation. The following table shows a description of these three levels.

Table 4.1 The three levels of Curriculum (van den Akker 2003, p.3)

INTENDED	Ideal	Vision (rationale or basic philosophy underlying a curriculum)
	Formal/Written	Intentions as specified in curriculum documents and/ or materials
IMPLEMENTED	Perceived	Curriculum as interpreted by its users (especially student teachers in this case)
	Operational	Actual process of teaching and learning (also: curriculum-in-action)
ATTAINED	Experiential	Learning experiences as perceived by learners
	Learned	Resulting learning outcomes

In view of the curriculum analysis, this chapter presents the curriculum design of the Post Graduate Certificate in Education (PGCE) programme based on the three levels; the intended curriculum, the implemented curriculum and the attained curriculum. Firstly, the intended curriculum is discussed using the data from the documents. Secondly, the implemented curriculum is presented based on the documents, observations and informal conversational interviews held during observations. Thirdly, the attained curriculum is presented, using the data from the standardised open-ended interviews. Lastly, the chapter concludes by giving a brief summary of the data analysed.

4.2. The Intended Curriculum

The intended curriculum refers to the aims and objectives of the PGCE programme as prescribed by policy documents and documents related to the programme.

4.2.1. The Policy Documents

An attempt by the South African government to adapt a curriculum that reflects the development of constructivism principles leads to the introduction of OBE based on Outcomes-based Education. OBE incorporated the principles of constructivism through the four aspects, namely clarity of focus, designing back, high expectations and expanded opportunity (Adapted from: Killen 2000, Van der Horst & MacDonald 1997 and

Pretorious, 1998).

1. Clarity of focus – the educators should describe to learners the outcomes at the beginning of any instructional programme and the outcomes must be clearly focused on what the learner should know, understand and be able to do successfully.
2. Designing back – the starting point for all the curriculum design must be a clear definition of the significant learning that students are able to achieve by the end of the formal education programme. Once this has been done, the instructional decisions are then made by tracing back from the desired end results and identifying the building blocks.
3. Expanded opportunities – learners should be given numerous opportunities and adequate time to achieve the desired outcomes.
4. High expectations – the teacher must establish high, challenging standards of performance in order to encourage students to engage deeply with the issues they are learning about.

Another important aspect of OBE is the effect it has on teacher professionalism and teacher education. Among the many policy frameworks that have been developed for teacher education are the revised South African Norms and Standards for Educators. The document of the Norms and Standards for Educators (2000) give a clear indication on the competences that the beginner educator should have in order to perform the different roles of a professional educator. The seven educator's roles are: mediator of learning, mediator and designer of learning programmes and materials, learner, administrator and manager, scholar, researcher and lifelong learner, role player in the community, citizenship and pastoral role, assessor and learning area/subject/discipline/phase specialist (Department of Education; The South African's Norm and Standards for Educators 2000). All these educators' roles must be demonstrated on three levels (Killen 2000, p. 190):

- Foundational competence: understand the knowledge and thinking which underpins actions taken.
- Practical competence: consider possibilities for action and make decisions about the possibilities.
- Reflexive competence: ability to integrate performances and decision-making with understanding and with an ability to adapt to change and unforeseen circumstances and explain the reason behind these adaptations

Consequently, teacher education programmes are expected to prepare beginner educators who are able to demonstrate competence considerably and reflectively, and who will be

able to adapt strategies to meet changing circumstances. This implies that the beginner educator must be able to demonstrate each of the competences before he/she is assessed as a professional educator. Thus, the competence of the educator in his/her roles should underpin programme design, accreditation and assessment.

4.2.2. The PGCE Accreditation

Having engaged with the above policy documents, it did not appear to be a useful starting point for conceptualising the one-year, pre-service teacher education curriculum. More substantive information was needed. It was argued that more useful information and a common understanding of teacher education could be obtained and to inform the design by answering the question: What is the purpose of an initial teacher education programme such as the Post Graduate Certificate in Education programme?

To comply with the policy requirements, the formal purpose for teacher education through a PGCE programme (120 credits and pitched at an NQF level 6) is to accredit a generalist educator's qualification that 'caps' an undergraduate qualification. As an access requirement students are required to have appropriate prior learning which leads to general foundational and reflexive competence. The qualification focuses mainly on developing practical competence and reflexive competence grounded in the foundations of education through the three aspects of the curriculum, namely professional curriculum, specialization curriculum and value-added curriculum.

Table 4.2 The PGCE Accreditation (Adapted from the Programme Information for the Post Graduate Certificate in Education (PGCE) 2005, p. 12)

Curriculum	Modules	Policy	Credits
Professional Curriculum	Fundamental modules	<ul style="list-style-type: none"> ▪ Special Needs in Education, ▪ Foundations of Education 	12
	Core modules	<ul style="list-style-type: none"> ▪ Facilitating Learning ▪ Learning theories ▪ Assessment ▪ Social Context of Education ▪ Professional Ethics and Law ▪ Professional Portfolio ▪ HIV/AIDS 	78
Specialization Curriculum	Electives modules	<p>As prescribed in the field of specialization</p> <ul style="list-style-type: none"> ▪ Early Childhood Development and Foundation Phase ▪ Intermediate Phase ▪ Senior Phase ▪ Further Education and Training 	24 for each phase
Value-added Curriculum		<ul style="list-style-type: none"> ▪ Information and Communication Technology ▪ English Proficiency 	6

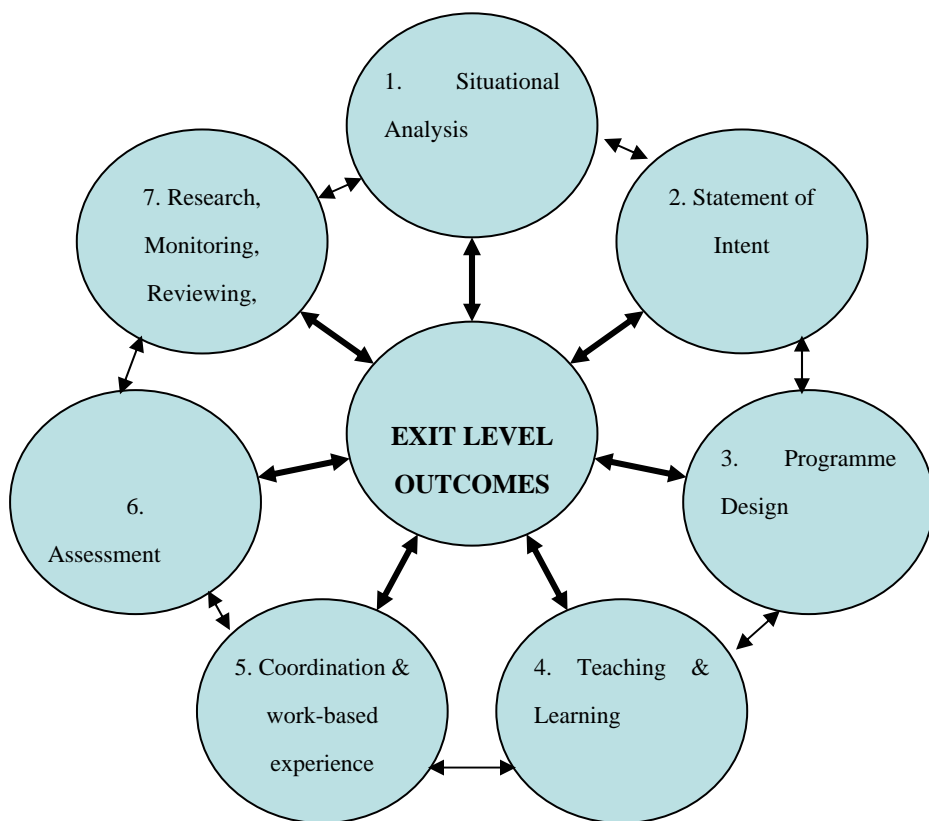
Considering the goal of the teacher education, the accreditation of the PGCE programme places a strong emphasis on developing teachers who can effectively fulfill their roles as competent teachers.

4.2.3. Philosophical Background

The PGCE curriculum was designed to address the impact of educational change on teacher education curriculum studies and implementation strategies. To enable the beginner educators to demonstrate competence and perform the roles of the educators, the PGCE programme aligns itself to the new education paradigm in South African schools, namely OBE embedded from the outcomes-based education. OBE was interpreted and incorporated in the PGCE programme on the holistic approach. The holistic approach was adapted from Whitaker (1995, p.20), who argues that teaching and learning should

be organized to encourage holistic, self-initiated, significant, experiential and intuitional learning. In the PGCE programme, the holistic curriculum is constituted and influenced through the seven integrated elements all focussing on the exit-level outcomes as represented in Figure 2.1.

Figure 4.1 The PGCE Holistic Curriculum Design (Adapted from the National review of the Post-Graduate Certificate in Education (PGCE) 2006, p.8)



The circular format indicates that the curriculum design is an ongoing dynamic process. The arrows represent the relatedness of each element interlinked with each other and focused on the exit level outcomes. The seven elements incorporated together substantiate how the beginner educators are expected to apply and demonstrate competences as teacher educators through the exit-level outcomes.

The holistic approach was coherently constructed in the PGCE programme on the basis of the principles of the outcomes-based education, namely clarity of focus, designing back, high expectations and expanded opportunities.

Clarity of Focus

The PGCE programme aims to develop the teacher educators who are expected to apply and demonstrate their competence on professionalism, leadership, knowledge, comprehension and insight, and independent lifelong learning in order to be able to perform their role as educators. The exit level outcomes are outlined and clarified in the Programme Information for the PGCE as shown in Table 4. 3

Table 4.3 Exit-Level Outcomes (Adapted from the Programme Information for the Post Graduate Certificate in Education (PGCE) 2005, pp. 9-10)

Exit level outcomes	Description
1. Professionalism	At the end of the programme, the beginner educators will have the necessary subject, educational and learning facilitation knowledge to be able to fulfil the different roles of an educator with self-confidence.
2. Leadership	The beginner educators are expected to practice leadership in various areas within the school context. In addition to leadership at school, it is also expected from the educator to take lead in the wider society and in the broader field of education.
3. Knowledge, comprehension and insight	The beginner educator integrates cross-curricular subject knowledge, dynamic facilitating learning strategies and effective communication, being sensitive in dealing with diversity of society across the boundaries of gender, culture and personal learner capabilities.
4. Independent Lifelong Learning	To cultivate a lifelong learning attitude, the programme embraces self-study, a reflective practice, sharing of constructed meaning with peers in small groups and a respectful analytical attitude when involved in peer and self-assessment.

These outcomes challenge the beginner educators to demonstrate their competence as teacher educators who will facilitate leadership within the society, comprehend the knowledge and insight from their professional development and regard the teaching profession as a lifelong learning process. In order to qualify as educators, the beginner educators are expected to demonstrate competences in all four exit-level outcomes. The

outcomes of the PGCE programme form an integral part of the preparation for the teacher educators and are based on applied competences.

Designing Back

Departing from the exit-level outcomes, the instructional procedures were then decided on by means of a situation analysis. That is, the strategies and actions implemented in the programme were decided on because of the nature of the students that enroll for the programme, the policy documents, the nature of the teaching profession, the available resources, staff capacity, school partnerships, socio and economic aspects, the mode of delivery and educational change globally (The National review of the Post-Graduate Certificate in Education (PGCE) 2006, p.11).

Expanded Opportunities

There are numerous ways in the PGCE programme to maintain and challenge the beginner educators to finally be professional educators. As the PGCE is based on a partnership programme with selected schools, the curriculum is implemented in such a way that it incorporates the university and school-based education throughout the two semesters. The activities within the two semesters are illustrated in Table 4.4.

Table 4.4 The PGCE programme; Semester 1 and Semester 2 (The National review

of the Post-Graduate Certificate in Education (PGCE) 2006, p.22-23)

Weeks	Curriculum	Outcomes
Semester 1		
1 st	Orientation	Basic preparation to enable the beginner educator to <ul style="list-style-type: none"> • Confidently enter into the first school based learning • Do lesson planning according to RNCS • Managing a class • Construct a practice theory
2 nd	Structured Whole School Observation	
3 rd	Personal and professional induction to education (Hammanskraal)	
4 th -9 th	Learning shops in all modules 1 st meeting with Mentors	
10 th -16 th	First School based experience 2 nd & 3 rd mentor meeting	
Semester 2		
17 th -21 st	Learning shops in all modules	Advanced preparation on facilitating learning: <ul style="list-style-type: none"> ▪ Design problem based learning tasks ▪ Confidently practice learning facilitation ▪ Be a significant other ▪ Effectively assess learning ▪ Reflect on practice ▪ Incorporate theoretical motivation ▪ Independently and creatively construct a practice theory to motivate the practice.
22 nd -28 th	Second School based experience and mentor meetings	
29 th -31 st	Consolidation of learning in modules	
32 nd	Research Indaba presentations	
33 rd -38 th	Assessment: Practice theory consolidation. Compilation of Professional Portfolio Self and Peer Assessment Self study for defense of professional educator status	

High Expectations

The PGCE programme established high challenging standards through teaching and learning, coordination of work-based experience, and assessment. The type of learning and the activities in the PGCE programme are meant to challenge the beginner educators to demonstrate a holistic, self-initiated, significant, experiential and intuitional learning in order to achieve the exit level outcomes. The programme incorporates 15 weeks of monitored practical experiences in the school-based programme. In alignment with the

outcome-based assessment, the assessment is integrated in the learning process as the beginner educators integrate performance with understanding.

Table 4.5 Type of Learning Activities (The National review of the Post-Graduate Certificate in Education (PGCE) 2006, p.51)

Type of Learning	Activity	Learning Time (%)
Learning shops - Hammanskraal Guest Lectures	Face to face contact (all modules) Induction programme Professional Experts from the partnership schools	32 %
Independent self-study	Study of texts and literature references	6%
Independent self-study	Construction of a practice theory	6%
Reflection	In action and on action	5%
Cooperative learning groups	Study of texts and literature references & Construction of a practice theory	4%
School practice	Teaching/observation and debriefing/self-assessment/peer group reflection/action research	47%
Research Indaba	Poster presentation	2%

The learning activities in the PGCE programme entail a dynamic process of facilitation of learning that contains numerous activities. The table also highlighted the differences in the amount of time that is being spent on each activity. For instance, when looking at the activities, much time is spent on the school practice, which means the practical experiences weigh a lot in the preparation of the beginner educators to be teacher educators.

Having engaged with the policy documents, the PGCE accreditation and the philosophical background, one can conclude that the curriculum design of the PGCE programme aims to improve competence in the professional practice of teaching. The intended curriculum ensures a close relationship between OBE and the South African Norms and Standards for Educators. Considering the philosophical background of the programme, the exit level outcomes and the type of learning activities, the PGCE programme places a strong emphasis on preparing teachers who will be able to demonstrate their competences when fulfilling their roles as educators. However, the

extent to which the intention of the programme is maintained can only be validated by the implemented curriculum and the attained curriculum.

4.3. The Implemented Curriculum

Departing from a holistic, philosophical approach, the implemented curriculum is only going to be discussed based on the three elements; teaching and learning, coordination, and work-based experiment and assessment. These three principles illustrate the teaching and learning process in which the curriculum is implemented throughout the two semesters of the PGCE programme.

During the teaching and learning procedures, the main focus is on the construction of a 'practice theory'. The practice theory is initiated from the three aspects of the PGCE curriculum; professional curriculum, specialization curriculum and the value-added curriculum. The professional curriculum aims at equipping the beginner educators with professional competence in education to become teacher educators. On the other hand, the specialization curriculum helps the beginner educators to develop pedagogical content knowledge in the different subjects for the area of specialization. In addition to the two aspects of curriculum, learning to teach is also facilitated through the value-added curriculum, which equips the beginner educators with regards to the information and communication technology and English proficiency (Programme Information for the Post Graduate Certificate in Education (PGCE) 2005, pp. 20-21). The three aspects of the curriculum are meant to assist the beginner educators to study and critically assess education literature and its relevance to the classroom in support of their practice theory construction.

I outlined the six phases to describe the teaching and learning process within the professional curriculum: the orientation phase, the school-based observation phase, the turning-point phase, the theory-based phase, the school-based practice phase and the accountability phase.

4.3.1. The Orientation Phase

The orientation weeks focus on establishing a rapport about the culture of the PGCE programme. The language and the intention of the teacher education programme are introduced at this early stage. The language used in the PGCE is different from the traditional education. For instance, the student teachers are called the Beginner Educators (BE's) and the teacher educators are called Professional educators (PE). From my observations, the purpose of communicating the intention of the programme is to inform the beginner educators of the programme exit level outcomes, the expectations and the holistic philosophy and how it influences the teaching, learning and assessment.

Since the PGCE programme is for students who hold first degree in other fields, the beginner educators are not familiar with the current developments in teaching and hence the orientation stage seeks to construct the beginner educators' background. Among other things discussed during the orientation stage are the reasons why beginner educators have decided to take up a teaching profession. There are several reasons which were mentioned by the beginner educators. For instance, some of them choose to be teachers because they couldn't find jobs, while others feel that it is a calling for them (Document; Field Notes, 09 February 2005). Several strategies are used to construct the background of the beginner educators. For example, the beginner educators introduce themselves by constructing collages of the aspects that shape their lives. Other strategies employed are, for example, a written record of personal beliefs on teaching and education, standardized tests on brain preferences, personality preferences and emotional intelligence (Document; Field Notes, 04 February 2005). The purpose of these activities is to enable the beginner educators to know their general preferences and become aware how their preferences play a role in how they act in the classroom.

Another approach that is also used for personal development is the formation of cooperative learning groups. The beginner educators are divided into groups of about four or five individuals, depending on the size of the class. The cooperative learning

groups are also formed with regard to diversity in terms of culture, race and gender. The purpose of the cooperative learning groups is for socialization, challenges, commitment and mutual support for the beginner educators' professional development (FCL; Study Manual 2004, p. 74). Cooperative learning also adheres to one of the South African Qualifications Authority's (SAQA) critical outcomes, which states that learners should be able to work effectively with others as members of a group.

The orientation stage plays a crucial role in bridging the gap between different fields of profession and teaching. With the background and an overview of the teaching profession the beginner educators realize and consider their potential as the future educators.

4.3.2. The School-based Observation Phase

The focus of the professional development shifts to practical situation as opposed to the orientation phase. The beginner educators engage in their first experience as emerging facilitators of learning during the school observations. During the school observations, the beginner educators conduct interviews with the principal, deputy principal or senior educator to get the organization structure of the school, the mission statement, resources, strategies and theoretical framework of the school. With background knowledge of the schools, the beginner educators move into the classrooms to conduct a structured, in-class observation. The structured observations focus on learner involvement, classroom management, teaching strategies, group dynamics, learning materials, diversity, assessment and teacher's activities (Document; Field Notes, 08 February 2005).

Another important aspect of the school observations is that each beginner educator is given the opportunity to observe children in the different phases: Early Childhood Development and Foundation Phase, Intermediate Phase, Senior Phase or Further Education and Training Phase. The reason for giving the beginner educators the opportunity to observe the different phases is to enable them to make valid decision on the phase of specialisation. In other words, the beginner educators are made aware of the level learners are at in the different phases of education to know what they may expect

from learners at a particular level in a particular phase.

Upon returning to the university after the school-based observation, the beginner educators construct their perceptions, attitudes and beliefs on teaching as the ‘ultimate best for teaching’ that they have observed. The overall feedback of the beginner educators describe the ultimate best for teaching as ‘the organization of the classroom, marking of the homework, introducing the lesson and the presentation of the lessons’ (Document; Field Notes, 09 February 2005). However, this ultimate best of teaching is exposed during the induction programme at Hammanskraal (distance education venue of the University of Pretoria).

4.3.3. The Turning-point Phase

After the school observation, the beginner educators go to the remote campus site of the University of Pretoria at Hammanskraal for one week, where they follow an induction programme. This can be considered to be the ‘turning point’ in understanding what the responsibility of being a professional educator is. The mere fact of being away from their families and friends for five days is a challenge. It is during this period that they bond as a group, building new social relationships, learning to accommodate and support one another and cope with differences.

During the induction programme, the beginner educators were introduced to four pedagogical educational paradigms. Using Bloom’s Taxonomy and the learning theories, the differences between the educational paradigms have been described in the following table.

Table 4.6 Four Educational Paradigms

Paradigm	Learning Theory	Bloom's Taxonomy	
		Levels of Thinking	Thought Process
Transmission	Behaviourist	Knowledge	Remembering by recall
Transaction	Cognitive	Comprehension	Grasping the literal message
Transformation	Cognitive	Application Analysis	Using knowledge to solve a problem Separating a complex whole into parts
Transcendental	Constructivist	Synthesis Evaluation	Solving a problem related to real life Construct meaning/knowledge Reflecting, judging, assessing offer opinions

Looking at the four educational paradigms, the transcendental paradigm represents a transition from the three old paradigms of education, namely transmission, transaction and transformation and a holistic approach to learning. Hence, by preparing the beginner educators to be able to teach and apply the latest innovative strategies in education, the core of the PGCE programme is focused on the transcendental paradigm rooted in the constructivist learning theory.

The beginner educators are introduced to the constructivist learning theory in an intricate process of selecting appropriate content knowledge to construct a problem which actively involves learners in the exploration of content knowledge related to or in real life situations. The focal point of constructivist learning pedagogy shifts from direct teacher control over learning to setting the learning agenda and then maintains learning through a process of facilitating learning, until the learners have explored and exhausted alternatives and can produce the best possible solution. To enhance the constructivist approach, the beginner educators are exposed to exercise the skills that characterized a facilitator of learning, which includes being a skilled listener, being able to know and like themselves and being a conflict manager who is centred and stable, while also being practical, creative, enthusiastic, organized, non-manipulative, accepting, authentic, playful and flexible (Document: Facilitation Skills and Participative Teaching and Learning 2005, p.1). The exercises are meant to influence the beginner educators to abide by the precepts of creativity in their professional development. The beginner educators

are also expected to maintain a positive attitude, to refrain from negative expressions such as “that’ll never work”, to recognize that every idea has creative potential and needs to be explored, to affirm that participation is essential to the creative flow and to acknowledge that risk-taking is vital to the creative process (Document: Approach to Creativity 2005, p.1).

Having being introduced to the constructivist learning pedagogy, the beginner educators discover a different perspective about teaching and learning. Different feelings seem to prevail among beginner educators. Some of the beginner educators were inspired because they felt that constructivist learning pedagogy will help them to face some of the challenges in teaching and learning. For instance, during the informal conversational interview, one beginner educator indicated changes in the perceptions about teaching as follows.

After this period, I have a different attitude towards learning; teachers control learners which is a negative attitude. Learning is interesting...lots of things can be used...like refuse material for experiments I can ask learners to collect...the teacher should do the best for learners, no matter how hard it is (Participant ICI-1, 16 February 2005).

On the other hand, some of the beginner educators were frustrated because the constructivist learning pedagogy is something different from what they had observed in schools. Their concern was on how the approach will be adopted in schools, because from their observations the schools are still using the teacher centred approach. Among some of their concerns were the syllabus to be followed, the level of difficulty in different subjects, different teaching strategies, limited access to the classrooms, time limits, public examinations and the role played by their mentors. During our informal conversational interview, another beginner educator put it this way.

For young children, in the foundation phase, but for senior phase and FET suitable for certain circumstances, if the topic is not too difficult, doubt about Computer Science. It takes more time; teacher gets push for time. It is difficult to change learners; it will take time to accomplish that (Participant ICI-2, 15 February 2005).

Since, the turning-point phase introduces the beginner educators to the foundational principles of the constructivist learning pedagogy, the contact sessions and the school-

based education are designed to support and connect with the foundational principles that the beginner educators encountered during the induction.

4.3.4. The Theory-based Phase

The main focus during the theory-based phase is on content knowledge and understanding how it contributes and relates to the practice of teaching. The theory-based phase is facilitated in face-to-face contact sessions. During the contact session, the beginner educators are introduced to different modules within the different discipline of curriculum. To establish a link between the theory and practice, the presentations of the modules are done through lecturing and seminars. The strategies used involve discussions, case studies, research projects, cooperative learning and discovery learning to give the beginner educators the opportunity to engage in practical situations. For instance, in the HIV/Aids module, the beginner educators were given two ‘hypothetical case’ descriptions with questions. The purpose of the activities was to lead the beginner educators to an interactive discussion on the principle of disclosure and the principle of employee or employer rights (HIV/AIDS; Study Manual 2005, p.5). On the other hand, the tasks given to the beginner educators focus on the practice of facilitation of learning and the incorporation of the role played by theory in practice. In the Foundations of Educational module (FOE), each assignment focuses on the practice of teaching, with the theory playing the role of illuminating and in turn being challenged by the world of practice. The beginner educators were encouraged to bring their experiences of the classroom as beginner educators into the discussion (FOE; Study Manual 2005, p.1).

The assignments given to beginner educators include both individual and cooperative learning tasks. For example, the format of presentation in Special Education Needs in Education reads as follows (SEN; Study Manual 2005, p.6):

You will work in your groups to study the learning material. The designated group will make a presentation of the given section of the module. The rest of the group will, after the presentation, ask questions for clarification and application purposes. The presenters will be required to make available to the BE’s:

- A concept map/mind map of the content of the presentation

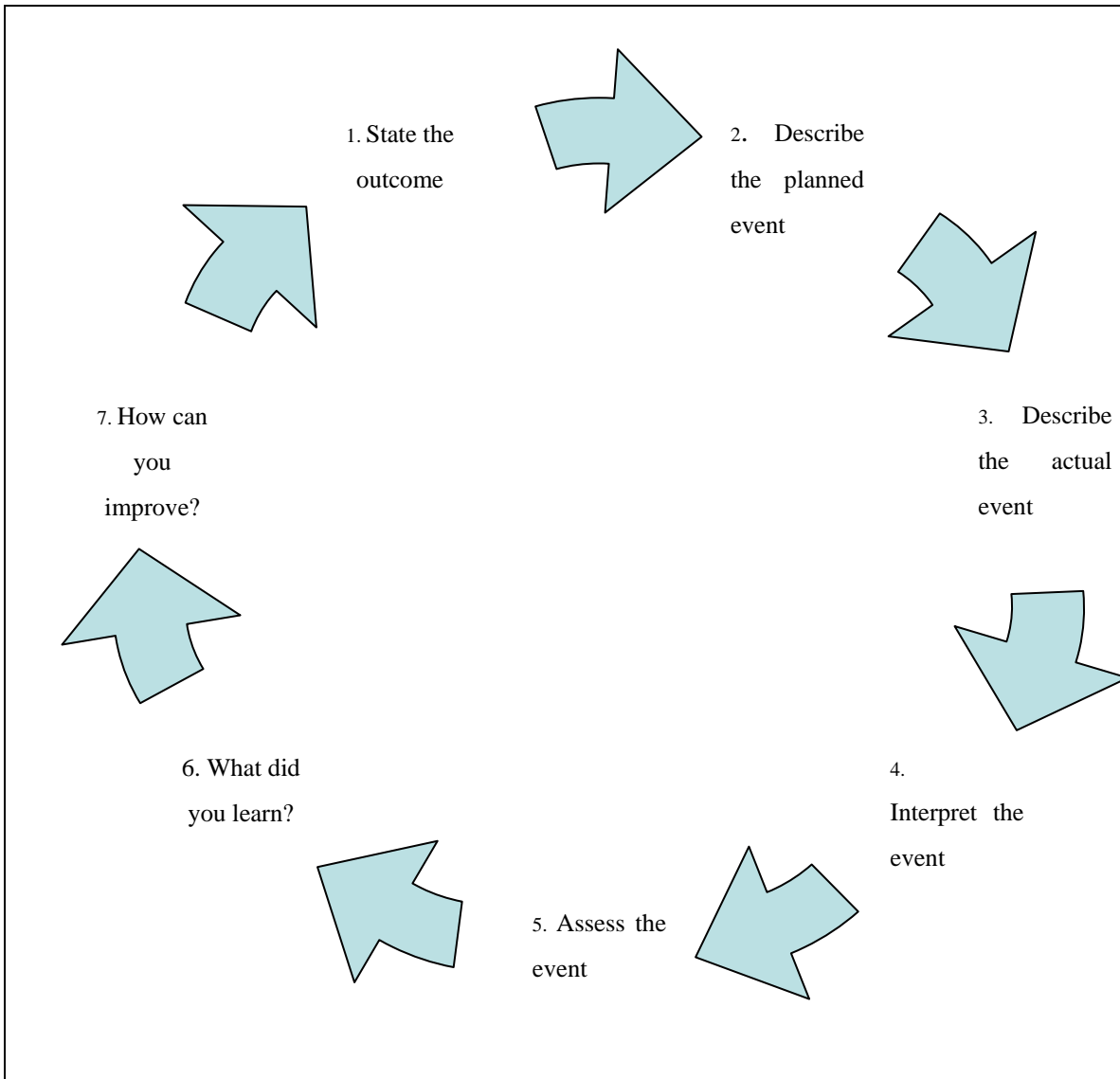
- Typed summary/notes of the particular content that was presented.

The assessment of the modules becomes a continuous process and a collaborative effort by both the teacher educators and the beginner educators. In most of the cases, assessment was conducted while the chosen individual or cooperative learning group performed a task or during presentation. A deliberate effort is made to integrate practice and theory in the programme. The practice theory is maintained and consolidated during the school-based practice.

4.3.5. The School-based Practice

The beginner educators get the opportunity to learn through experience to become experts in facilitating learning during the school practice. It is during this period that the beginner educators experience the continuous interplay between the theory of constructivist learning pedagogy and the actual teaching practice. The school-based education is primarily research driven; the activities done by the beginner educators are integrated through continuous reflection. The reflective practice involves the process of monitoring, planning and evaluating the beginner educators' own learning. The beginner educators are guided by the following process and questions to effectively reflect on their practices:

Figure 4.2 Reflection Process (Adapted from the PPF; Study Manual 2005, p.6)



Continuous reflection is also done through the use of action research. Action research is used as a project on which the beginner educators investigate how to best improve learning in a particular learning task in their field of specialization. The link between action research and the beginner educators' field of specialization becomes one of the main projects in the programme. The evidence of the beginner educators' practices is presented during the accountability phase.

4.3.6. The Accountability Phase

This phase relates to the period in which the beginner educators give account for their practice-theory construction through the presentation of the professional development portfolio. The professional development portfolio includes all tasks and assignments in different modules and the concept maps representing the practice theory, which illustrates the structure of the learning task designs and the theory behind the practices of the beginner educators during the school-based practice (Programme Information for the Post Graduate Certificate in Education (PGCE) 2005, p. 23). The main purpose of the assessment is for the beginner educators to describe their learning theories and describe how it informs their practice.

The beginner educators present their professional development portfolios during the progress assessment and the final assessment. However, there are preliminary assessment opportunities such as self and peer assessment which serve as the preceding preparations for the progress assessment and the final-exit-level assessment. During the progress assessment done in the mid-year, the beginner educators identifies strengths and weaknesses during the first school-based practice so that they can improve their practices in the second school-based practice. The assessment is thus for learning. The progress assessment is facilitated through the selection of (The Professional Development Portfolio Assessment Documents 2005, p. 2);

- Two learning tasks that best indicate their professional development
- Two concept maps (if available) of the selected learning task as well as their facilitating learning practice theory.
- Three reflections that illustrate their professional development best

The beginner educators also have to explain how they have attempted to implement teaching practices that reflect a constructivist learning perspective. For instance, out of the five beginner educators I observed during the progress assessment; two beginner educators have made the attempt to implement different educational paradigms during their practices: transmission, transaction, transformation and transcendental strategies. They were able to provide evidence through concept maps that explain how their learning

theories informed their practices. The other three have only implemented the transmission, transaction and transformational paradigm strategies. For instance, one beginner educator indicated that it was difficult to create a learner-centred approach environment considering the subject, the time factor and classroom management (OB3, Participant, 21 June 2005). Since the purpose of the progress assessment is to try and identify the problems that were encountered during the first school-based practice, the beginner educators acknowledged their mistakes and promised to improve their practices in the next school-based practice (Document; Field Notes, 22 June 2005).

The final exit-level assessment serves as a final examination for the beginner educators to demonstrate their professional development. During the final exit-level assessment, the beginner educators give a fuller picture of their views as teacher educators; how they have developed and how they will apply their professional development in future. They use the storylines for defence of their professional portfolios. One beginner educator uses the story of the Salmon to describe the phases of professional development.

Figure 4.3 Phases of Development during the PGCE Course (Observer Participant, October 2005)

Phase 1	The first two weeks of class and observations at schools	Testing the water
	Getting to know the course and what it entails	
Phase 2	Hammanskraal	Getting used to fresh water
	Learning about OBE, real life problems, co-operative learning, etc. Old paradigm to new paradigm	
Phase 3	University classes	Swimming upstream
	Covering a long distance upstream with some minor obstacles/challenges. Gain information and knowledge.	
Phase 4	First school	A stronger current and obstacles
	Getting used to teaching and the learning environment. Competing against time, assignments, mentor, krit lessons, etc.	
Phase 5	Progress Assessment	Predators appear
	Prepare and show your best, but still the predators attack you and you have to be careful not to be caught.	
Phase 6	Cape Town	Finding a pool to rest
	A needed break from the course to restore strength and self motivation before the difficult part of the journey.	
Phase 7	Second school	Jumping the waterfalls
	Experience many challenges. There are not many predators but you have to take huge leaps and swim against a strong current. Exhaustion plays a big part.	
Phase 8	Back at university and Final Assessment	Homestretch to the dam
	The end is in sight. Making the final preparations; start changing colour, losing weight, dig a whole and lay eggs.	

The beginner educators also consolidate learning at Research Indaba of the Faculty of Education through power point presentations and posters. The beginner educators showcase their professional development in front of the faculty staff members, students and several invited guests from different places.

Taking into consideration that the holistic approach was adopted and designed around the principles of constructivism, the implemented curriculum has established the core principles of constructivist learning as discussed in Chapter Two; authentic learning

environment, metalearning, cooperative learning and reflective practices. The authentic learning environment is created during the orientation phase and in the rich, school-based practical experience. The teaching and learning activities in the PGCE programme require the active involvement of the beginner educators, individually as well as cooperatively. The reflective practices in the PGCE programme are incorporated throughout the different phases of learning and these are facilitated by the construction of practice theory.

4.4. The Attained Curriculum

The attained curriculum refers to the actual learning experiences of the beginner educators and the resulting learning outcomes. This section presents a synthesis of interpretation on the data collected from the standardised open-ended interviews. The knowledge, skills, understanding and attitudes of the beginner educators were grounded from the three themes, namely sense of purpose, sense of fulfilment and sense of commitment. The resulting learning outcome is determined through an analysis on the four exit-level outcomes in the PGCE programme: (1) knowledge, comprehension and insight, (2) leadership, (3) independent lifelong learning and (4) professionalism.

4.4.1. Sense of Purpose

The theme investigates the beginner educators' sense of purpose in the teaching profession. The purpose of the theme is to elicit the responses from the following interview questions (appendix B):

1. What were your thoughts and feelings about teaching before you become a student teacher?
2. How, if at all, have your thoughts and feelings about teaching changed since you become a student teacher?
3. What is your understanding of being a beginner educator?
4. In what ways, if any, has the programme contributed to your development as the beginner educator?

The beginner educators arrive with a variety of largely implicit beliefs about teaching, which condition their intuitive judgments and reactions. The beginner educators express their feelings about teaching by the level of difficulty in teaching.

Well I think about teaching before, I actually didn't want to be a teacher, can u believe it? I said I would never ever be a teacher because I felt that teaching was a hard work and it just looks like teachers won't fulfil. It looks as a track day in and out with difficult children, lots of paper work, preparation; it didn't look appealing to me at all (Participant 1, 31 August 2006).

Some beginner educators thought that teaching was easy and it became appealing to them because they learned from the experiences that teachers change one's life. This can be depicted from the following beginner educators' views:

It was, you know, any other job where you get holidays and also it was not too bad but I could see that my grandmother was always working, doing preparations and all of that during the school holiday, so it was constantly changing people's lives (Participant 4, 11 September 2006).

One important aspect which came across from the beginner educators when expressing their thoughts and feelings about teaching was the reason for being a teacher. Most of the beginner educators indicated that teaching was not their first choice; they came for different reasons. Among other reasons was their future profession, in which teaching was a prerequisite. For instance, one beginner educator brings a further insight into how she came to the teaching profession.

I actually did this course because I needed to continue with my studies in educational psychology. So I come from the psychology background and I realize I love children and they said to continue with educational psychology, I need to have education subjects and some kind of degree. That's why I have done this course. Since then I realized that I enjoy teaching but the background is that I didn't even think or feel teaching was for me (Participant 1, 31 August 2006).

The experiences the beginner educators have throughout their professional development change their thinking about teaching. It became a challenge for the beginner educators when they realized the essence of the constructivist teaching and learning.

I thought I was just going to be lectured on how to be a teacher and I was going to learn more about the development of the child and the basic outlines, and of course my learning area. But it proves to be so much more and beyond and like it has been stressful, incredibly stressful, and it's a lot of pressure and it's a lot of work and many times I just thought this is enough I can't take it any more (Participant 3, 09 September 2006).

Before I came to this course I thought it was quite simple to be a teacher. You know, you just have to entertain the kids and everything. But when regarding to this course it's all about paradigms and different teaching theories like constructivism and behaviorism and all those things, so it was extremely complex (Participant 2, 06 September 2006).

The beginner educators agreed that the programme contributed a lot to their professional development. They acknowledge that their professional development is about personal growth; they have matured and they realized that they have to deal with lots of things like assertiveness, firmness and confidence.

It makes me aware more of whom I am and what I stand for, especially when I don't agree with them to the programme. You don't often just go with the flow, but you think well if this is what they are teaching us it should be what's right. And if I look at the girl that started, now it's a totally different picture (Participant 3, 09 September 2006).

It's a learning experience it's not what I thought it could be. I've grown a lot, I am confident as well as my criticisms of myself. I'm very critical of myself and especially now even more. When I reflect back on the things that I've done now I can see that I should have done it in that way. Next time I could do it myself so it's quite a learning experience for me (Participant 4, 11 September 2006).

The professional development brought a different perspective on the beginner educators' beliefs about teaching.

I am very proud to be a teacher now, because I feel I am really being educated professionally. Whereas before I started this course I thought that most people can be teachers, it is not difficult. But now after this course I see teachers as professionals doing something that nobody else can do, because they are not even trained and most specifically in the PGCE course. We were trained in the transcendental paradigm that even the teachers at the schools don't know what is going on, so we are like we now we have the caring edge of teaching theories at the moment of the transcendental paradigm. So I feel very proud and where we are basically, towards the teaching practice (Participant 2, 06 September 2006).

Though the beginner educators came to a teaching profession for different reasons, there is an insight feeling that connects one's personality to teaching: 'I've always wanted to do teaching' or 'I realize I love children'. These feelings become reality through their professional development.

I actually find it quite a feeling, I realize that you invest in the life of children, that you have an opportunity to change children's lives forever and that changed my opinion and hard work and it is actually not so easy to be a teacher (Participant 1, 31 August 2006).

Oh it's completely different, I've grown tenfold and I am realizing the actual essence of teaching. You know, like you think you are going to study teaching and they teach you do this, you do that, but you realize you form such a connection with kids (Participant 3, 09 September 2006).

The theme of 'sense of purpose' shows different views from the beginner educators with regards to their interests, feelings and thoughts about teaching and how these have changed through the professional development. The experiences explored the beginner educators' views on how they thought the teacher education programme contributed to their development. Being a beginner educator is a learning experience and the professional development has changed the essence of their views on teaching.

4.4.2. Sense of Fulfilment

The sense of fulfilment refers to the beginner educators' ability to perform their roles as facilitators of learning. The purpose of the theme is to elicit the responses from the following interview question (appendix B):

5. What are your experiences on the school-based education?

The data analysis reveals the role played by the beginner educators as change agents, the teaching strategies they implemented during the school practice and the examples of how they initiated the constructivist learning approach, as well as the achievements and challenges they experienced during their school practices.

The school based practice is meant to enable the beginner educators to experience the interaction between the practice and theory. The beginner educators demonstrate their practices through the teaching strategies. Having been exposed to different strategies, the beginner educators most often incorporated the transmission and transaction strategies when they started their practices.

Well we try in the first school based education, we tried the transmission, transaction methods where you just teach the class, you give those notes and they go through them with you. Transaction is where you asked question and they respond, so it's between teacher-pupil and now in the second school-based education it was more transformation; that's giving them assignments and things. Then transcendental, where you just pose the challenge to the class and they have to come up with some sort of strategy of solving it, but it has to be real life everything you give to beginner educators (Participant 3, 09 September 2006).

The beginner educators acknowledged that they mostly used the transmission and transaction strategy when they started their first school practices. The choice of the teaching strategy seems to have been influenced by the personality.

I enjoyed transmission and transaction because I realized it makes me look clever and smart. But that's not why I am there at school; I realize slowly but surely that I am there to make them smarter, for them to look good, for them to feel wonderful about themselves. The new transcendental method is basically not looking for achievement or marks, every single child has the possibility, has an opportunity to do well in what they can do. I have seen how these children love the attention and they love the new found abilities. Letting the children learn for themselves and be willing to do some research to get the answers (Participant 1, 31 August 2006).

Considering their commitment as facilitators of learning, it is clear that the beginner educators make an effort to facilitate their practices through the transcendental strategy. The transcendental strategy was initiated through the design and the implementation of a learning task embedded in a real life problem. The following quotation provides an example of how one of the beginner educators created a learner-centred environment:

I covered topics such as drug abuse and that was the great success and with that we did a bit of grounding work where we got information on drugs. The learners have to give information on drugs, and then I got a friend of mine from university. He is a recovered drug addict and he came to speak to the classes for me on a very personal level that was per class and there were only few kids in the class and then the one class actually decided on their own that they want to go and do a play making the grade ones aware of drug abuse (Participant 3, 09 September 2006).

The beginner educators recognise the value of using the practical examples and the relevance of integrating practice to theory from the learners' compliments. The beginner educators describe their achievements as a self-fulfilment, a personal growth and a reward from learners.

You know challenging the way they thought of something and bringing something else to the table. We did a lesson on bacteria and viruses and on washing hands. Very obvious thing to talk about but then we talk about the method that we use to wash our hands and the correct method of washing hands. Pupils take things for granted they just don't think about it

and at the end of the lesson as well. And the other day after school when I went to get the form for the mentor teacher one learner came to me and says: 'Miss [Percy], since you've left I'm using your technique to washing my hands.' That was quite nice when I realized that at least I've taught them something (Participant 4, 11 September 2006).

When comprehending the integration of the different professional modules in their practices, the beginner educators put it this way:

I learned a lot about assessment and rubrics and stuff like that, physically having to mark pupils work according to a rubric. I learned a lot about how you should take the curriculum that you have. Whatever you do, you assess the learners on more assessment you have of the learners, the better it shows what they are capable of, so for every small thing do it in such a way that you are able to assess them on it (Participant 2, 06 September 2006).

I enjoyed FOE and ethics and the way I think about things. I always used to think everything was black and white now that I see there are a lot of grey areas that will change my experience out there. And I won't be so harsh on people if I hear this and this, I don't agree with this but maybe this. I have learned about diversity, the other subjects I have had have contributed a lot as well (Participant 1, 31 August 2006).

The beginner educators also express their experiences through the challenges they had from the partnership schools. One of the challenges that the beginner educators experienced was the conflict caused by the differences in beginner educator's commitment and interest focused on the learners' learning. The beginner educators' concern was that most educators in schools are very traditional in their approach: "I am the teacher, you are the learner, you listen to me" (Participant 4, 11 September 2006). Another challenge was caused by different opinions between the beginner educators and their mentors.

I struggle with my mentor. She was kind and she has given me good marks and always positive towards me. But towards the children themselves, she will often be negative and often break them down. I find like I was clashing with her in that area (Participant 1, 31 August 2006).

On the other hand, the beginner educators thought that the basis of the conflicts was their status as the beginners, the different approaches in teaching and their professional development background.

Coming into school and teachers knowing that you are still the beginner educator and because with the PGCE you don't know. I was at the second school with fourth years BEd, our teaching stuff was completely different and their idea of teaching was completely different to mine. The teachers could pick it up, but they are still very wary about this whole transcendental paradigm; does it really work or doesn't it work. And to try to show that it

does even though you know its going to fail sometimes, you know it's a bit difficult in that sense. Even in the way we think, because it's not a bad thing, but because they have been doing teaching from first year up until now, they have sort of got multi skills in their heads, this is how it goes. They were so worried about getting a comprehension and getting this and getting that and for us making all our lessons 'real life' is more of the challenge. It's not about worksheets, which is important, but it's not about everything. But for the students the worksheets and stuff were the most difficult to get. So that's how I saw the difference (Participant 3, 09 September 2006).

One of the beginner educators thought that the differences were also caused by the different expectations between the PGCE programme and the partnership schools.

When you get to the schools it is as if breaks are put on because you are going like all full string in your head. Then you get in this school and its like; 'this is not the way that we do it, we want this, we want marks, we want to see tests, we want to see the textbooks, we are used to get that exercise and all of that.' It's very demoralizing as well, but at the same time having to work with the learners and putting theory into practice to a certain extent it's very exciting as well. You get with this young people and you can see progress and you know the light goes on a moment when they get something (Participant 4, 11 September 2006).

Another concern that was mentioned by the beginner educators was the normal procedures of time management and discipline. The discipline was very intimidating because of 'the peer pressure in the schools'. The discipline also affected time management. For instance, one beginner educator highlighted that:

If you are doing stuff like cooperative learning or group works ... because those things are in learners' pace. So it's not an easy to get them to do things quickly because they are doing them at their speed (Participant 2, 06 September 2006).

The beginner educators felt that the discipline was also influenced by the differences in the learners' attitudes and the culture of the school.

I found the attitude towards school was a lot different in the [first school]. The children started out to be keen to learn, whereas the children at this [second school] where I am now, they just come to school because they have to (Participant 1, 31 August 2006).

When being asked how they coped with the challenges, most of the beginner educators opted for the support from their families and friends: "I just dumped all to my mum" (Participant 4, 11 September 2006), "I go home and I tell my husband", "I've just told my peer friend at school" (Participant 1, 31 August 2006). One beginner educator mentioned that mentor support helped them to cope with the challenges.

Personally, I feel that if you don't have a good mentor at the school then you are going to suffer. Even though you can come to professors at any time, they are not there with you in the class like the mentor is. They are not there 24/7 to see what you are doing and what's working and what's not working. So the biggest aid for me in the SBE was my mentors, because they were with me and they showed me the immediate source when I was doing something wrong or when something was not working. They can give alternatives or they can tell you why is this not working, how can you do this better, so that was my primary source. I make things work with my mentors (Participant 2, 06 September 2006).

One beginner educator thought that coping with the challenges is a process and not something that one can identify as a strategy.

It's more a process you can't actually say exactly how you cope with it because everyday you change to suit the challenges and try and solve them. Well I think even the fact that we are constantly interacting with one another, sharing ideas and sharing experiences, we energize each other and we actually keep one another going which is important for a course like this. Otherwise, if you stick on your own, you are going to crash. I also think the background of this course makes it different. There is more urgency in it; you have to get it in a year and you have to be the best and you have to perform in the schools even if you have never taught before (Participant 3, 09 September 2006).

The beginner educators also thought that the time for teaching practice was very limited. One of the beginner educators thought that teaching is very personal and that it takes time for both the learners and teachers to get to know each other.

This SBE was very short actually. You think of becoming a beginner educator six weeks in the schools is not much. You have to learn the kids and the kids learn to know you for the first two weeks so it's actual not a lot of time. So as the beginning teacher, I am going to find my own way of teaching. I have got the theory and I have added a little bit of practice in what to do in the classroom, but I know when I am going to the schools, I am going to really figure out how to teach learners or how I want to teach learners (Participant 2, 06 September 2006).

It was a great opportunity for the beginner educators to get a first hand experience on teaching. They felt that they were the change agents in their schools. They thought that working with the children's minds was a great privilege for them. The following beginner educator's view represents how they describe being change agents:

I think as an energizer agent, because what I felt is that teachers have become so used to the school system and used to the children and for me the main thing was that I did not know pre-knowledge of the children and the behaviour. And when you get there then the teachers all really want to tell you who are the naughty ones, who are the good ones and for me saying to them I don't want to know that. Often the children that had been labeled bad are the ones that give you best results and the ones that behave in your class. So I think it was just the freshness for the children not being judged, you know (Participant 3, 09 September 2006).

Another beginner educator further elucidates how they consider themselves as change agents based on the teaching strategy they employed.

Previously schools were ‘teacher talks, students listen and do what they must and those who don’t work hard enough, who don’t understand, they are obviously the bad, stupid children’. And the new transcendental method is basically not looking for achievement or marks. Every single child has the possibility, has an opportunity to do well in what they do and I can have seen how these children have just loved that. They love the attention and they love the new found abilities (Participant 1, 31 August 2006).

The experiences of the beginner educators during their school practice revealed their fulfilment as future educators. The beginner educators’ fulfilment was based on their experiences while engaging in the role of facilitators of learning. Most of the beginner educators demonstrate the differences in the facilitation strategies within the PGCE programme and the teaching and learning approaches in the partnership schools as major challenges.

4.4.3. Sense of Commitment

The sense of commitment refers to the beginner educators’ commitment towards the teaching profession, the willingness and the determination to teach. The theme elicits responses to the following interview questions (appendix B):

1. Could you describe the most important lessons you learned about educators through the experiences you had in the programme and in partnership schools?
2. Where do you want to see yourself in two years time?

From the views of the beginner educators, commitment to teaching is more about the teachers’ personal identity. The beginner educators indicated that the ability to enhance commitment to teaching necessitates certain qualities in an educator. Most of the beginner educators thought that it takes a special kind of person to be a teacher who is creative, patient and loves the job and the subject, and who does not see children as a burden. The following quotation gives an example of one beginner educator’s view of

being an effective educator:

I would first say an effective educator loves children, then an effective educator can easily or can show children boundaries or can clearly define boundaries for children in the classroom. Effective educators can take difficult concepts, facts and knowledge and give it to learners in a way in which they want to learn more and they take responsibility for their own learning. You know that is not that just talking upfront or giving them knowledge in such a way that they take it and they learn for themselves from it (Participant 2, 06 September 2006).

This was further supported by another beginner educator who indicated that the values and norms of a person shape his/her life.

An effective educator is someone who can challenge the children, who can stretch them, who can let them do extremely well above even what they expect of themselves, who can always make them feel good about themselves and always make them feel motivated to work. Teachers that can make learners learn the work, know their work and have fun the whole time. By the end of that year they have learned all this and they don't even see it as hard work, they saw it as a complete joy to learn that work. (Participant 1, 31 September 2006).

Another beginner educator thought that diversity in the classroom is very important to enhance the effectiveness of the teachers.

A huge thing for me was diversity and the diversity in the classroom and how we have to embrace it and not to be so rigid in one's thoughts and in one's way of teaching and in one's way of communicating to people. A lot of teachers lose energy and they have lost interest and the kids pick it up and that's why the kids are not learning as much as they should and that's why they are not reaching the optimal development. The lecturers that we had here had been full of energy and they just spark something inside you and you have to take that spark with you for as long as you are going to teach, you know. They have been here for so long and they could just have it so (Participant 3, 09 September 2006).

On the other hand, the beginner educators argued that personal and professional background plays a major role in their commitment to facilitate learning. The beginner educators' view is that one's background determines the extent to which the beginner educator can be able to perform competently the roles of an educator. From the experiences they had, the beginner educators recognize how their background influences their determination.

I'm thinking of another student who studied law. Now her perspective is right and wrong and everything must be in law, you must not do anything wrong. I studied psychology and I am looking at the behaviour. I am thinking about maybe they have got problems at home, which is why they been naughty so even what's going on their minds at subconscious level. That's why I'm being gentle with this child, because I'm thinking maybe he has got issues at

home; he looks sad, maybe he has got trauma. Whereas the lawyer is saying you know this is not allowed in class, I would not accept this, you are getting yourself into trouble for this (Participant 1, 31 August 2006).

One beginner educator argues that personal background influences to a certain extent, but it is basically the professional development that determines the extent to which the beginner educator can be able to competently perform the roles of an educator.

Well I think it does contribute extensively and yet not, because if I take the people in this course that are doing the PGCE course with me, especially the people that did English with me, we all have different backgrounds and each one of them I have respect for because they turn out to be great beginner teachers. Even fellow beginner educators who initially know they won't go far and obviously they are not right for this job, they amazed me. So if I think in that context, you choose whether or not you want to be the best educator that you can possibly be (Participant 2, 06 September 2006).

The beginner educators consider commitment to teaching as a lifelong learning process; their intentions demonstrate their willingness to enhance their professional development through experiences. The beginner educators' plans for the future provide clear evidence of the ways in which they are committed to their profession.

In two years time I would be at the point where I really enjoy teaching, because I figured out how to do it properly. You know what it is like, if you are a bad teacher you don't like this job because you don't know about discipline, but if you are a good teacher you love it. So in two years time, I hope I would be at the point where I can do teaching effectively enough to be where I'm good at it (Participant 2, 06 September 2006).

I'm taking what I have learned this year about real life experience about taking every child skill and knowledge into account, about the different ways of assessment where I won't just have, you know the best in the class in the way to assess. I will have peers assessing each other and I will have other children commenting on other children and I will think more of total life growth not just academically. There is so much more to life than just the work that you have to do in class (Participant 1, 31 August 2006).

Adhering to one of the bases of the programme which states that the beginner educators will continuously change educational context nationally and internationally, they thought that in addition to the national experiences, they need a global exposure to enhance their competence as educators.

Ah...well next year I'm aiming to complete my honours in psychology and the following year I want to travel abroad and teach the kids and specifically from South Korea and Japan. I want to experience different cultures and at the same time practice my profession in the teaching world, so that's how I see myself now but I don't know how that's going to change (Participant 3, 09 September 2006).

For starters I think I will have to go overseas and teach there as well for full-time. Next year I am going to [Petersburg] and I am going to teach there for a year. So that's one year now and then that year I think I will mostly learn the ropes, you know. By that time I'll get settled and get my admin in order and see how to teach the whole day and have activities afterwards and how do I deal with my social life and stuff like that. And then I am thinking of going overseas to see what teaching is like in the world and then after I have done that, I can start looking at teaching globally and what do we need to do to improve on it. Then if I have done that I can be famous (Participant 2, 06 September 2006).

From the experiences, the beginner educators also indicated that it is more than the skills and knowledge that they have gained from the teacher education. One of the beginner educators says:

It is the skills and the knowledge more of myself that I've gained from this course that will get me to the honours in psychology. Like this course it's about teaching and giving up yourself to the children. But you can only do that if you know 110 % who you are and who you are in the crisis situation and who you are when things are going well and what you want to give up. So I think this course has equipped me well for long time, even in the beginning I thought every mother-to-be should come on this course. It just teaches you so much about yourself which you can radiate to others (Participant 3, 09 September 2006).

A sense of commitment shows the determination of the beginner educators in the teaching profession and their love for children, regardless of the profession they were intending to pursue. The beginner educators are willing to use the knowledge and skills gained from their personal development in the future.

4.1.4. The Learning Outcome

In the PGCE programme, professional development is the ability to demonstrate competence determined by four exit-level outcomes: (1) knowledge, comprehension and insight, (2) leadership, (3) independent lifelong learning and (4) professionalism. A further analysis of the implications of the beginner educators' experiences, with regards to the exit-level outcomes, is crucial in order to determine the extent to which they can demonstrate competence in their roles as educators.

(1) Knowledge, Comprehension and Insight

The extent to which the beginner educators comprehend knowledge from the teacher

education programme can be detected from their commitment as facilitators of learning. The evidence provided shows the extent to which the beginner educators integrated the knowledge of the subject, facilitated learning strategies and enhanced communication. The beginner educators give a limited direction of the application on the integration of the different professional modules in their practices. From the experiences of the beginner educator one can conclude that they are well aware that personality, confidence, self-esteem and inner conflict are influential factors that can hinder the ability to facilitate learning effectively.

(2) Leadership

The beginner educators are expected to practice leadership in various areas within the school context. In addition to leadership at school, it is also expected from the educator to take the lead in the wider society and in the broader field of education (Programme Information for the PGCE 2005, p. 10). The beginner educators' view of leadership was grounded in the important lessons they learned about educators and their description of an effective educator. They showed an understanding that as educators they have to be committed to the children, be responsible and that they will be held accountable to their role as change agents. The beginner educators consider themselves as agents of change because of the knowledge they have of learning and facilitating learning, which is different to chalk and talk teaching. They felt that they have contributed to the learning of both the teachers and learners. Being agents of change in the schools were not easy, as it caused collisions between the beginner educators and the mentor teacher, who demanded that the beginner educators motivate what and why they believe in learning facilitation. In situations like this they gained leadership skills, to a certain extent.

(3) Independent Lifelong Learning

The beginner educators exposed to a rigorous reflection process learnt to consider lifelong learning as a process. They seemed to be willing to change to enhance their personal development, academically or through experiences. The beginner educators'

plans for the future provide clear evidence of their commitment to their profession. The beginner educators indicated that it is through experiences that they will enhance their independency as educators and learn to be lifelong learners. The beginner educators believe that in order for them to be effective, they need to explore and understand teaching globally so that they can add to the knowledge they obtained from the programme. Most of the beginner educators want to continue with their studies, though in a different field. Nevertheless, this proves their determination to be lifelong learners.

(4) Professionalism

The final exit-level outcome provides evidence of the way in which the beginner educators perform some of the roles of an educator; leader, researcher and lifelong learner, interpreter and designer of learning programmes, learning area specialist and assessor. The beginner educators' perceptions, views and beliefs about teaching have changed and the largest contributing factor is their professional development. They have grown personally and professionally and they were able to illustrate their development in their school-based education. They have realized and acknowledged that teaching is about commitment to the children's education and that they as future teachers can make the difference to children's lives. However, the contrasting expectations of the teacher education programme and the schools affect their competence as teacher educators. It also seems that some of the beginner educators are not yet ready to face the challenges at schools; they want to continue in other professions and prefer part-time teaching as opposed to full-time teaching.

4.5. Conclusion

This chapter has established the relationship between the intended curriculum, the implementation curriculum and the attained curriculum. One can conclude that the interpretations and discussions of the results provide different links that explain the extent to which the PGCE programme prepares teachers who can competently fulfil the roles of

educators. However, these results only present the data based on curriculum design theory as a structure for evaluation of the PGCE programme. In the next chapter the conceptual framework established in Chapter Two will be put to use to determine the extent to which the PGCE programme aligns itself to a new professionalism

Chapter Five

Cultivating the Culture of Teacher Professionalism; Discussions and Conclusions

5.1. Introduction

The reason for conducting this study is to evaluate an innovative, one-year Post Graduate Certificate in Education (PGCE) teacher education programme benchmarked against a new professionalism. The main research question addressed was:

To what extent does the PGCE programme align to the constructivist principles?

The main research question was further classified into three sub-questions to facilitate data collection and data analysis:

4. What are the theoretical principles underpinning the curriculum design of the PGCE programme?
5. How does the process of teaching and learning in the PGCE programme align to the constructivist principles?
6. How do the experiences displayed by the beginner educators indicate an alignment with the constructivist principles?

The above sub-research questions have been addressed in the previous chapter through the three levels of the curriculum, namely the intended curriculum, the implemented curriculum and the attained curriculum. The relationship between the sub-research questions and the three levels of the curriculum are illustrated in a table below.

Table 5.1 Research Questions and Levels of Curriculum

Research Questions	Levels of Curriculum
1. What are the theoretical principles underpinning the curriculum design of the PGCE programme?	Intended Curriculum
2. How does the process of teaching and learning in the PGCE programme align to the constructivist principles?	Implemented Curriculum
3. How do the experiences displayed by the beginner educators indicate an alignment with the constructivist principles?	Attained Curriculum

However, these levels of the curriculum were discussed as separate entities to develop a theory for the curriculum design of the PGCE programme. Having developed a theory for a curriculum design for the PGCE programme, it is necessary to shift from the theoretical work to the practice of this particular study.

This chapter therefore presents an analytic discussion by establishing a link between the PGCE curriculum design theory and the constructivist principles. The chapter starts with a brief summary of the PGCE curriculum design theory as presented in the previous chapter. Subsequently the chapter examines the PGCE curriculum design theory in relation to a conceptual framework and the existing research on the theoretical perspectives of constructivist learning pedagogy in teacher education.

5.2. The PGCE Curriculum Design

In the previous chapter I discussed the PGCE curriculum design based on the three levels of the curriculum, namely the intended curriculum, the implemented curriculum and the attained curriculum. This section provides a brief summary on each level to indicate the basis of which the curriculum design theory was developed.

5.2.1. The Intended Curriculum

The intended curriculum represents the theoretical principles underpinning the curriculum design of the PGCE programme. Having engaged with the principles of outcomes-based education through the holistic approach, looking at the initial professional educator development, the accreditation and the outcomes-based education, one can conclude that the curriculum design of the PGCE programme aims to promote competence in the professional practice of teaching. The intended curriculum ensures a close relationship between OBE and the South African Norms and Standards for Educators. Considering the philosophical background of the programme, the exit level outcomes and the type of learning activities, the PGCE programme strongly emphasizes preparing teachers who will be able to demonstrate their competence in fulfilling their roles as educators (See 4.2, pp. 70-80).

5.2.2. The Implemented Curriculum

The implemented curriculum describes how the curriculum was interpreted by teacher educators and also the actual process of teaching and learning. The implemented curriculum illustrates the extent to which the intended curriculum of the programme was maintained. Taking into consideration that the holistic approach was adopted and designed around the principles of constructivism, the implemented curriculum has incorporated the core principles of constructivist learning pedagogy established in Chapter Two: authentic learning environment, metalearning, cooperative learning and reflective practices. These principles of a constructivist learning pedagogy are initiated and maintained in the PGCE programme throughout the different phases over the two semesters, including the orientation phase, school-based observation, the turning-point phase, the theory-based phase, the school-based practice phase and the accountability phase (See 4.3, pp. 80-93).

5.2.3. The Attained Curriculum

The attained curriculum presents the actual learning experiences of the beginner educators and the resulting learning outcomes. The knowledge, skills, understanding and attitudes of the beginner educators were grounded through a synthesis of data on which the three themes were outlined: sense of purpose, sense of fulfilment and sense of commitment. These three themes form a holistic picture of the beginner educators' competence in terms of professional development. Using the four exit-level outcomes, namely knowledge, comprehension and insight, leadership, independent lifelong learning and professionalism, the knowledge and skills displayed by the beginner educators show a coherence of the intended curriculum and the implemented curriculum (See 4.4, pp. 93-102).

5.3. The PGCE Curriculum Design and the constructivist principles

In Chapter Two I created a matrix for the conceptual framework and deduced the five criteria found in the literature reviewed from the theoretical aspects of postmodernism, constructivist learning pedagogy and teacher professionalism.

Table 5.2 Conceptual Framework

Criterion	Description	Features
1. Personal transitions	Changes in teachers' perceptions, attitudes and beliefs through professional development.	Safe environment Developing self-identity Developing self-awareness
2. Self-regulated learning	Self-organisation and active involvement of learners that enhances continuous learning.	Metalearning Collaborative learning
3. Meta-cognitive tasks	Creating challenging tasks that enhance cognitive development and promote learners' reasoning and critical thinking.	Contextualized content High task complexity Problem-solving tasks
4. Reflective practices	Cognitive processes of learning which assert the importance of experience and critical reflection in learning and on learning.	Reflection Self-reflection Action research Incorporation of theory
5. Practical experiences	Integration of course-based and school-based modes in a school environment.	Teaching practice Professional authentic practices Professional behaviour

The five criteria, when considered holistically, represent issues of programme design in teacher education. I therefore use the five criteria as a benchmark to determine the extent to which the PGCE programme aligns to the constructivist principles.

5.3.1. Personal Transitions

Personal transitions in this context refer to changes in teachers' perceptions, attitudes and beliefs through continuing professional development. In the PGCE programme personal transition starts with helping the beginner educators to develop a sense of identity. This starts during the orientation phase, where the teacher educators build a safe social atmosphere for the beginner educators to explore their worldview, values, attitudes and personal life goals. The teacher educators give guidance to the beginner educators to develop an understanding of their personality, preferences and the background to the teaching environment. The rationale is that the beginner educators have to know

themselves first and find out their preferences in life, in order to link it to their pedagogical actions when fulfilling their professional task as educators. The several activities incorporated at the orientation stage are mostly connected to an introspective process followed by an interactive process of sharing and discussing the self exploration experience with their fellow beginner educators (See 4.3.1, p. 74-75). This section of the programme sets a personal transition in motion.

The personal transitions in the PGCE programme form part of the different subject disciplines from the three aspects of the curriculum, namely professional curriculum, specialization curriculum and value-added curriculum. For instance, there is a shared commitment to the moral and social purposes as part of the professional curriculum, because it aims to equip the beginner educators with professional competence in education in order for them to become professional educators. Besides this, the implemented curriculum illustrates the phases of teaching and learning. The beginner educators are given opportunities to engage with the moral and social purposes and values of the teaching profession. Looking at the foundational courses, the beginner educators are exposed to the contemporary social, political and legal contexts for schooling. These are also covered in the diversity modules, whereby the beginner educators are being prepared for culturally diverse classrooms (See 4.3, pp. 73-85).

The idea of developing the beginner educators' sense of identity at the beginning of their professional development is supported by literature. Most of the studies recommended that teachers' practical knowledge, conceptions, beliefs and values need to be investigated at the beginning of their professional development (Tigchelaar & Korthagen 2004; Van Driel, Beijaard & Verloop 2000; Shkedi & Laron 2004; and Ethell & McMeniman 2002). A further point of consideration was highlighted by Shkedi & Laron (2004), recommending that practical knowledge would be best accomplished in a real school setting by teaching in a real classroom and with the direction and supervision of mentor teachers. In such a situation, the mentor teachers can direct the beginner educators' awareness of having unattainable, idealistic goals in accordance with the school's definition, pupils' characteristics, pedagogical content knowledge approach and

the beginner educators' abilities.

The experiences of the beginner educators give further details about personal transitions. The theme 'sense of purpose' describes the beginner educators' beliefs, perceptions and attitudes before and after being in the teaching profession. The data explores how the ideas, opinions and thinking of the beginner educators have changed through their professional development. The experiences displayed by the beginner educators illustrate that personal transitions are a process characterised by determination, uncertainty, emotion and commitment towards personal growth (See 4.4.1, pp. 85-88). The personal transition process, as seen from the analysis of the implemented PGCE programme, forms an integrated component in the development of a professional educator. We can conclude that the programme departs and incorporates the principal of meta-cognitive learning.

5.3.2. Self-regulated Learning

Based on the structure of the programme and the mode of delivery, teaching and learning in the PGCE programme is learner-centred. The extent to which the beginner educators regulate their own learning is grounded on the philosophical foundation of the curriculum design facilitated through a learner-centred approach. The philosophical background of the PGCE programme provides clear evidence on the intention of the programme to ensure self-initiated learning (See 4.2.3, pp. 67-73).

In the PGCE programme, self-regulated learning is facilitated by the mode of delivery in the different disciplines of the curriculum. The presentations of the modules are done through lecturing workshops and seminars and the strategies used are discussions, case studies, research projects, discovery learning to enhance independent self-study and cooperative learning. In Table 4.5 it is indicated that 12% of the learning time is allocated for independent self-study and 4% for cooperative learning groups. Cooperative learning enhances self-directed learning because it stimulates peer interaction. The beginner educators also used social interaction to overcome some of the challenges they were

faced with in their professional development. For instance, during the school-based practices, the beginner educators indicated that their peers were very helpful (see 4.4.2, pp. 88-93).

In view of self-directed learning, the study conducted by Butler, Lauscher, Jarvis-Selinger & Beckingham (2004) enlightened the challenges faced by teacher educators who try to make learning collaborative and self-regulated, in order to allow teachers to reflect on and revise teaching practices so as to construct new conceptual knowledge. The implication of the study was that teacher education should implement innovative strategies that will encourage student teachers to become lifelong learners.

Considering then, the PGCE programme embraces self-directed learning through independent self-study and cooperative learning. The critical issue found from the study is how co-construction of new ways of teaching supports shifting values or conceptual frameworks, to promote meaningful shifts in practice.

5.3.3. Meta-cognitive Tasks

The beginner educators are introduced to the constructivist learning theory. They are challenged to work through an intricate process of selecting appropriate content knowledge and constructing appropriate authentic problems to actively involve learners to explore content knowledge in real life situations. Thus, during the school-based practices, the beginner educators design their learning task with a real life problem trying to evolve high task complexity. The evidence provided by the beginner educators show how they initiated and maintained the problem-based learning tasks during the school practices. Creating a real life setting in the classroom enables the beginner educators to facilitate learning within the context of the school and the learners. The beginner educators recognize the value of using highly challenging practical examples and see the relevance of integrating practice and theory during their self-assessment and in reflection. The evidence of how the beginner educators initiated the highly challenging tasks to their learners can be depicted in the theme 'sense of fulfilment' (See 4.4.2, pp. 88-93).

Creating highly challenging tasks that enhance cognitive development and promote learners' reasoning has been found to increase the opportunity and responsibility for exercising discretionary judgment in teaching. According to Howey & Post (2004, p219), effective teaching is best understood as a highly intellectual, problem-oriented and largely clinical endeavour that is conducted properly. The point made by Howey & Post is that teachers who can justify their teacher decisions with principled arguments and data, especially data derived from the analysis of their effects on learners, are found to be superior to other teachers. In addition, Korthagen (2001, p. 261) also believes that preparing children for the responsibility of using knowledge for the benefit of society means helping them to become reflective thinkers who are able to use subject matter in real situations, and gives them the confidence that their actions can make a difference. This enables learners to experience that, in the research process, the exchange of ideas and approaches between people is essential in order to finally arrive at an acceptable approximation.

Combined with the literature and the analysis of the meta-cognitive tasks that the beginner educators are confronted with in the PGCE programme under evaluation, we can conclude that to ensure meta-cognitive learning it is necessary to make provision for meta-cognitive learning in the design of a teacher education programme.

5.3.4. Reflective Practices

To cultivate reflective practices, the PGCE programme embraces continuous reflection through daily reflections in a journal; during school based practice every 10th day, shared reflection with peers at school, action research, and the use of professional development. The beginner educators reflect on their daily activities and keep records of their reflection. The reflective practices are also enhanced during the school-based practice. The school-based practice is primarily research driven. The activities done by the beginner educators when facilitating learning are integrated through the action research process (See 4.3.5). The beginner educators also reflect on their professional development through the use of professional development portfolios. The professional

development portfolio serves as an assessment for the beginner educators and they are exposed to presenting their professional development based on evidence from the development portfolio three times in the duration of the programme: pre-interim, interim and as part of a final examination. The Research Indaba held by the Faculty of Education challenges the beginner educators once again to reflect when they have to select an aspect of their professional development and prepare and present a paper (See 4.3.6, pp. 82-85).

By returning to the literature we see that, according to Clayton (2007, p. 227), the epistemological inquiry and self-reflection as a professional development activity created opportunities for the new teachers to consider the consequences of their curricular choices in personal terms. That, in turn, may have more practical benefits for novice teacher development. In addition, the findings of Donnell (2007, p. 223) illustrated that beginner urban teachers' sense of efficacy is enhanced if they develop a transformative teaching practice focused on highlighting the mutual learning between teacher and pupils. The study suggests that beginning teachers benefited more from individualized support in generating, reflecting on, and building their knowledge about urban teaching. Donnell further recommends that teacher educators need to think outside the traditional elements of teacher education and develop practices that are more responsive, rather than didactic, towards beginners.

Furthermore, Ponte, Ax, Beijaard and Wubbels (2004), examine the extent to which teachers develop professional knowledge through action research and the extent to which the facilitation they receive affects this. The findings of the study, suggested that those involved in facilitating teachers to do action research should pay explicit attention to the domains of knowledge and their associated actions and skills from the outset. The facilitator of learning, concerning beginner educators, needs to give limited direction only. The findings also indicate that teachers tend to develop knowledge mainly in the technological domain and rarely in the empirical and ideological domains of knowledge. It is thus important that teacher educators purposefully include learning and understanding in all three domains of knowledge in the training programme.

Considering the finding of the PGCE programme evaluation, I come to the conclusion that the programme adheres to the criteria of learning based on a reflective practice.

5.3.5. Practical Experiences

The PGCE programme incorporates practical experiences in the training of the beginner educators through the school-based education in partnership schools. The relationship established between the PGCE programme and the partnership plays a major role in the professional development of the beginner educators. The beginner educators get the opportunity to demonstrate their competence as facilitators of learning and are exposed, over a period of two school terms, to the complexity of the inner workings of classroom practices. Looking at the teaching and learning activities from the programme, the school-based education takes the highest percentage (Table 4.5). This means that most of the beginner educators indicated that evidence of their professional development comes from the practical school based experience component of the programme. In support of this view, Humphreys & Hyland (2002, p13) also found that providing a stage for beginner educators to observe their mentor in action allows the beginner educators to intuitively find their own creative ways.

In the PGCE programme the school-based education is meant to enable the beginner educators to demonstrate competent leadership, to comprehend the knowledge and insights of being professional educators, to show their commitment in teaching and it also acts as a stage to 'show case' their professionalism. On the other hand, the experiences the beginner educators have during their practices show lack of coherence in the relationship established between the PGCE programme and the partnership schools (see 4.4.2, pp. 88-93). It has been argued that the lack of coherence between teacher education and the partnership schools is disregarded by teacher education. Quick & Siebörger (2005) argue that effective teaching is not only about the theoretical aspects, but also includes several factors involved in making a qualitative difference to school experience in the training of beginner educators. The following factors are mentioned: the amount of teaching practice, the relationships between schools and the university, the relationship

between mentoring and supervision, teaching ability and the overall value added by schools. Quick & Siebörger (2005, p. 4) further suggested that the four key things that would improve the relationship between the teacher education and partnership schools are: (1) greater communication between the host teachers, supervisors, liaison people and university lecturers; (2) more regular, informal meetings among the university lecturers visiting schools and the mentors/coordinators at the school; (3) inviting school staff and mentors to the university more often; and 4) having some lessons supervised by subject area specialists. This implies that a critical relationship is the focal point of effective school practice.

The partnership between the school and the PGCE programme in this study exposed the inclusion of aspects of importance on which to build a collaborative approach towards quality learning and professional development such as: using appointed mentors at the schools, hosting informal professional development seminars and workshops for the mentors at the university, the academic year is spread out in each of the two semesters for the school based practice. However, as school-based learning is highly estimated by the beginner educators and as a large section of the PGCE programme depends on the partnership relationship with schools, serious attention is needed to strengthen the partnership in developing professional educators.

5.4. Concluding Interpretations

Regarding the PGCE, I conclude that this teacher education programme brings the reality of constructivist learning into the practical experience and the learning process of training teachers. The pedagogy is focused on training teachers to facilitate learning. Incorporated in the structure and implementation of the programme is a monitored reflective practice. The reflective practice incorporates theory and, in doing so, diminishes the gap between practice and theory. The programme creates opportunities for the beginner educators to practice the skills of lifelong learning and enables them to understand the complex process of learning in relation to diversity and the potential development of a learner. The next chapter concludes and gives recommendations.

Chapter Six

Conclusions and Recommendations

6.1. Introduction

The purpose of the study was to evaluate an innovative, constructivist, one-year postgraduate certificate in education (PGCE) teacher education programme. Much of what I did in this thesis was to analyse and evaluate the PGCE curriculum benchmarked against the constructivist principles.

The conceptual framework that was used to evaluate the PGCE programme was created and established in Chapter Two. I adopted critical theory as a baseline theory for this research. Based on the critical theory paradigm, the qualitative research approach was suitable because evaluating the PGCE programme involves the process of analysing and interpreting its curriculum design from the perspectives of the teacher educators and the beginner educators. The evaluation process in the current study involves a multiplicity of data collection strategies; document analysis, observations, informal conversational interviews and standardized open-ended interviews. The results were presented on the three levels of the curriculum analysis; the intended curriculum, the implemented and the attained curriculum.

When looking at the criteria and the theoretical aspects related in teacher education, there is a shared commitment by the PGCE programme to train teachers who will distinguish themselves as professional educators. By training the novice teachers, teaching and learning in the PGCE programme embraces self-regulated learning through independent learning and collaborative learning. The learner-centred approach encourages the beginner educators to design, initiate and maintain learning through a problem-based learning approach; continuous critical reflection forms the central focus of teaching and learning in order to enhance understanding. Ample opportunity exists for the beginner

educators in partnership schools to engage in practical experiences within the authentic situation of the classroom, while collaborating with a mentor and peers. The PGCE programme ensures that the beginner educators leave the programme having gained respect for a profession under siege in the 21st century.

However, commitment to effective professionalism can be limited by the patterns of behaviour displayed by the beginner educators. By patterns of behaviour, I refer to the beginner educators' changing perceptions, low self-esteem and inconsistency. Consequently, these patterns of behaviour are a trend that results from the different phases of the beginner educators' professional development. These patterns of behaviour can be traced in Chapter Four, in all the themes that have been extracted from the beginner educators' experiences.

These patterns of behaviour relate to a process of learning characterised by a continuous awareness of equilibrium, disequilibrium and re-equilibrium experiences. Piaget (Doll 1993, p 141) explained in his research that the driving force of development is situated in the non-balance or disequilibria that disturbs equilibrium, in order to create 're-equilibration', but always at a higher level and in a continuous process of re-equilibrium. These patterns of behaviour can be argued to be the results of change, as change gives prominence to uncertainty which depends on "challenges, perturbations and disruptions". In the PGCE, change and not stability seems to be the essence. According to Guskey (2002, p. 386), change is primarily an experiential learning process for teachers. Learning to be proficient in something new and finding meaning in a new way of doing things requires both time and effort. Any change that holds great promise for increasing teachers' competence and enhancing student learning is likely to require extra work, especially at first. Furthermore, change can bring a certain amount of anxiety and can be very threatening.

On the other hand, these patterns of behaviour relate to the "dilemmas" of constructivist learning pedagogy. Windschitl (2002, p. 132) describes the ambiguities, contradictions and compromises that are part of implementing constructivism as the "dilemmas".

Windschitl describes “dilemmas” of constructivism as aspects of teachers’ intellectual and lived experiences that prevent theoretical ideals of constructivism from being realized in practice school settings. He used the four frames of reference to describe these dilemmas:

1. *Conceptual dilemmas* are rooted in teachers’ attempts to understand the philosophical, psychological and epistemological underpinnings of constructivism.
2. *Pedagogical dilemmas* arise from the more complex approaches to designing curriculum and fashioning learning experiences that constructivism demands.
3. *Cultural dilemmas* emerge between teachers and students during the radical reorientation ethos.
4. *Political dilemmas* are associated with resistance from various stakeholders in school communities when institutional norms are questioned and a routine of privilege and authority is distributed.

Implementing a constructivist learning pedagogy in the PGCE programme and the effects of change as a learning process have important implications for the practices of teacher education.

6.2. The Practical Implications

This study serves as a baseline of how a constructivist teacher education programme trains novice teachers to be professional educators. When considering the issues of teacher education programme design, this study has raised some basic principles relevant for all teacher education programmes:

1. The design of the programme need to adhere to the principles of an holistic integrated learning approach concerning the curriculum: modules, content, facilitation of learning and assessment.
2. The teacher educators need to be committed to a shared philosophical point of departure and supportive of the assumptions, beliefs and practices associated with

- a constructivist way of thinking about knowledge acquisition and understanding.
3. The design need to be based on a teacher education model that is rich in experience.
 4. Essential integrated components in pursuing quality learning and encouraging lifelong learning are reflective practice, action research and continuous critical self-assessment.
 5. In giving prominence to theory in function, the focus needs to be on integrating and relating implicit educator knowledge and evidence-based theoretical forms of knowledge encouraging student teachers to individually construct a practice-theory.
 6. Embedded in the design there need to be different appropriate continuous assessment strategies to share and mentor learning quality.
 7. In a constructivist teacher education programme evaluation of learning is set against intended outcomes and relevant assessment criteria. Assessment strategies involve self-assessment, peer-assessment and finally proof of the professional status. For example, in this case study the beginner educators are challenged to present and defend their professional development portfolio before a panel of internal and external examiners.
 8. The importance of self-knowledge in being a professional facilitator of learning became apparent in this study and also that a concerted effort need to be made to explore self-knowledge, identity and integrity.
 9. Finally, the importance of and necessity of establishing teacher education working partnerships between higher education instructions and schools emerged to ensure authentic quality learning.

The implications of the findings are that professional development of teachers requires a continuous process of learning, promoting professional growth that goes beyond knowledge and skills. The issues raised above have important implications in teacher education and teacher professionalism and also has relevance for discussions on what is meant by teacher competence in South Africa. Because teacher education is a site of struggle over competing issues with several stakeholders involved, that needs to be

incorporated when conceptualizing teacher professionalism. The recommendation for researchers is to look directly at difficult issues and expand their scope of inquiry and expertise by tracer studies on professional development of the beginner educators into the school, where the beginner educator is appointed as a professional educator.

6.3. Pathway to My Professional Development

As indicated in Chapter One, the reason that motivated me to conduct the study is my professional development. Based on the history of my professional development, I considered myself to be a behaviourist teacher. Conducting this study is an experiential learning. From an inside perspective, I still have the roots of behaviourist of knowing teaching and learning as the transmission of information from the teacher to the learner. Having engaged with the literature of teacher education, professional development, curriculum design and the complex readings on postmodernism and constructivism, as well as being a participant and non-participant observer, I would like to consider myself as a constructivist teacher. As a qualitative researcher, my reason for conducting this study was not to generalise the findings. However, the research has enhanced my knowledge. As such, for my country Lesotho, there is quite a lot to share with regards to the growth and development of teachers, who are the ‘frontline troops’ in shaping high quality citizens of the future.

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APPENDIX A

Interview Schedule- Pilot Testing

1. Tell me, what it is like to be a student teacher?
2. Tell me about your thoughts and feelings about teaching before you become a student teacher.
3. How, if at all, have your thoughts and feelings about teaching and learning changed since you become a student teacher?
4. What positive changes occurred in your life since you became the student teacher?
5. What negative changes, if any, have occurred in your life since you became the student teacher?
6. Tell me how you go about teaching in the classroom. What do you do?
7. Could you describe the most important lessons you learned about educators through experiences you have in the programme?
8. What makes an educator effective? How would you describe an effective school educator? How does an educator get to be effective? How does one's background contribute to one's effectiveness?
9. Tell me how you would describe the person you are now. What most contributed to this change?
10. Where do you see yourself in two years? Describe the person you hope to be then. How would you compare the person you hope to be and the person you see yourself as now?

APPENDIX B

Interview Schedule

Name:.....

Phase:.....

Gender:.....

Specialization Area:.....

Main Questions	Possible Probe Questions	Reasons For Asking
1. Tell me about your thoughts and feelings about teaching before you become student teacher?	<ul style="list-style-type: none"> - What positive/negative feelings did you have about teaching? - Can you explain the different feelings you have on teaching? 	To elicit the beginner educator's expectations before entering the teaching profession.
2. How, if at all, have your thoughts and feelings about teaching changed since you become a student teacher?	<ul style="list-style-type: none"> - How do you view teaching now? - What causes changes in your views about teaching? 	To find the cause and effect on the student teacher's view about teaching.
3. What is your understanding of being a beginner educator?	<ul style="list-style-type: none"> - What are your expectations, experiences, beliefs, views or feelings about the beginner educator? - What it is like to be the beginner educator? 	To elicit student teachers understanding of the beginner educator.
4. In what ways if any, has the programme contributed to your development as the beginner educator?	<ul style="list-style-type: none"> - How have you experienced the programme? - Did the programme help/ hinder your development as the beginner educator? 	To determine the extent to which the programme contributed to the development of the beginner educator.
5. What are your experiences on the school-based education?	<ul style="list-style-type: none"> - What was your role as the beginning educator? - Tell me how you go about teaching in the classroom. What do you do? - What strategies did you employ in teaching? - What were the challenges/achievements that you met? - How did you cope with the challenges/achievements? 	To discover the experiences the beginner educator has in their teaching practice.
6. Could you describe the most important lessons you learned about educators through experiences you have in the programme and in partnership schools?	<ul style="list-style-type: none"> - What makes an educator effective? - How does an educator get to be effective? - How does one's background contribute to one's effectiveness? 	To explore the student teacher's views and feelings about an educator
7. Where do you see yourself in two years?	<ul style="list-style-type: none"> - Describe the person you hope to be then. - How would you compare the person you hope to be and the person you see yourself as now? - What will contribute to the changes? 	To determine the beginner educator's general feeling about the teaching profession

APPENDIX C

Letter of Notification- Ethics Documentation

Dear -----

I am studying Masters in Curriculum Studies at the University of Pretoria and this is my second year of study. My research focus is in the field of teacher education, curriculum design and the new professionalism. I am conducting a research project on the PGCE programme at the University of Pretoria, the purpose is to seek and explore how the teacher education programme prepares teachers for the new professionalism.

We share a common interest and concern as educators. Your role in education is very important and as the beginning educator you are the key person in making changes in the teaching and learning environment, hence your professional development is very important. It is on the basis of a common goal of increased knowledge about education that I am requesting your cooperation in an interview session which I will hold during the first week of September.

You and other participants have been purposefully selected, the knowledge and experience you have in your current studies could help me in my investigation. Your response will remain anonymous and no attempt will be made to identify any response with any beginning educator. Your participation is, of course, voluntary. Please think of the problem as indicated above before your interview session.

I will call you next week to confirm and make arrangements for time and place, hopefully it won't be more than 30 minutes and it will be at Groenkloof Campus, which I think it, is more convenient to you. Please inform me if you are no longer using this contact number:

Thank you for your cooperation

Yours faithfully

Maseabata Molefe (Sabi)

Department of Curriculum Studies

University of Pretoria

APPENDIX D

The Letter of Informed Consent

An Evaluation of a Constructivist Teacher Education Programme

Date_____

Dear Participant

You are invited to participate in a research project aimed at exploring how the Post Graduate Certificate in Education (PGCE) at the Faculty of Education, University of Pretoria meets the criteria of the new professionalism. This will be done by analyzing the theoretical principles underpinning the design of the teacher education programme and examining the student teachers' professional development towards the constructivist principles.

Your participation in this research project is voluntary and confidential. You will not be asked to reveal any information that will allow your identity to be established, unless you are willing to be contacted for individual follow up interviews. Should you declare yourself willing to participate in an individual interview, confidentiality will be guaranteed and you may decide to withdraw at any stage should you wish not to continue with an interview.

The result from this study will be used to contribute to the literature on teacher education. The study intends to inform policy makers, curriculum designers, and teacher educators on the significant differences of a constructivist approach in teacher education. The study could also indicate if and the extent to which the programme succeeds in developing teachers to be change agents.

If you are willing to participate in this study, please sign this letter as a declaration of your consent, i.e. that you participate in this project willingly and that you understand that you may withdraw from the research project at any time. Participation in this phase of the project does not obligate you to participate in follow up individual interviews, however, should you decide to participate in follow-up interviews your participation is still voluntary and you may withdraw at any time. Under no circumstances will the identity of the interview participants be made known to the faculty of education.

Participant's signature.....: Date:

Researcher's signature.....: Date:

Yours Sincerely

Maseabata Rose-Mary Molefe

APPENDIX E

List of Documents

- FOE: Study Manual 2005, PGCE-Faculty of Education, University of Pretoria.
- HIV/Aids: Study Manual 2005, PGCE- Faculty of Education, University of Pretoria.
- PPF; Study Manual 2005, PGCE-Faculty of Education, University of Pretoria.
- Programme Information for the Post Graduate Certificate in Education (PGCE) 2005, Faculty of Education, University of Pretoria.
- SEN; Study Manual 2005, PGCE- Faculty of Education, University of Pretoria.
- The Approach to Creativity Document 2005, PGCE-Faculty of Education, University of Pretoria.
- The Facilitation Skills and Participative Teaching and Learning Document 2005, PGCE-Faculty of Education, University of Pretoria.
- The Norms and Standards for Educators 2000, National Department of Education, South Africa.
- The Professional Development Portfolio Assessment Documents 2005, PGCE-Faculty of Education, University of Pretoria.
- The National Framework for Teacher Education in South Africa 2006, Report of the Ministerial Committee on Teacher Education, 16 June 2006.
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