

CHAPTER 1

In many ways, just as the student of teaching needs to experience the tensions, dilemmas and problems of practice in order to learn through the accumulation of knowledge of practice, so too the teacher educator is confronted by a similar situation in learning through accumulation of knowledge of teaching about teaching (Loughran, 2006, p.9).

1 STATEMENT OF THE PROBLEM: MY ACADEMIC CONTEXT

1.1 Introduction

In this chapter I take the opportunity to introduce the reader to the major motivation behind undertaking this particular research. The introduction is very important to me since as I engaged in this research I constantly took an introspective look at my own career as a teacher educator. In reflecting on my career it became apparent that I had many biases and assumptions that might have shaped the way I practise teaching. Additionally, reading about research work undertaken in this particular context and in international contexts, and observing teacher educators follow their careers in lecture halls provided lessons that I would not have thought about under normal circumstances. Observing teacher educators in practice was a revealing experience. The lessons that are revealed in the concluding chapter illustrate how this study has impacted on my own career as a teacher educator in many significant ways. I therefore invite the reader to join me on this journey in which I have deliberately begun to search for the foundations of the career I cherish.

“Searching for the foundations of the career I cherish” is my story set in a Lesotho context. I am a teacher educator at the National University of Lesotho. Lesotho is a small country with an area of just over 30,000 square kilometres, landlocked by the Republic of South Africa. It is in this context that the search for the foundations of the career that I cherish is set. My story is based on my teaching experiences at different levels of the education system in Lesotho and how I came to be the teacher educator that I am. The story therefore depicts my professional journey, which has largely contributed to my undertaking the study on the “sources and application of professional knowledge among teacher educators”.

I entered the world of teacher educators ‘through the back door’, having started in this career at the level of an unqualified teacher after being invited to join teaching at various levels of the education system. After completing my studies at a post-

secondary school I was invited to teach in the same school by my post-secondary teachers. I accepted, despite not having a professional qualification. I never inquired about the reasons for the invitation but I suspect that the teachers in the school saw the potential in me to become a teacher. Although I accepted the invitation, which has led to my eventually becoming part of the teacher education fraternity, I did so with great discomfort. The question then arose as to how one teaches.

My first day in a post-secondary school classroom confirmed my fears; it appeared to be a difficult task. There are some researchers who have studied teaching as a job, but as Calderhead and Shorrock (1997) indicate, even teachers who have gone through teacher education programmes experience difficulties in learning to teach. However, unlike trained teachers who have some theories on teaching, one who enters teaching through a back door does not have anything to depend on. Therefore, while my story may not be unique, the frustrations, the difficulties, the lack of a mentoring programme that could have been offered by those who invited me were some of my experiences in teaching at the post-secondary school. In my mind the difficulties were complicated by the fact that I had not undergone any training. Under the circumstances I had to find a way of addressing my anxiety if I were to survive. I had no choice but to reflect on my secondary school days. There were compelling images I could draw on.

I therefore depended on the way in which my best secondary school teacher taught me. The image of that teacher and how she handled her teaching was clear and dependable. Originally from Swaziland, she had a remarkable style of teaching English language that was her speciality. In my view she knew the content, was confident, had a style of managing learners that was uniquely hers and she loved her students. She was a disciplinarian yet someone who displayed commitment to work.

However, while consistently reflecting on how my best secondary school teacher taught provided a reference point, I still felt uncomfortable. I felt I had ventured into a territory that was exclusively for specially trained people. I definitely lacked something that teachers acquire in teacher education institutions. Secondly, regardless of the comments by one of my relatives who came to me after my first lesson and shared her classmates' views about my teaching, which indicated that the students were impressed with my teaching, my fear that I might not be doing the right things had been deepened by that first lesson. I wondered what criteria the students used to judge my teaching as interesting. I knew then that teaching was not an easy task and I therefore strongly felt I needed appropriate tools if I were to succeed.

An introspective perspective on the experience of teaching at this level of the education system clearly indicated that even at this point of my teaching career my question on where teachers draw their knowledge of teaching from was already in my mind. Entering teaching through the back door greatly contributed to the current study. It was probably the concern of not knowing what is expected of a teacher and the feeling that there are techniques that qualified teachers use in teaching, that made me enrol in a teacher education programme. This presumably would provide some answers on the foundations of the career I would come to cherish.

Therefore, having accepted the invitation to join the teaching profession, and having started teaching without a professional qualification, I decided to enrol in a teacher education institution. This was an eye-opener. It became apparent that teacher education is a discipline that uses unique terminology; teachers talk about methods of teaching; they choose a subject to teach and learn about the content they intend to teach; they must have skills for managing classroom activities; they prepare for teaching; and they have to assess learners. There are those aspects of teaching that students of teaching learn from psychology classes. It was in such classes that I learnt how to deal with learners with different mental abilities. There are slow learners and there are extremely gifted ones who, if not attended to, tend to leave school because it does not challenge them. I was a different individual when I left the college, having completed the teacher education programme. At this level I felt I had acquired knowledge and skills for teaching at the secondary or post-primary school level. However, teaching at the post-primary school level was transitory. I taught at this level of the education system for only six months because it was at this time that I got the second invitation.

One of my college lecturers looked for me and invited me to enrol in a Diploma in Education programme that was offered by the University. This was a specially designed diploma in education programme, intended for people who would, upon completion of their studies, serve as supervisors of student teachers during their teaching practice. Although it did not appear obvious that I was now being prepared for a different level of teaching, my recollection points to the fact that the courses I took at both the diploma and undergraduate degree levels were initial steps into the world of teacher educators. For the Diploma in Education and the first degree programmes I took one subject or content course and foundation courses which included supervision of instruction, teaching and instructional technology, measurement and testing, educational research, guidance and counselling and curriculum development.

My first employer after obtaining my first degree was the then National Teacher Training College, now the Lesotho College of Education. I worked as an intern supervisor; therefore the actual application of professional knowledge, especially in the supervision of student teachers during their teaching practice, was a manageable task. In practice an instructional supervisor observes one student teacher at a time and may hold discussions with that individual after observation. While observation and giving feedback to an individual presents technical challenges, such as helping a student teacher achieve his or her potential or assisting a student teacher who teaches content with which one is not familiar, they proved to me to be not as complex as the task of teaching many students assembled in one classroom. As Shulman (2004) argues, teaching, especially compared to disciplines such as medicine, is a complex undertaking. Teachers, unlike a physician who works with a single patient at a time, have classrooms filled with many learners and have multiple goals and the school's obligations to achieve. Yet supervision of instruction, perhaps similar to provision of counselling to individual students, is one of the few areas in teacher education where it is possible to deal with one person at a time. Perhaps this might be the reason for Acheson and Gall's (1992) allusion to the process of helping student teachers during their teaching practice as provision of clinical supervision. Following a clinical supervision model, there are times during the process for a pre-conference, observation of a student teaching, and then a post-conference phase. Hence the challenges to supervise student teachers during teaching practice were less demanding for me. This is one area in my career that, while challenging, proved enjoyable.

I must, however, even at this level of my professional development in the career of teacher educator, admit that there were experiences where the strategies of those who supervised me impacted on my style of instructional supervision. During my teaching practice I was supervised by an American lady from whom I drew significant lessons. She consistently observed each one of us at least twice a week, following the clinical supervision model, and had time to meet students prior to and after observing them. We kept diaries of our experiences and the way in which we handled dilemmas that we came across. There were monthly meetings in which we shared our experiences and had an opportunity to support one another. The American lady was a highly committed individual, loved her student teachers, was not hesitant to share her thoughts about what she observed, and gave us opportunities to reflect on our teaching. I definitely drew heavily on her style of supervision of instruction when I became an intern supervisor.

The third and final invitation was to serve as a research assistant in a research institute which is one of the units of the National University of Lesotho. This particular invitation, especially compared to the first and the second ones, appeared different; it proved to be an avenue for gathering research and teaching experience. However, it too provided worthwhile experience. The opportunity made it possible to engage in something that was completely new and extremely difficult. Together with nine other colleagues who worked as intern supervisors, I was required by the Institute of Education at the National University of Lesotho to collect data for a study titled *Teaching and Learning Strategies in Lesotho Primary Schools*. It was a major study which used numerous data collecting instruments, one of which was an observation schedule which required us to observe each teacher 25 times. Although supervision of instruction had exposed me to observing other people teach, serving as a research assistant was another opportunity to observe teachers, though we were not expected to give the observed teachers any feedback. It was after completion of this particular study that I was invited to join the Institute, still as a research assistant. I wondered why this invitation had been made, given the fact that the task we had just completed was not only demanding but a new avenue altogether, and one for which I had had no training.

Lessons were learnt from the data collection phase of the study. As research assistants, for example, we were required to present our own experiences and interpretations of the work we were engaged in during debriefing workshops. Joining the Institute of Education was another opportunity to learn about the various levels of working on research. Serving as a research assistant and working with seasoned researchers and professors provided the most valuable learning experiences. I learned how to prepare a research proposal, collect data, analyse data and come up with a research report. Although I had not used the research skills attained at that level for researching my own teaching, it was a worthwhile experience. It definitely contributed significantly to my knowledge, particularly on what to look for in observing teachers in a research context.

It was after joining the University that I was required to enrol for further studies. I then enrolled in a Master's degree programme at the University of British Columbia in Canada, which although I was not aware at the time, was a further initiation into the world of teacher educators. It further exposed me to courses that are, in the literature, classified as courses to be taken by people who plan to join the teacher educators' fraternity. These included supervision of instruction, sociology of the curriculum, programme evaluation, philosophy of education, teaching in institutions of

higher learning, school effectiveness and educational research. Since at post-graduate degree level I had the liberty to choose courses, and I was mindful of the focus of the Institute of Education, I took three educational research courses and audited a PhD course on teacher education. The audited course was not offered at Master's level; yet I knew it was a valuable course for the type of work I was destined to do upon return to my institution. Learning about teacher educators as reflective practitioners was the most valuable outcome of that teacher education course that I audited.

Therefore, while I fully admit that an exposure to relevant courses from the diploma level to the Master's degree level provided much specialised teacher education knowledge and skills for teaching in teacher education programmes, practice presents a number of challenges and dilemmas. My first experience teaching at university was with the second year Bachelor of Education degree programme. I was assigned to teach a course "Teaching Methods and Instructional Technology" to a class of 300, comprising a mixed class of people holding diplomas in teacher education and those directly from secondary school. This assignment presented numerous challenges.

The challenges included the ability to use the pedagogy of teacher education effectively and thereby demonstrate teaching to a group of student teachers who had entered the programme with or without a teaching qualification. Other challenges included the capability to develop a teacher education curriculum or a course outline, manage classroom activities to the extent of ensuring that all students, regardless of their numbers, would benefit from my teaching, manage assessment of student teachers and manage the teaching itself. One of the major concerns that emanated from a reflection on my teaching in highly populated classroom situations was the extent to which I was efficient and whether indeed the students were gaining the quality of education that I was expected to offer. Indeed, as I argued with colleagues, I felt as though teaching a course of such paramount importance to the education of teachers was similar to holding a political rally in which numbers did not matter.

Trying to involve students in their own learning meant dividing them into manageable groups to discuss a topic or do research and return to report in large groups. This strategy, which I thought was the best way of involving student teachers in their own learning, presented me with serious problems. There were students who would not participate in discussions on a given assignment but would demand that they be graded. More often than not I mediated in meetings where students complained about other group members who were reported not to have contributed to the group

work. Lecturing was not my style of teaching but I was, on several occasions, forced to resort to it.

The many unpredictable results of initiatives which were intended to help ensure that students benefited from teaching made me doubt my effectiveness and wonder what lessons student teachers drew from my own teaching. I reflected on courses that had prepared me to become a teacher educator but could not draw on any that had prepared me for some of the practical challenges I encountered. Teaching large classes or dealing with the unpredictability of classroom events constituted some of those challenges. I concluded that degree courses one takes remain a firm foundation. However, the courses cannot help one envisage what the practice holds in store for those who undergo teacher education regardless of the level at which they take courses in this discipline. Therefore it is in real life and only in the world of work where one will learn how to handle challenging situations, especially in classroom encounters.

It is, I concluded, in the world of work where cases present themselves for solution and the teacher or teacher educator in this context will have to find ways of dealing with those. Those cases become reference points whenever similar ones arise. One case that amused me and provided a valuable lesson was when I grouped students and stayed for too long with one of the groups. I was surprised when I realised, after helping the one group, that the other groups had left the seminar room, even though the time allocated for the course was not yet over. I knew that I should not spend too much time with one group, no matter what difficulty each might be experiencing in interpreting the assigned task. The essence of this experience is that learning to teach, no matter the level at which it may be, is highly unpredictable. However, finding solutions to each case becomes a learning experience from which individuals gather knowledge and skills for the future.

Additionally, particularly in the context of the current study, I wondered and subsequently asked myself a question: Where do other teacher educators, particularly those who never received education relevant to the training of student teachers, draw their professional knowledge from? The question I asked at the initial stages of my career became concrete over time, hence the topic for this story: *searching for the foundations of the career I cherish*.

Incidentally, an idea to participate in an international study on teacher education involving 5 countries, the Multisite Teacher Education Research (MUSTER) Project, provided an opportunity to engage in research on teacher educators teaching in

colleges and universities in the identified countries. Participating in the study as a researcher exposed me to undertaking research focusing on teacher educators and most importantly provided me with an opportunity to peep into their classrooms and see the various styles of teaching. Observing the teacher educators' practice was a valuable exposure which added more interest to my intention to undertake the current study. Although participating in the MUSTER Project did not address my research concerns, it helped me think deeply about what it was that I wanted to research. It provided lessons on various aspects of teacher education and teacher educators in particular, but did not specifically address the element of professional knowledge on which my study focuses.

Analysing the process that led to the current study and juxtaposing it with the paradigm that I adopted, confirm that there is a relationship between my quest to undertake a study on teacher educators and the adopted paradigm. The focus had to be on sources and application of professional knowledge and my professional journey. The interpretivist paradigm which underpins the current study involves individuals' opportunity to interpret their own situations and therefore establish meanings. My own experience as a teacher educator and the interest to undertake a study focusing on teacher educators therefore relates to the context in which the teacher educators were found. I am, in detailing my experience, alluding to my interpretation of my professional journey.

In a book co-authored by Clandinin and Connelly (1995), titled *Teachers' Professional Knowledge Landscape*, there is a chapter on competing and conflicting stories, in which they allude to a claim that there are serious yet significant consequences for how teachers who participated in their research know themselves as professionals. Clandinin and Connelly (1995) make reference to a school principal and other teachers who engaged in what they referred to as a new way of engaging in professional development which they also considered as a new way to challenge the sacred theory-practice story. In practice, in engaging in professional development, teachers, instead of relying on experts in the system or from elsewhere, they were called on to rely on their own resources. This is a fundamental change in professional development in the context of teacher education.

Writing my story has helped me reflect on my professional life, and has allowed me to see how it unfolded. In undertaking this particular research I had the opportunity to listen to colleagues narrate stories of their professional lives and what they had learned from their experiences. I have observed them apply their professional knowledge to the real world of teaching and in the process have gathered more

knowledge. Undertaking the study has enabled me to think about my own teaching much more deeply. In essence engaging in the study has impacted on me in many ways. I am a different person than I was when I started.

The content of the story I have shared is a brief analysis of my professional journey, reflecting the interplay between lessons emanating from it and that actual journey. Therefore the rationale and objectives of this study as presented in this chapter justify the reason for engaging in the study. Additionally each major section of this chapter presents contexts; following on my own context is an analysis of local and international contexts as these relate to teacher educators.

I initiate each of the chapters of this study with a diagram or a box depicting the contents of a particular chapter. The first of the diagrams presents the contents of Chapter 1:

Contents
1.1. Introduction
1.2. The Teacher Educator's Context
1.3. Teacher Educators: The Lesotho Context
1.4. Teacher Education: the International Context
1.5. Professionalizing Teacher Educators
1.6. Transition from Teacher to Teacher Educator
1.7. Formal Programmes and Courses for Teacher Educators
1.8. Learning at the Workplace
1.9 The Pedagogy of Teacher Education
1.10 Rationale and Objectives of the Study
1.11 Conclusion

1.2 The Teacher Educators' Context

In my capacity as one of the teacher educators based in Lesotho I make three assumptions. Firstly, I entertain little doubt that teaching in practice and the teacher who delivers it determine the quality of the education provided. In this context the quality of the teacher education subsequently determines the quality of the teaching. Secondly, the role of the teacher educator in contributing to the quality of the education provided cannot be underestimated. In practice, therefore teacher educators are the ultimate determinants thereof, which is why the teacher educator is at the heart of this study. Thirdly, throughout the world, teacher educators are at the forefront of preparing teachers at all levels of education systems.

New developments and reforms in education have inadvertently caused growing interest in teacher education and teacher educators. This interest is evident in the increasing rate at which research is being undertaken by educational researchers and the increasing number of publications focusing to a greater or lesser extent on the teacher educator fraternity. The research interest is related to a number of issues fundamental to teacher educators and the quality of their work. One of the primary foci is the extent to which their work could be identified as professional and whether they could be regarded as professionals. The key concern revolves around the training of teacher educators as an area which does not exist in any formal way, particularly in the context in which this study was carried out. Most pertinent to the lack of resources for facilitating the education of teacher educators is the need to acquire knowledge, skills and values or attitudes to ensure that their pedagogy is the most appropriate for educating prospective teachers. It is important to note that underlying expertise in teacher education is that teachers who benefit from the teacher education programmes could subsequently be regarded as professionals.

The main inspiration for undertaking this study is the role I play in teacher education as a citizen of Lesotho. I have been a teacher at various levels of the education system. I have taught in the two Lesotho teacher education institutions and continue to serve as a teacher educator and researcher in one of them. I have had an opportunity to undertake research and have in most cases done so in collaboration with colleagues in the area of teacher education. The current study was therefore undertaken in the Lesotho context that stimulated an interest in undertaking the study. This is why I begin with a presentation of the context in which I work in this introductory chapter.

1.3 Teacher Educators: The Lesotho Context

There are only two institutions in Lesotho that offer teacher education programmes, namely the Lesotho College of Education (LCE) and the National University of Lesotho, through its Faculty of Education. The Lesotho College of Education is responsible for the preparation of primary and junior secondary teachers. Initially it offered certificate programmes to both primary and junior secondary teachers through pre-service and in-service modes. There are developments in the College that have led to the shift from certificate programmes to the offering of diploma programmes at both primary and junior secondary levels of the teacher education system. As recently as 2007, the Lesotho College of Education introduced two courses: the certificate for early learning for pre-school teachers and a course for primary school teachers who will be responsible for dealing with the visually impaired. The teacher educators who were employed to offer these courses are specialists in these areas. Since there were no locally trained teacher educators qualified to teach in such programmes, some were recruited from other parts of the world. The new courses were introduced to meet the international demands according to the world declaration on *Education for All* (EFA) which, among other things, calls for inclusive education.

However, it is not enough to introduce new courses and meet such international demands without ensuring that they are offered by teacher educators who have undergone training that prepares them for teaching the courses at national level. New programmes have to be sustained and this depends on national teacher educators having appropriate knowledge and skills.

Another institution that offers teacher education programmes is the Faculty of Education at the National University of Lesotho, mainly to prepare teachers for the senior secondary school level. Although for a long time the Faculty has been offering Bachelor of Education Degree programmes, it recently resuscitated programmes which had been suspended for some time. During the 2009/2010 academic year the Faculty resuscitated both the Postgraduate Diploma in Education (PGDE) for secondary school teachers who needed a professional qualification, and the Master's in Education degree. Additionally, the Faculty has resuscitated a degree programme for primary school teachers and offers the Bachelor of Education (Primary) programme through a distance mode. It is imperative that whoever is employed in teaching any of the Faculty's programmes is someone with expertise in the education of student teachers.

The motivation to undertake the current study comes from a realisation that neither the Lesotho College of Education nor the National University of Lesotho offers formal programmes for the education of teacher educators, as is the case in some parts of the world. Hence the key question that forms the thrust of this study is where and how teacher educators acquire their professional knowledge and how they employ the most appropriate corresponding pedagogy to ensure that the best quality teacher education programmes are offered.

1.3.1 Research on Teacher Education in Lesotho

Although a large number of studies on teacher education have been undertaken at the Lesotho College of Education since its establishment in 1970, studies focusing on teacher educators in Lesotho are very few. The Multi-site Teacher Education Research referred to earlier was undertaken between 1997 and 2000. The second study in the context of teacher educator's professional knowledge was a pilot study that I undertook during the initial stages of my PhD programme.

1.3.2 The Multi-site Teacher Education Research (MUSTER)

Project

The Multisite Teacher Education Research (MUSTER) Project focused on the primary teacher education sub-sector at the Lesotho College of Education. The teacher educators who participated in it were drawn from the following areas of the primary teacher education programme: English Education, Mathematics Education, Science Education and Professional Studies. The study looked into a number of aspects that relate to teacher education, categorised according to sub-studies within this large cross-national study. Among several sub-studies undertaken during the MUSTER Project was one on teacher educators, addressing issues such as teacher educators' characteristics, including career paths, induction and continuing professional development and their perceptions of good practice.

The MUSTER Project established that the tutors who participated in the study, although they taught in the primary department of the College, had trained as secondary school teachers. The study further established that only 40 per cent of them had any primary teaching experience. They were graduates, with a third holding master's degrees, some in Education but others in areas such as Development Studies. It was further established that, in view of their education background in the context of the teaching of teachers, none of them had been specifically trained as a teacher educator or had been engaged in a programme of study to prepare them as

teacher educators, although two held a diploma in Primary Supervision specifically designed to educate intern supervisors.

The findings of the MUSTER Project, in as far as teacher professional qualifications are concerned, suggest a major gap in the education system. It is a system in which the majority of teacher educators is not attended to and the education of teachers who are considered professionals themselves is left in the hands of “teacher educators” who could, because they do not hold a professional credential, be classified as “paraprofessionals”. Those teacher educators who may have taken courses during their careers that are relevant to the teaching of student teachers have done so of their own choice, not because the employing institutions expected or required them to.

Additionally, the MUSTER Project established that a dominant pedagogy that featured at the Lesotho College of Education primary section was the extensive use of the transmission model of teaching and to a lesser extent some interactive methods of teaching, such as group work. These methods required student teachers to participate in more significant ways than transmission methods, in which student teachers barely participate. The MUSTER Project concluded by posing a challenge for teacher educators at the Lesotho College of Education, that they produce innovative teachers who will go out into the schools to break the mould (Lefoka and Sebatane, 2003). This suggestion was consistent with the college philosophy that stipulates that the new diploma programme would cater for the complex, challenging and increasingly diverse difficult role that would have to be played by the primary school teacher.

1.3.3 The Pilot Study

The pilot study was carried out immediately after a proposal for the current study was approved. In undertaking it in the Faculty of Education at the National University of Lesotho, six teacher educators based in the Department of Educational Foundations of this Faculty were invited to participate. The pilot study was intended to establish the extent to which the proposed research which was going to focus on the sources and application of professional knowledge was feasible. In carrying it out the interviews were conducted and the data analysed thereafter. The pilot study revealed that:

- 1) All the participants held postgraduate degrees, with two being at the PhD level.

- 2) Each of the research participants was a specialist in at least one particular discipline or field of study, two in educational management and administration and one in each of the following fields: supervision of instruction, guidance and counselling, teaching and instructional technology and the philosophy of education.
- 3) Only one of the six pilot study participants claimed to have taken the following courses: supervision of instruction, testing and measurement, teaching and instructional technology and curriculum studies.

The courses mentioned on 3 above were the courses that were at the time of carrying out the pilot study classified in the literature as relevant to the teaching of student teachers. I then concluded that one out of the six who participated in the study could be classified as having taken courses in teacher education and would qualify as a teacher educator.

The significance of the pilot study is that it helped me establish that there was a need to carry out a study focusing on teacher educators at the National University of Lesotho. It was clear that a study focusing on professional knowledge of teacher educators had not been carried out before. Most importantly, given that I did not observe the teacher educators in practice, it was not possible to establish how in practice teacher educators engaged in the application of professional knowledge.

1.3.4 Conclusion on the Lesotho Context

The two studies, namely the MUSTER and the pilot study carried out at the Lesotho College of Education and the National University of Lesotho respectively, although undertaken at different times, share some similarities:

- 1) Since the majority of teacher educators in Lesotho had not been educationally prepared for the career they were following, it was concluded that the majority were not qualified to be teaching student teachers. It is justifiable to consider them to be practising as paraprofessional or unqualified teacher educators in their current field of employment;
- 2) Employment procedures followed in hiring teacher educators in both institutions do not require that those who apply must have studied teacher education to the extent that they could be classified as teacher educators.
- 3) Neither the Lesotho College of Education nor the National University of Lesotho staff development policies dictate what courses teacher educators must take to prepare them for the task of teaching student teachers. Instead,

teacher educators who go for further studies are free to specialise in their areas of interest.

- 4) The majority of the teacher educators who participated in both studies had not taken any course or courses that would fully prepare them for the task of educating student teachers.

Therefore, the need to carry out the study that specifically focused on teacher educators' professional knowledge at the National University of Lesotho became intense; this institution has a potential to offer programmes for training teacher educators in Lesotho. The teacher educators who participated in the pilot study admitted that they did not know much about what constitutes professional knowledge that underpins or informs their teaching in the context of teacher education.

1.4 Teacher Educators: The International Context

The Lesotho context has revealed the situation of teacher educators in this country. However, given that teacher education is offered in almost all countries of the world it suffices to include the international context in this chapter, thus setting the stage for the research conducted on teacher educators.

1.4.1 *The Teacher Educators' Career*

Lewin and Stuart (2003), in a study in which Ghana, Lesotho, Malawi and Trinidad and Tobago teacher education institutions participated, studied among other factors the career paths of teacher educators. Their study found that those in the participating institutions had joined teacher education through applying for advertised posts for teaching at the level of college or university, and for various reasons. Kunje (2002) added that a study that focused on teacher educators who taught primary teachers in Malawi found that they were under-qualified. The study confirmed the contention that the education of teachers is, in the majority of the aforementioned countries, in the hands of under-qualified teacher educators or paraprofessionals. It can therefore be concluded that teacher educators start their careers without a professional qualification. Moreover the institutions that employ them do not have set criteria for attracting people with a teacher educator professional qualification.

However, according to Labaree (1992), people who join teacher education as teacher educators have been found to bring numerous experiences into teacher education institutions. Teacher educators were found to have worked as classroom teachers, school administrators and curricular consultants, special education providers for

programmes such as those for children with disability, programme designers and community developers. Most significantly, their career is characterised by lack of formal training that specifically prepares them for the role of educating student teachers.

The analysis of teacher educators' careers goes beyond the qualifications they hold and the numerous and perhaps valuable experience with which they enter teacher education institutions. These teacher educators have been found generally not to meet primary standards that exist for other college or university professors employed in faculties other than Education. Reference is made to faculties such as those of Law or Humanities, which do not offer education programmes; yet their staff are considered to meet primary higher education standards. This comparison is based on research output undertaken by researchers such as Cole (1999) and Labaree, (1992), which points to the fact that teacher educators tend not to meet the demands of research productivity. The work of these researchers implies that professional teacher educators teaching in teacher education institutions are expected to engage in research and therefore contribute to their scholarship. I revisit this point in the literature chapter where an extensive discussion is made on people teaching in institutions of higher learning. However, in the context of teacher educators there are developments in other parts of the world that show that engaging in research,, especially among teacher educators, is becoming popular (Kunje, 2002; Stuart 2002).

It is important to conclude that the teacher educators' career is still encountering problems, ranging from lack of a clear career path and failure to undertake research or low research output. These are the only yardsticks for judging their suitability to teach in teacher education institutions. Furthermore, there is a lack of clear criteria or policies to be used in employing them.

1.4.2 Articulating the Concept Teacher Educators

Some researchers (Fisher, 2005) have studied the concept *teacher educator*, its features and the extent to which teacher education can be classified as a profession. The term *teacher educator* refers to professionals found in institutions of higher learning, including those who instruct students and practising teachers. Besides providing instruction, teacher educators conduct research necessary for, among other things, educating student teachers and practising teachers, and for their own professional improvement (Ducharme, 1986; Smith, 2003; Fisher, 2005).

Descriptions of teacher educators go beyond the research findings that they have worked as teachers; many have a strong academic background, but little or no preparation for teaching (Lunenberg and Willemse, 2006), let alone teaching student teachers. Furthermore, those who are trained as teachers may have no training or experience of working with adult learners, who are more often than not the teacher education clientele (Smith, 1999; Korthagen, 2000). Therefore, the research work which studied teacher educators (Zeichner, 1999; Ducharme, 1993; Buchberger, Campos, Kallos and Stephenson, 2002; Kunje, 2002), confirms that most teacher educators have not received training in the most pertinent area of methodologies of teaching or the pedagogy of teacher education that is suitable for teaching student teachers or adult learners.

Therefore an important feature that distinguishes teacher educators from teachers is the skill required for different learners, that is, adults and children respectively. Both require different approaches, and there is one pedagogy for teaching adults and another for teaching primary or secondary students. Teacher educators are therefore in need of some form of education which will supposedly prepare them for the task of educating adult learners found in teacher education institutions (Loughran, 2007).

An international study of teacher educators was reported in Churukian and Lock (2000), a project mainly intended to determine where the journey to becoming a teacher educator begins. The study was undertaken in collaboration with the Association of World-Wide Teacher Educators. Twenty-four teacher educators from 24 countries participated in the study entitled *International narratives on becoming a teacher educator, telling stories of how they became teacher educators*. They were guided on how they were expected to tell their stories and asked to describe the nature of their work.

The results of the study indicate that there is consistency in that teacher educators do not have formal training on instructional techniques for teaching teachers. The majority had taught at secondary or high schools before they were employed as teacher educators at this level. There were criteria for employing them, with the majority of the teacher education institutions in which they worked regarding teaching experience at, for instance, secondary school level as an important attribute. Some teacher educators joined teacher education institutions by chance, having applied for an advertised post even though they were aware that they had not taught at college or university level before. A few were hired straight after completing a university degree and only one appeared to have joined teacher education even though he had not taken any courses in it. One of the teacher educators who participated in the

above mentioned study, Drakensberg (2000), related the feeling of being employed to teach teachers in a situation where one does not even have the skills that those future teachers are expected to acquire:

I was offered an appointment as a teacher educator at a teacher education college. All of a sudden, having the formal education needed, a PhD, I was qualified as a teacher educator and qualified to tell others how to teach – something I had never done myself! In such a situation good advice is expensive, so friendly and nice teacher educators at that teacher college taught me to be a teacher-educator (p.70).

The quotation from Drakensberg's (2000) biography illustrates the experiences and frustrations that some teachers of teachers encounter. The case referred to here is one of an individual who was not in the field of education and had therefore never trained as a teacher. Secondly, Drakensberg's work illustrates that teacher education institutions such as the one he joined do not have criteria for employing teacher educators. However, others as is illustrated in Churukian and Lock (2000), do have such criteria. For example, some institutions make it clear that it is necessary that a person employed to teach student teachers has a teacher education background.

The experiences of teacher educators who participated in Churukian and Lock's Project ranged between three and twelve years. Reporting on their work revealed that besides teaching they were expected to teach research and to publish. Moreover, the institutions that employed them shared similar policies, with teacher educators having to be sent for further education to improve their qualifications. While it is not clear whether the further education equipped them with knowledge and skills for educating prospective teachers, it is clear that institutions are particular about further education of teacher educators. Additionally, the criterion that whoever is employed as a teacher educator should have a teaching qualification implies that, even though there may be some exceptions, a teacher qualification is considered a prerequisite to teaching in an institution of higher learning or in educating teachers.

To a large extent the findings of Churukian and Lock (2000) are similar to those studies undertaken by other researchers in different parts of the world. However, although their study mainly used narratives for collecting data as the only approach, and while this approach may have some limitations, it confirms findings of similar studies in other countries. An additional examination of teacher educators of a cross-national study that covered five countries Lewin and Stuart (2003) established that teacher educators' qualifications varied according to the country's wealth, and with the opportunities offered for academic and professional development in the education system as a whole. They indicate that:

... in Trinidad and Tobago half the tutors hold a master's degree, in Lesotho almost all tutors are graduates, and about a third have master's degree, while in Ghana about three-quarters hold a B.Ed. and very few have masters'. In Malawi the majority of tutors have only diplomas; the rest have Bachelors degrees with a sprinkling of masters' (p.121).

In addition to the established notion that teacher educators in most parts of the world have not received formal professional education that prepares them for their career, there is also a concern that there are fewer opportunities for them to participate in continuing professional development endeavours (Stuart, 2002). Arguably, whether or not a professional has undergone formal training, it is common practice that professionals have to participate in professional development programmes. One of the reasons for participation in staff development programmes is to upgrade them in terms of new developments in their disciplines.

A study undertaken by Kunje in Malawi established that teacher educators in that country were not only under-qualified but also had few professional development opportunities. They had received only a short and superficial orientation to a paradigm shift that had been proposed and that they were expected to implement. In this regard Kunje's study established that teacher educators in Malawi did not have professional knowledge needed for the work with which they were entrusted (Kunje, 2002). This is supported by Stuart's (2002) analysis, which suggests that teacher educators around the world appear to be a neglected group of professionals. According to Stuart, from a professional point of view, very few countries have taken seriously the need to develop teacher educators' skills for purposes of establishing their career paths:

From an academic point of view, little research has been carried out in this field and the available literature even in the West is very sparse. From a policy viewpoint, it can be surely argued that just as teachers are very key factors in raising standards in schools, so teacher educators are crucial for improving the quality of the teaching force (p. 367)

The information discussed in the preceding section indicates that there are various ways of analysing teacher educators. Firstly, one can look into teacher education programmes in which they study them in that context. Secondly, one could study the criteria used to employ them. Thirdly the focus could be on characteristics with which they enter the teacher educator world and the perceptions of what the role of a teacher educator should entail.

1.5 Professionalizing Teacher Educators

Following on the descriptions of the concept, it is important to explore the extent to which teacher educators are professionalized. There are debates about the extent to

which they match up the descriptions of the term 'profession', with some researchers concluding that generally they do not (Doyle, 1990; Ducharme, 1986; Labaree, 1992; Trip, 1993). These arguments may be based on the view that professionals must receive specialised knowledge, which, as illustrated in Trip's (1993) work, is considered to be "scientifically verified and formally transmitted to initiates who are certified as having mastered it" (p.129). Clarke (2001) examines further the extent to which teacher educators can be regarded as professionals. It is in the work of researchers such as Robson (2010), Hoyle (1995), Clarke (2001) where we learn about the history of professions with some indicating that a profession is regarded as an occupation requiring instruction in a specialized field of study and therefore also an advanced knowledge of it.

It is Robson (2010) who reflects on the history of professions and still emphasises that professions are identified through looking into characteristics of professionalism, specialist intellectual knowledge and a self-governing body. It is important to note though that these attributes were, however, derived from the high status professions such as medicine that tended to meet the given criteria (Robson, 2010). The latter researcher indicates that professions have sources of social prestige. In a study that Robson undertook in the United Kingdom in which he focused on professional challenges for further education teachers, he discusses among other issues, sources of professional prestige and indicates that although those that she discusses are not the only factors that should be considered, they are all key to an understanding of the relative status of professions. The concepts are in his view 'social closure', 'professional knowledge' and 'autonomy'. Practising professionals are in his view primarily concerned with protecting their interest as a group and controlling entry to their ranks to preserve their autonomy.

These views imply that teacher educators, like other professionals, are expected to undergo training that is specific to their career if they are to be classified as professionals. The works of Ryan (1974) and Korthagen, Loughran and Lunenbeg (2005) indicate that the nature of teaching about teaching and/or teaching others how to teach, demands skills, expertise and knowledge that cannot be taken for granted. Related to undergoing specialised training, as observed by Clarke (2001), is a claim that professionals need to be certified prior to practising in the field. This observation suggests that to be declared a professional one is required to demonstrate a satisfactory level of competence within an area of specialisation or a given profession.

There are arguments that indicate that the nature of teaching about teaching and/or teaching others how to teach is very complex. This view is expressed in the work of Korthagen, Loughran and Lunenbeg (2005), who suggest that teaching is complex and consequently a teaching profession is similarly complex. Shulman (2004), a scholar who has done extensive work on professional knowledge, discusses the word 'complex' in the context of teacher education through comparing it to medicine as a field of study that deals with people:

The practice of teaching involves a far more complex task environment than does that of medicine. The teacher is confronted, not with a single patient, but with a classroom filled with 25 to 35 youngsters. The teacher's goals are multiple; the school's obligations far from unitary. Even in the ubiquitous primary reading group, the teacher must simultaneously be concerned with the learning of decoding skills as well as comprehension, with motivation and love of reading as well as word-attack, and must both monitor the performances of the six to eight students in front of her while not losing touch with the other two dozen in the room. ... The only time a physician could possibly encounter a situation of comparable complexity would be in the emergency room of a hospital during or after a natural disaster (p.258).

The same view can be extended to teacher educators in that they too teach. While the large number of student teachers or a large class size could be a challenge to teacher educators, the work of the teacher educator is even more complex. Teacher educators have to think not only of their own students but also of those that student teachers will have to teach. Therefore have to equip their students with knowledge and skills that will enable them to cope with their challenging world of teaching.

There are, however, other professions outside the education arena which have been represented in the image of those who are its members. Professionals tend to advance their interests and will argue that their profession has a strong technical culture with specialised knowledge base and standards that are shared by its members. Hargreaves (2000) gives as an example, the work of Etzioni that was reported in 1969. Etzioni (1969) describes professions pointing to some as semi-professions. Hargreaves concludes that a profession has a service ethic, commitment to clients' needs, "a firm monopoly over service, long periods of training, and high degrees of autonomy" (p.152). Most significantly, Eraut (1994) argues that "control of the profession of teacher education is in the hands of the profession, and it is the responsibility of its members to protect the clients against incompetence. The clients are many; student teachers, the teaching profession, children, parents and the society as a whole" (p.2). Professionals are known to have a unique knowledge base.

There are some researchers who have conducted studies in the area of teacher educators as professionals (Cole, 1999). Cole conducted a study over a period of 3 years and focused on the pre-tenure professional in Canada. In conducting the study, Cole (1999) used a life history perspective approach involving seven participants, one male and six female pre-tenure faculty members working in different Canadian teacher education institutions. The said study established that despite facing numerous challenges they were committed to their work and had a desire to transform for purposes relevant to their new portfolios. They were also found to bring to their teacher education classrooms certain attributes, including values, beliefs and knowledge of good teaching that usually contrast starkly with the traditions and expectations of the teacher education classroom. Cole (1999) further found that teacher educators who enter teacher education institutions with this type of background tend to have as their priority pedagogical reform. In contrast to the work of researchers who questioned the extent to which teacher educators can be considered to be professional, Cole's work suggests the need to look into the experiences that new teacher educators bring to the teacher education institutions. Perhaps these experiences, if properly analysed, could be used to develop indicators of a teacher educator's profession.

One of the major challenges facing teacher educators is the fact that besides teaching and undertaking other related duties such as supervising instruction, they are required to carry out research. Lunenberg and Willemse (2006) who have established that research is one of the areas that teacher educators find challenging, studied the value of engaging in research in the teacher educators' context. They recommend that there is need for teacher educators to undertake research that focuses on their unique practices and on valuing their personal experience. These arguments are based on their understanding that research could enhance collective learning among teacher educators. Research would encourage them to collaborate, jointly reflect on research design and, most importantly, they would write for the community of teacher educators. Therefore the emergence of self-study research, which has been in the education arena in some parts of the world for more than 15 years, is likely to address the concern that there is a lack of research carried out by teacher educators themselves.

On the whole there seems to be varying views as to the extent to which teacher education can be classified as a profession, indicating the need for teacher educators themselves to engage in research and giving clear descriptions of what it entails to be a professional in this field. Engaging in research on the professional teacher

educator would be expounding on the work that has already been undertaken by researchers such as Cole (1999).

More importantly, this could lead to formalising acceptance of the profession and consequently its recognition. It is, however, important to acknowledge that teacher education as a field of study or discipline is improving in a number of areas in other parts of the world. In particular there are attempts towards offering formal education to prospective teacher educators, and developments towards producing modules that they can use to improve their own teaching. Significantly, teacher educators are engaging in research using the self-study approach.

Looking into possible conjectures regarding recent landscapes of teacher education, Clarke (2001) charted the emergence of journals, reference books and public meetings as single entities, with each representing developments of legitimate outlets for work in teacher education. He argues that these “indicate a genuine interest by teacher educators to construct and disseminate knowledge to advance the field of teacher education and to bring increasing coherence to the field” (p.603). Clarke (2001) concludes that, with the developments charted on the landscape of teacher education he reviewed, there exists a possibility that teacher education is approaching the point where, in the not so distant future, it will be recognised as a field of study. Therefore it remains to be seen

... if the institutional homes of faculties of education will simultaneously support the roles of ‘scholar’ and ‘teacher educator’. It is hoped that the despair that pre-tenure faculty faced in earlier days, as they shouldered the burden of ‘teacher education’ ... with little time to establish viable research programmes, is vanishing as we enter the new millennium (p.610).

The issue of recognition seems to be based on what Clarke refers to as ‘critical points’ in teacher education, some of which may be applicable to the current study. While in Clarke’s context, scholarly work is recognised, and he concludes his paper with an argument that teacher education as a field of study is approaching a “win-win” situation; it is important to note that while in the developed world this might be the case there is still a long way to go to attain a similar recognition in some of the developing countries. This is particularly so in the context in which the current study was undertaken.

1.6 Transition from Teacher to Teacher Educator

Teacher education has been identified as one of the channels for producing future teacher educators; therefore teacher education has ample opportunities for the

education of prospective teacher educators in formal institutions. Dinkelman, Margolis and Sikkenga (2006) were involved in studies, which confirmed that teacher education is facilitated by people who began their career as either primary or secondary school teachers. These researchers share their research on transition from being a teacher to becoming a teacher educator. Dinkelman et al. (2006), share the work that was carried out by Tom in 1997. According to Dinkelman, Tom (1997) wrote about transition from school classrooms to university-based teacher educator. Transition between the two worlds of practising teachers sometimes happens as teachers enrol as graduate students in a teacher education institution. Enrolling in a school or faculty of education at the graduate level contributes to the creation of teacher educators as they tend to work very closely with their professors at this level.

Indirectly therefore graduate students are inducted into becoming teacher educators from within the institutions in which they are registered as students. The study by Dinkelman et al. (2006) addressed, among other things, the question: What institutional and contextual challenges and supports are experienced by those moving from classroom teaching to university-based teacher education roles? One of the findings was the impact of institutional context on their work: "There are explicit and implicit sets of norms, morals, messages, supports, and requirements established by the university's graduate programme in education and by the teacher education programme in which they worked" (p.16-17).

The teacher educators who participated in this study acknowledged the powerful dimension of the experiences provided within an institutional context. It was in this context that they had an opportunity to grow, as they negotiated the move from their own secondary classrooms to university education positions. They further acknowledged that the university climate worked in various ways to both support and challenge them, especially during the transition period. They admitted that working with professors in institutions of higher learning provide a very different context from the one that teachers tend to be familiar with. However, there are some challenges. The universities' contexts are shaped by the research orientation of their graduate programmes and there are therefore mixed signals about the value of their work. Most significantly, Dinkelman et al., (2006) noted that institutional support was not easy to come by, except in situations where a professional seemed to engage in research-oriented work.

It was in this context that the research participants eventually worked out approaches to the competing responsibilities that they encountered. The approaches they developed assisted them in the transition from teacher to teacher educator. Most

significantly, the involvement in the world of teacher educators while one is a student at the graduate level brings a realisation that the world of teacher education differs from that of a school teacher.

Working in teacher education institutions therefore provides some learning experience. Dinkelman et al. (2006), for example, learned that there is credibility in practising what they teach and, most importantly, in accepting that they were no longer teachers but teacher educators. Working in the context in which there were numerous challenges but determined to become teacher educators, they found that they had to survive. They eventually developed stronger identities as teacher educators.

There is a clear relationship between the process that Dinkelman and colleagues went through as graduate students working with a university-based professor and what Schempp (1987), in recognising the work of Lortie (1975), refers to as 'the apprenticeship-of-observation'. An apprentice in this context learns the skills of teaching in action and does so in an informal way. Such a person may have to use his/her discretion regarding what works better. Schempp (1987) refers to research by Lortie, several decades earlier, into 'the apprenticeship-of-observation' as core to learning to become a teacher. In Schempp's view Lortie's work actually indicated that students, through staying in classrooms for many years, informally learn about teaching. This conclusion is in line with the study by Dinkelman et al. (2006) in that prospective teacher educators who worked with their professors learned the art of teacher education through becoming assistants to their postgraduate professors, and subsequently observing them, even though they did so informally. Schempp (1987) indicates that:

The apprenticeship begins the process of socialization by acquainting the student with the task of teaching and developing an identification with teachers. The apprenticeship, however, does not appear to lay the foundation for informed orientation towards the work of teachers. The individualistic preconceptions of teaching, grown firm from many years in public schools, hold the strength to weather the undergraduate experience with little change. They are carried into and even verified by the workplace of teaching (p.3).

Based on the content of this section on transiting from teacher to teacher educator, it can be concluded that the education of teacher educators and need for this cadre of professionals to engage in research are of paramount importance. The studies quoted in this section point to some form of training, regardless of whether it is formal or apprenticeship-based, already taking place in some institutions.

Researchers such as Clandinin and Connely (1995) have established that experience plays a significant role in helping teacher educators learn a number of skills on the job that enable them to do their work. Additionally, as pointed out in the study undertaken by Dinkelman et al. (2006), learning as an apprentice through attachment or working with a university-based teacher educator adds value to those intending to become teacher educators. These developments indicate that teacher education, especially as it deals with teacher educators, is developing.

1.7 Formal Programmes and Courses for Teacher Educators

As Kremer-Hayon and Zuzovky (1995) point out, there is a need for teacher educators to undergo formal professional training, an argument they base on the characteristics of teachers who become teacher educators. The emphasis is that success in teaching does not necessarily mean success in educating teachers, and there is no teacher education course to prepare teacher educators in higher education on how to instruct and support student teachers. Additionally, as pointed out by Calderhead and Shorrock (1997), “the experience that teacher educators have acquired has been developed through their own personal experience, and has often not been shared with colleagues or subjected to any open and critical scrutiny” (p.207). Weisterin and Merges (1991) add another dimension to this argument in a study that showed that teacher educators, in their teaching, tend to focus primarily on presenting course materials, instructional strategies for communicating content effectively, and on strategies for teaching students how to learn content.

Although most research studies have revealed absence of formal education for teacher educators, there are some exceptions. Harris (2003) has established that there are institutions that have developed programmes at PhD level for prospective teacher educators. These programmes are offered in some universities in the United States of America (USA). Thus, besides having a list of courses for a teacher education programme, prospective teacher educators are required to have five years of teaching experience before they enrol. In her study Harris (2003) found that a small number of institutions have designed programmes that could, to some extent, help to prepare teacher educators. In a paper presented at the Annual Meeting of the American Educational Research Association, Harris (2003) reports on studies carried out in the USA. The first looked into doctoral programmes which offered courses for prospective teacher educators, the second into knowledge and experience desired by the “markets” for teacher educators. While Harris concludes that the results of the two studies indicate that “only a small set of doctoral institutions have a terminal

degree programme specifically to prepare teacher educators” (p.1), there were proposals about the possible curriculum for prospective teacher educators:

- Curriculum theory
- Research in teaching
- Theories/strategies of instruction and classroom management
- Research in teacher education
- Instructional design
- Evaluation of education programmes
- Supervision/mentoring of new/pre-service teachers
- Teacher education policy
- Teacher education programmes
- Professional development
- Instruction in higher education
- Internship in supervising new/pre-service teacher
- Internship in teacher education.

While the suggested topics appear relevant to the education of teacher educators, the relevance of these courses has not been fully tested or piloted as constituting a programme to be offered by teacher education institutions. Therefore the challenge for designing programmes for teacher educators is still unresolved, implying that the majority of teacher educators will continue to learn from their workplaces and/or through experience. A holistic view of studies that evaluated trained teacher educators would probably illustrate the value of formal training juxtaposed with experiential knowledge.

This section has examined developments leading to the formal education of teacher educators by institutions which offer programmes at PhD level. It is now necessary to look at the value attached to learning to teach teachers while they are working.

1.8 Learning in the Workplace

Research indicates that learning through experience or in the workplace can provide learning opportunities. Eraut and Hirsh (2007) worked on the significance of workplace learning for individual groups and organisations, and discussed the Dreyfus model of progression. Their work, which makes reference to studies undertaken before the production of their module 9, takes that of Dall’Alba and Sandberg (2006) further in that they articulate in greater detail how individuals learn in the workplace. Moreover, they include factors that enhance or constrain such

learning. In a typology of early career learning they discuss work processes with learning as a by-product, such as trying things out and learning from the experience; learning activities located within work or learning processes including participation in conferences; and participating in short courses and learning processes at or near the workplace.

The work of Eraut and Hirsh (2007) is related to the current research. It focuses on the significance of workplace learning for individuals, groups and organisations. These authors note that

people are engaged in learning in different ways and in different contexts; but they do not recognise much of this without being prompted to reflect on particular types of experience or specific changes in their capabilities. Hence attributions of learning to particular experiences may be unreliable unless they are accompanied by detailed narratives; and the influence of prior learning often remains hidden or even unconscious (p.3).

Eraut and Hirsh (2007) argue that occupations require various types of knowledge. These include generic and specialised codified knowledge and practical knowledge. Therefore, while individuals enter their workplace with knowledge from their training institutions, as they engage in their jobs they progress in such a manner that they link the job expectations with the knowledge they enter with and in the process attain certain levels of professional progression. Eraut and Hirsh (2007) also make reference to the Dreyfus model of progression also discussed by Dall’Alba in the following paragraph. Reference is made here to Eraut and Hirsh’s work on learning in the workplace precisely because the salient question of this particular study is about where teacher educators draw their professional knowledge from, given that the majority of those who participated in the study whose findings are reported in this thesis had not received codified knowledge in the context of teaching teachers.

Dall’Alba and Sandberg (2006), in their review of education research, looked into empirical studies in which a Dreyfus model had been used. It is a model that, according to these authors, indicates that acquisition in each new area typically proceeds through five skill levels: novice, advanced beginner, competent, proficient, and expert. They conclude that not all practitioners achieve expert status. Most importantly, they argue that advanced skill levels cannot be achieved by acquiring context-free knowledge and skills, a point which suggests that work-related context facilitates learning or improving of knowledge and skills acquired. Dall’Alba and Sandberg (2006), make reference to other research in previous models of skill acquisition. They indicate that the “Dreyfus and Dreyfus (1996) and Dreyfus (2002) model highlighted the progression that accompanies experience, the situational

character of professional skill, and know-how that extends beyond rational deliberations” (p.405). While Dall’Alba and Sandberg (2006) acknowledge the Dreyfus and Dreyfus contribution, they are of the view that the model has some limitations as it tends to conceal some fundamental aspects of professional skill development.

Based on their analysis of Dreyfus and Dreyfus’ contribution, Dall’Alba and Sandberg (2006) argue that a fundamental aspect of professional skill development is the actual understanding of the practice itself. In their own words “the way in which professionals understand and perform their practice forms the basis for professional skills and its development” (p.405). The work by various researchers on skills attained in workplaces, highlighting that professionals move from a certain level to another, for example, from novice to expert, indicates that formal education lays the foundation for professional advancement. However, there is more work outside formal education that professionals have to engage in if they are to acquire more context-based knowledge and skills, and if they are to advance or progress in their fields of studies from one level to another.

Some researchers (Stuart, Akyeampong & Croft, 2009) view learning on the job as still needing to be complemented with appropriate materials that can serve as an analytical frame for understanding practice. They ventured into producing a sourcebook for use by teacher educators. This sourcebook can help teacher educators to improve their knowledge and skills. It covers pertinent topics, such as learning in teacher education, student teachers as adult learners, the pedagogy for teacher education, assessing teacher learning, analysis of teacher education curriculum, the design and development of teacher education programmes and improving the practice of teacher educators.

The production of a sourcebook relevant to the professional development of teacher educators signals developments in the teacher educator’s field of study. The sourcebook is written in simple language, has activities, and can be used by teacher educators independently. The pedagogy for teacher education is one of the chapters that are user-friendly and perhaps most relevant to actual teaching. It covers the methods of teaching that teacher educators could test and use, depending on the context in which they operate. The sourcebook is structured in such a manner that it provides prospects for teacher educators who will use it to reflect on their use of the various proposed methods of teaching.

This section, while it does not rule out the value of formal training, articulates the value of workplace experience. It is in the workplace that teacher educators have ample opportunities to learn how to teach teachers, to research their own teaching and to use available materials to support their work. The use of relevant materials to support their teaching should provide guidance for teacher educators to reflect on critical aspects such as the use of appropriate pedagogy for teaching student teachers. Shulman (2004) summarises the arguments about workplace learning smartly by pointing out that if professionals were to actively

... connect learning with service, with practice, with application, and were further to capture that practice in a kind of pedagogy that uses cases and case methods in ways analogous to some of the ways we use them for professional preparation, we would not only achieve the moral ends of service, we would very likely do better at overcoming the challenges to liberal understanding. Through service, through application, through rendering their learning far more active, reflective, and collaborative, students would actually learn more liberally, understand what they have learned more deeply, and develop the capacity to use what they have learned in the service of their communities (p.565).

1.9 The Pedagogy of Teacher Education

The concept “pedagogy of teacher education” has been studied and different perspectives are presented. Stuart et al. (2009), focus on possible pedagogies that can be used in the teaching of student teachers. Loughran’s (2007) work on enacting a pedagogy of teacher education goes deeper into how student teachers can be challenged as teacher educators to enact the pedagogy of teacher education, and how they themselves can learn from the process of teaching and from researching their work. Loughran (2007) argues that endeavouring to act in ways that are responsive to both teaching and learning about teaching perspectives is indispensable in enacting a pedagogy of teacher education. He articulates enacting a pedagogy of teacher education as requiring:

a deep understanding of practice through researching practice. In order to develop such a deep understanding, it is important not to be constrained by a teacher educator’s perspective but to actively seek to better understand the perspective of students of teaching. By drawing appropriately on both of these perspectives, the sometimes contradictory and competing agendas and insights into the ways in which teaching is conceptualized and practised might then influence the way in which teaching and learning about teaching might be articulated and portrayed (p.1).

Advocating for researching teacher education using a self-study approach as suggested by Loughran (2007) adds to Shulman’s (2004) argument that teaching is a complex undertaking. This view is based on Loughran’s contention that self-study of teacher education practices has contributed to revealing some aspects of teaching

and learning about teaching. Loughran (2007) concludes that the discovery of self-study research has, due to the applicability of this research paradigm in the context of teacher educators, contributed immensely to developments in teacher education.

As the literature review chapter of the current study shows, there are many other teacher educators who confirm that the self-study research has proved helpful to teacher educators. This is particularly so for those who are out to improve their world of work, particularly through researching the pedagogy of teacher educators. Bullock (2007) points to the value of researching one's work in the context of teacher education, while Russell (2007) articulates a pedagogy of teacher education from his perspective on the following:

- (a) Modelling ... educational values, implicitly and explicitly ("walking my talk");
- (b) naming features of school and university culture early and often;
- (c) listening to (own) students and playing what they tell (him) back to them as a way of challenging them to clarify issues and assumptions; and
- (d) building on their practicum experiences, rather than attempting to talk over the experience gap that inevitably separates (his) perspective from theirs (p.189).

1.10 Rationale and Objectives of the Study

In the introduction section of this chapter, particularly the section on the statement of the problem, my academic context, I allude to a number of issues that indicate motivation for carrying out the study. The rationale for the study concretises the motivation.

1.10.1 *The Rationale for the Study*

The professional preparation of teacher educators can be provided through formal training. It gives trainees an opportunity to acquire professional knowledge, skills, competencies and attitudes that are unlikely to be acquired through experiential learning alone. In Lesotho, and in many other parts of the world, teacher educators have not received formal training that would equip them with a professional knowledge base that is foundational for their task of educating prospective teachers. Studies on teacher educators have been undertaken, covering a wide range of issues that include career paths for teacher educators (Lewin & Stuart, 2003). A critical analysis of being in a career as teacher educator "if I had it to do all over again ..." by Ryan (1974) reveals the need for a structured career path for teacher educators. However, there is little empirical evidence of the sources of professional

knowledge for teacher educators. Insights into the nature of knowledge acquired and constructed through involvement in the teaching of student teachers and how it is used are not well understood, hence the need to investigate these aspects of the learning experience.

There is a need to establish empirically what constitutes professional knowledge in the context of teacher education. The fact that the majority of the Lesotho teacher educators have not been trained for teaching teachers implies that their sources of professional knowledge could be situated in the college or university lecture halls and seminar rooms, and in the context in which they perform their task (Clandinin & Connelly, 1995). However, the scarcity of empirical evidence about their sources of professional knowledge limits the use of research-based information in teacher education institutions. Relevant information should facilitate the conceptualisation of knowledge that forms the foundation of the education of teacher educators. This is particularly so in the context in which skills, expertise and knowledge on teaching about teaching have not been carefully examined, articulated or communicated, so that the significance of teacher educators might be more appropriately highlighted and understood within the profession (Murray and Male 2005).

Teacher education institutions, particularly with regard to staff appraisal, qualification frameworks and standard-setting, tend to use set criteria to assess staff. Currently in Lesotho, even in the context of the 2004 Higher Education Bill, teacher education institutions that hire teacher educators do not have criteria for assessing their suitability for the work they are employed to do. There is need to establish what constitutes professional knowledge in the context of teacher educators if strategies for assessing and consequently enhancing their professional work are to be professionally employed. Furthermore, lack of empirical evidence on professional knowledge in the context of teacher education negatively impacts on efforts aimed at facilitating identification and designing interventions to improve the existing context as regards knowledge, skills and practices in teacher education in general. A body of knowledge that constitutes teacher educators' professional knowledge is not well articulated. Classifying the existing knowledge and the sources of their knowledge might suggest ways of broadening and deepening their professional development.

Description of the concept *teacher educator* is grounded in the work these educators do, yet such a concept is not explicitly based on a repertoire of knowledge and skills they possess. There is therefore a need to make explicit what informs the teacher educators' knowledge base so that they themselves can appreciate and understand the magnitude of the task entrusted upon them. Thus, investment in educating

teacher educators could yield considerable institutional returns, and is therefore critical for preparing them for the complex task of educating prospective teachers.

1.10.2 Objectives and Research Questions

Objectives of the Study

The major objective of this study is to investigate the sources and application of professional knowledge among teacher educators. It is to determine what the sources of professional knowledge are for teacher educators, the extent to which they construct professional knowledge and how they apply them.

Research questions

The following questions guided the study:

Key research question

What are the sources and application of professional knowledge among teacher educators?

Specific research questions:

What are the sources of professional knowledge among teacher educators?

What professional knowledge do teacher educators construct and how do they construct it?

How do teacher educators enact professional knowledge?

How do teacher educators model professional knowledge?

1.11 Conclusion

I conclude this chapter by returning to the theme in which it is grounded. It is a chapter that is grounded in contexts; my context, the national and the international contexts in which teacher education is being practised and teacher educators practise. These contexts present the background in which the study was envisioned or created in my mind; although teacher educators are individuals operating in unique contexts, they relate to others at national and international levels. The linking theme therefore is professional knowledge as it pertains to teacher educators. Therefore, regardless of the varying contexts in which they are located and practise, this chapter has established that there is some level of similarity. It is through research undertaken in the context of teacher education that this chapter reveals that there are aspects that identify teacher educators as a group with certain features.

In particular, as can be deduced from the content of this chapter, with the exception of those who enrolled in post graduate programmes with courses on teacher education, teacher educators have not undergone formal training that specifically prepares them for educating student teachers. There are therefore great challenges regarding the education of teacher educators and the extent to which their career can be recognised as a distinct or well-defined profession. Studies of the teacher educators' sources of professional knowledge have to be carried out to resolve challenges posed by the lack of empirical research in this area.

It can also be deduced that workplace experience is regarded as adding value to teacher educators, as it does to any other profession, including those that require formal training. However, an analysis of the impact of work-based experience and how it contributes to the enhancement of professional knowledge, particularly in the context of Lesotho, remains a challenge.

This chapter has helped me establish the situation as it prevails in various contexts in which teacher educators practise, have undertaken research or have been researched. The issue of recognition of the profession is fully addressed in research undertaken in this area. Therefore the rest of the chapters of this thesis are an extension of the major objective of this research.

- Chapter 2 is a methodology chapter that significantly outlines the procedures followed in searching for the answer to the questions addressed by the study. This chapter details the methodology that guided the path I followed in undertaking the study. The methodology is grounded in established theories.
- Chapter 3 focuses on reviewed literature and ensures that each of the areas that have been captured through the research questions in this study is addressed. This chapter helps address my concern raised through the research questions. It is presented in a manner that highlights the main questions that the study aimed at finding answers to.
- In considering the presentation of the findings in Chapter 4, I took the liberty to have my interpretation infused fully cognisant of the fact that the chapter that follows elaborates on this one. In this way the “narrative” emerged as each data set relating to each research question was presented, analysed and interpreted. This chapter is, as is the case with all the material presented in the pre-data-collection, organised according to the broad areas that the study focuses on: sources and application of professional knowledge.

- I discuss the results of the research in Chapter 5. In this chapter I present an interpretation of the data. My intention here is to provide potential readers with information so that they can freely form their own interpretation. It is also in this chapter that I take advantage of the literature I reviewed and include it for a number of reasons. More specifically, I include the literature as a point of reference for the discussion of the new data. I draw the balance between the literature or theories that have aspects of the results of this study in as far as there is relevance with other studies or theories and those that are not relevant. In the final sections of this chapter I point to limitations of this study and the need for future research in the area of professional knowledge among teacher educators.
- It is in the conclusions and research implications chapter that I reflect on the research questions that motivated this particular study and then I draw definite conclusions. In this regard I present my final position as an answer to the research question. The implications refer to what the data imply for teacher education institutions and the teacher educators themselves. I deliberately avoid presenting recommendations as it would be inappropriate to make recommendations. A PhD study is different from consultancy work where clients tend to demand recommendations. It is in this chapter that I actually link findings emanating from this study to current discourses or debates in teacher education and education systems.

CHAPTER 2

2 METHODOLOGY

The process of autobiography is “an act of writing perched in the present, gazing backwards into the past while poised ready for flight into the future” (Abbs, 1974 p.7).

Contents
2.1. Introduction
2.2. Data Collection
2.3. Data Analysis
2.4. Conclusions

2.1 Introduction

The research methodology adopted in undertaking the current research is qualitative in approach, following a decision influenced by an understanding that finding an answer to the overarching question: *What are the sources and application of professional knowledge among teacher educators?* The answer to this complex research question could not be found by merely asking questions following a quantitative approach. I therefore concur with researchers who argue that there are times when it is appropriate to use qualitative research. In fact Creswell (2007) puts it more succinctly when he argues that researchers conduct qualitative research because a problem or issue needs to be explored.

This exploration is needed in turn, because of a need to study a group or population, identify variables that can then be measured, or hear silenced voices. ... [in qualitative research] we need a complex, detailed understanding of an issue. This detail can only be established by talking directly with people, unencumbered by what we expect to find or what we have read in the literature (pp. 39-40).

Creswell's arguments are therefore similar to those of Nieuwenhuis (2007a). The latter author is of the view that qualitative research is naturalistic, in that it is based on approaches that tend to seek an understanding of the phenomena in their natural context (Nieuwenhuis, 2007a, Nieuwenhuis 2007b). Nieuwenhuis (2007a) further points

out that investigating human activities in terms of meanings necessitates looking into why the researched say what they say and act in the way they do. In that regard one may better understand the phenomenon that is being studied through on-site visits and conversations. Nieuwenhuis (2007a) says the following:

In qualitative research we maintain that knowledge should emerge out of the local context and should privilege the voice of the “insider”, taking into account what people say, do and feel, and how they make meaning of the phenomena under research investigation. Patterns, trends and themes should therefore emerge from the research process, and the role of the researcher should be to understand real-life situations from the point of view of the insider, rather than from the point of view of the outsider. The emphasis is thus placed on the participants’ frame of reference and how they see things from within. It should not be the researcher who decides what counts as knowledge, but what the participants view as knowledge, emerging from interactions between the participants and the researcher (p.56).

The most relevant data collection techniques for the current study therefore were observation and narrative. The study explores the world of the research participants through observing individuals’ actions and asking them about professional contexts in the environment in which they are located and familiar with. Although I expound on each of these techniques later, a brief explanation of what each entails is in order at this point. As pointed out by McMillan and Schumacher (2006) the major benefit of an observation method is that it relies on a researcher’s seeing and hearing things and recording the observations instead of relying on participants’ responding to questions. Using a narrative as a method as is the case in this study, is that, while it is, as pointed out by Rogan and De Kock (2005), a complex method of inquiry, it is still a technique that can help researchers collect information in a naturalistic manner through asking research participants to share their life histories or stories. Hatch and Wisneiwski (1992) add that narrative inquiry involves sharing narrative knowledge through the telling of a story as a way of knowing the important to life history research.

2.1.1 Interpretivist Research Paradigm

It is important here to note that research paradigms of various types have been developed over the years. They range from positivism, post-position, critical theory and constructivism. Nieuwenhuis (2007a) cautions though that other researchers have suggested three categories depending on the research epistemology. These include positivist, interpretive and critical. He further indicates that in practice it is difficult to draw

the line between the different approaches as most have evolved into hybrid forms that overlap and/or complement other approaches. As I stipulate in the following paragraph I settled for the interpretivist paradigm because of its relevance to the current study.

The relevance of an interpretivist paradigm to the context of the current study is that it enables the researcher to capture and analyse participants' actions, beliefs, thoughts and perceptions (Henning, Van Rensburg & Smit 2004, McMillan & Schumacher, 2006; Nieuwenhuis, 2007a; Choi, 2008). Furthermore, it is an "attempt to understand phenomena through the meanings that people assign to them" (Nieuwenhuis, 2007, p. 58a). Such assumptions include the fact that human life can only be understood from within; that social life is a distinctively human product; that the human mind is the purposive source of origin of meaning; that human behaviour is affected by knowledge of the social world; and that the social world does not exist independently of human knowledge (Nieuwenhuis, 2007a). It is these assumptions that focus on the human being as central to data gathering that helped me contextualise the study as it concerns teacher educators working in an education faculty in a university. Their context is the university in its broad terms, including students, colleagues, classrooms of student teachers and the community.

It was clear that I would be in a position to understand how teacher educators construct knowledge within their contexts, and that this would only be possible as they shared the interpretations and meanings they attach to their professional lives in the context in which those lives are lived. My understanding is that contexts are unique and that in order to understand and interpret the meanings the participants make about their lives it is necessary to be in that context as a researcher. I draw this understanding from Nieuwenhuis's (2007a) argument that social life is a distinctively human product. In essence individuals can be understood in relation to the context in which they are found.

Therefore, using an interpretivist paradigm, and through interacting with the research participants, a researcher is in a better position to comprehend the findings that would emerge from engagement. This helped me appreciate that the behaviour portrayed by the research participants during the process of undertaking the study could be a result of the knowledge of their own context. Such knowledge might have affected the behaviour observed in gathering the data. Individual research participants, while they are employed to teach student teachers, behave differently in carrying out a similar activity. For example, their lecturing styles differ. The difference only helps to illustrate that peoples'

behaviours differ. Finally, the interpretivist paradigm helped me to realise that the context in which the research participants work also depends on an engagement with them and their own construction of knowledge in the research setting. In this regard my knowledge and understanding of the topic influenced the type of questions that the study is addressing and the manner in which I proceeded to gather the data (Nieuwenhuis, 2007a).

Therefore, the interpretivist perspective as articulated by researchers such as Nieuwenhuis (2007a) relates to how I visualised and planned to undertake my research. With this knowledge listening more carefully to the research participants as they shared their professional lives and paying more attention to my role as a researcher proved beneficial. The question I constantly asked after listening to the individuals narrate their lived professional lives was: *So what did you learn from that experience?* This question was important in situations or cases where the answer to the question did not seem to be fully addressed in the narrations. The participants' situations were observed as they unfolded, particularly at the level of the lecture halls. Observations were made with little interference and, in the process, valuable data was obtained.

2.1.2 The Case Study of the Faculty of Education at the NUL

This study is classified as a case study that is a detailed examination of one setting or a single subject (Bogdan & Biklen, 1992). The Faculty of Education at the University was, at the time of undertaking the study, the only institution of higher learning that educates teachers for the senior secondary school system in Lesotho; therefore it was mandated also to train teacher educators for other levels of teacher education in the country. Although some of such programmes have been suspended, this Faculty for example, used to offer a Diploma in Education for educators who assume the responsibility of supervising student teachers' during their teaching practice for the Lesotho College of Education. Given the focus of the study professional knowledge could be best researched at this institution of higher learning in Lesotho.

Within the faculty are lecturers characterised by different disciplines and allocated different areas or subjects to teach. Initially the focus was going to be on teacher educators in the department of Educational Foundations, as its lecturers were considered responsible for educating the next generation of teachers. However, a question posed by one of the professors at the time of presenting the research proposal

persuaded me to include participants from the other two departments in the Faculty, namely Science Education and Language and Social Education. The question posed indicated that other teacher education departments involve the teaching of content or curriculum studies, and they are therefore equally responsible for educating student teachers. The emphasis was on the value of looking into Pedagogical Content Knowledge (PCK) that is considered to be more the responsibility of the curriculum studies departments than that of educational foundations.

In the final analysis, while this is a single case study the inclusion of the three departments, namely Educational Foundations (EDF), Science Education (Sc. Education) and Languages and Social Education (LASED), facilitated diversity within the current research project. There was therefore a mix of participants who offer curriculum studies in the areas of Language and Social Education, Mathematics and Science Education, and those teaching the professional courses or educational foundations, in this case Educational Psychology, Educational Management, Supervision of Instruction and Teaching and Instructional Technology.

Both the institution in which the study was carried out and the research participants were purposefully selected.

2.1.3 Selecting Research Participants

The selection of the appropriate research participants was essential to the practicality of the study, and thus the method of purposive sampling was chosen; the criterion for the selection was that lecturers had to be from the different disciplines mentioned above. The inclusion of areas of specialisation, as discussed in the data analysis chapter, illustrates that there are similarities and divergences in the way the research participants understand and enact their professional engagements. My criteria also included teaching experience, from under 10 years to 20 years and even over 30 years. Gender was one of the criteria that were considered; however, this was possible only for the curriculum departments, since there were no male lecturers in the Department of Educational Foundations. A total of eight teacher educators participated: four from the Department of Educational Foundations, 2 from Science Education and 2 from the Department of Language and Social Education. There were 6 females; 4 with PhDs, 3 with M.Ed. degrees and 1 with an M.Sc. Four of these research participants were subject specialists or curriculum specialists, in English, Geography, Science and Mathematics; 3 were from

Educational Foundations; Educational Management, Instructional Supervision and Counselling, and 1 was in Educational Technology.

The choice of fewer research participants was informed by arguments on purposeful sampling strategies presented by McMillan and Schumacher (2006) as being advantageous. In these researchers' view "purposeful sampling is done to increase the utility of information obtained from small samples. ... The power and logic of purposeful sampling is that a few cases studied in depth yield many insights about the topic, ..." (p.319).

In the case of this study, having individuals in each of the three Faculty of Education departments especially coupled with subject areas, experience and gender served as an important factor. The purposive sampling criteria were followed even in the choice of three out of the eight cases that are used in the discussion chapter as cases in point.

As indicated in the concluding chapter, the discussion chapter is not only a freer section of a research report but it is where researchers have an opportunity to consider all possible interpretations of the data. It is in the discussion chapter that I choose to illustrate and/or elaborate on the cumulative model which seems to have emerged from the interpretation of the data through the use of the selected three cases.

These particular cases, besides the fact that the chosen research participants are based in the three departments, present pertinent issues regarding teacher educators having learned from the experience of educating teachers. As Rogan and de Kock (2005) did in their research, researchers are free to choose research participants deliberately to represent a number of factors within a given society. In my case, and guided by reflexivity as I analysed the data, I deliberately chose the three research participants for the reason that is highlighted in this paragraph. Some sections of their stories presented scenarios that helped me to appreciate the teacher educators' articulation of their experiences for an in-depth analysis.

2.1.4 Triangulation or Crystallisation

Research, regardless of whether one opts for the quantitative or qualitative type, demands that quality be considered as an absolutely important factor. Guarding or ensuring that this study too upholds research requirements and expectations, it was felt that embracing the issues of triangulation and crystallisation was significant in finding a balance of various aspects of collecting data.

2.1.4.1 Triangulation

Triangulation involves a variety of data collection techniques being used, and although qualitative researchers tend to question its relevance, arguing that it is commonly used in quantitative research (Nieuwenhuis, 2007b), they still use it extensively. Triangulation helps researchers, regardless of their research inclinations, to cross-validate data sources, data collection strategies, time period, and theoretical schemes (McMillan & Schumacher, 2006, Miles & Huberman, 1994, Nieuwenhuis, 2007b). Nieuwenhuis (2007b) adds that while triangulation is used in quantitative studies for the confirmation and generalisation of research findings, qualitative researchers cannot ignore the fact that it is a traditional strategy for improving the validity and reliability of research or the evaluation of findings.

In carrying out this study, several data sources were used. These included participants selected from lecturers in different departments of the Faculty of Education. The study also followed a time span, as advocated by McMillan and Schumacher (2006) and Nieuwenhuis (2007b). I spent at least six months collecting data. Methods comprised observation of classroom practice, which facilitated capturing the ways in which teacher educators implement their espoused theories, and gathering data on their life experiences as teacher educators. Data on their life experiences facilitated obtaining their views on their experiences and how those impacted on their professional knowledge and practice. Data in the form of documents was gathered through accessing their curriculum and assessment documents.

As Miles and Huberman (1994) argue, triangulating data is a test for researchers, as the different sources could be inconsistent or even directly conflicting, and that this problem tends to become apparent at the data analysis stage. The major challenge is establishing the extent to which the data helps to corroborate the findings or explain any incongruities as they emerge.

2.1.4.2 Crystallisation

Crystallisation is discussed alongside and/or in contrast to triangulation (Maree, 2007; McMillan & Schumacher, 2006; Nieuwenhuis, 2007b). While triangulation is based on a determined and therefore fixed position, crystallisation provides researchers with a complex and deeper understanding of the phenomenon being studied (Nieuwenhuis (2007b). In the case of this study including triangulation provided an operational

framework. An advantage associated with crystallisation is that it provides researchers with an opportunity to look at the world from a variety of perspectives, and as Richardson (2000) claims, it provides them with a complex and deeper understanding of the phenomenon. With crystallisation one has to be cognizant that contexts are neither fixed nor rigid, but that their fluidity requires changing perspective in manageable ways. The context in which I operated was neither fixed nor rigid. Situations changed and research participants were not always available due to their other commitments. This might explain the difference between the number of teaching practice observations per research participant with some having been more available than others. However, it is critical to bear in mind the caution that it is important to ensure that the findings of the study are credible, such that the same patterns will, as clearly articulated by Nieuwenhuis (2007b), emerge.

The emergent reality is not in the first place a result of some form of measuring. It emerges from the various data gathering techniques and data analyses employed and represents our own reinterpreted understanding of the phenomenon. What we describe as our findings are those which crystallise from the data. This crystallised reality is credible in so far as those reading our data and analysis will be able to see the same emerging pattern, and this adds to the trustworthiness of our research (p.81).

Maree (2007) shares Richardson's (2000) view that crystallisation may be a better lens through which to view various components in qualitative research. This relates to the practice of "validating" results by using multiple methods of data collection and analysis.

Analysis of the current research indicates that the collected data can be merged. For example, responses to the question on understanding of the concept *professional knowledge in the context of teacher educators* can be merged while still reflecting similarities and divergences of the responses but showing peculiarities that may emerge. However, some parts of the data drawn from the individual experiences cannot be merged as flexibility in analysing it without compromising credibility of the research results appears unavoidable. Crystallisation therefore caters for the interpretations that participants give to their varying experiences.

2.1.5 Achieving Acceptable Quality

2.1.5.1 Validity

In conducting the current research a number of strategies were employed with the aim of enhancing validity. Firstly, the literature provided explanations and/or descriptions of terminology used in the current research, thus using established research terminology in developing the research questions. Although my research participants had participated in studies that required them to respond to consultancy research questions conducted by external researchers focusing on programmes such as the teaching practice aspect of teacher education, this was the first time that they were observed in practice and at classroom level. Instruments such as a video camera were used for capturing data in lecture halls and seminar rooms. This equipment was intended to reduce the threat to internal validity, especially the possibility of teacher educators and student teachers ‘performing’ for the study. It was anticipated that performing for the study was high since both the educators and student teachers were familiar to the researcher.

Additionally, though one cannot claim that the use of a technician to assist with videotaping can be compared to having several investigators, as advised by researchers such as Maree (2007), McMillan and Schumacher (2006) the assistance was helpful in sharing the responsibility of collecting data.

Member checking was another strategy used. Although it is not clear what “long term observation” (Maree, 2007) means in terms of months, the time spent in gathering data was extensive, not only the number of months involved but also the number of lessons videotaped. Most research participants were observed between 10 and 20 times while only two were observed fewer than 10 times and only one was available for more than 20 times. The time spent on collecting data added to the extended period and therefore increased the validity.

2.1.5.2 Member Checking

Involving the research participants went beyond just asking them to share their professional life histories and observing them in practice. This justifies my decision to include member checking as a strategy for involving the research participants in this study. I was aware that this was their first opportunity to reflect formally on their professional lives and that it was possible to take introspection even after narrating their

stories, a reality which could facilitate expansion of the draft reports on their shared stories.

The question that emerged after reading their narratives and asking them to validate their narrative was what they thought they learned from their experience as teacher educators. This particular question gave them the opportunity to reflect deeply on their experience of teaching in teacher education. They shared what they felt they had learned which had an impact on how they conduct their teaching of teachers.

The narrative data imparted by the research participants was transcribed, following the guidelines developed prior to collecting data. The transcripts were delivered to the research participants to allow them to validate the data or their narratives. The member checking process aimed at ensuring that the research participants established the extent to which the text represented what they had shared in the narratives. They were also asked to expound on issues that were not fully addressed, without necessarily changing their original stories. At this time it was apparent that experiential knowledge was emerging as an important element of the study; therefore it was important to emphasise the question, “*What have you learnt in your experience/journey of educating student teachers?*” as the participants were requested to authenticate the data. The reason for involving them at this level of the research process was to increase validity and ensure quality standards.

2.1.5.3 Authentic Measures

One of the questions asked by a professor during the presentation of the research proposal to the department of Humanities Education at the University of Pretoria related to whether the sample was not too small. While this was acknowledged as a possible weakness, it was felt that what is lost in size is made up for in diversity. Indeed, the variety of selected members from one faculty and its three departments greatly reduced bias. Gender representation would also guard against bias and provide consistency. This could not be fully achieved, given that there were more female staff members than males in one of the departments. Nevertheless, representation by disciplines counteracted the problem as far as possible.

Since the current research is a case study, it follows that the findings cannot be generalised to other teacher education populations or practices. However, the measures

taken provided authenticity; to the extent that it is anticipated the findings will be credible and have meaning in a similar context.

2.1.5.4 Vulnerability

Although carrying out a study amongst colleagues could expose the researcher to methodological vulnerability, I choose to discuss vulnerability as it concerns the research participants; they are the focus of the study.

Methodologically a variety of data collection instruments to collect both the narrative and the classroom observation data were used. In the process the research participants were exposed to vulnerable situations, particularly at the time of observing them in practice. While all had agreed to be videotaped, some were sensitive to the process. The research participants appeared vulnerable, perhaps because there was more than one person with a video camera at different times in their otherwise private places. Video recording was done by the technician, except on some occasions when this service was not available and I had to step in myself. A tape recorder backed up by a computer was used to type while the research participants told their narratives.

At the level at which they narrated their professional life stories I observed some discomfort, at least with two of the research participants. Therefore capturing their voices was, for these two, an exposure to a vulnerable situation. This was particularly so in situations where an individual was asked a question to which he/she might not have fully provided an answer. The question on conceptualisation of professional knowledge presented a challenge during the pilot stage of this study and continued to do so for a very few number of participants. Three out of the eight would, for example, and in great discomfort, either say, "That question is difficult" or just say, "I don't know". While spontaneity was observed in sharing their life history some of them were not ready to provide the information that was asked.

Although the research participants were exposed to a situation that made some of them appear vulnerable, there was no other way to learn about or understand their practice in reality other than actual observation of their teaching practice. That they had been exposed to a vulnerable situation was, regardless of their varying experiences, notable, and the teacher educators reflected on their teaching practice performance at the time during which they participated in the study. This was illustrated by those who expressed interest in acquiring the videotaped material once the process of analysing the data had

been completed. The reason that was given by the participants who made such requests was that watching the video material would give them an opportunity to reflect on their teaching practice. Reflecting on practice using the video material was something that they had never done before.

2.1.5.5 Ethical Considerations

Due to the probability of the researcher being personally intrusive in the context of research, guidelines regarding informed consent, deception, confidentiality, anonymity, privacy, and caring (McMillan & Schumacher, 2006) were considered. The University of Pretoria was helpful regarding issues of ethical principles; although I was aware that as an individual researcher I was free to adopt established ethical principles, collection of data could only start after the ethics committee had issued a certificate. The same principle applied to the National University of Lesotho, being the host University. The Dean of the Faculty and the Registrar of the University were, in accordance with requirements, also involved; I sought permission which was duly granted. Moreover, the fact that the study involved human beings and professionals, each with his or her values, necessitated negotiations. These were for obtaining their informed consent and assuring them that ethical requirements would be adhered to. All eight research participants studied and agreed through appending their signatures to the informed consent document that detailed how the study was going to be conducted and how confidentiality would be ensured.

Other ethical issues taken into consideration related, firstly, to the topic of the research: “sources and application of professional knowledge among teacher educators”, which concerns, among other things, views on how teacher educators survive without professional training. Since this was of personal and professional interest to me, special attention was paid to the risks of being biased in collecting and in analysing the data. I listened without interjecting as the research participants told their stories. Additionally, although I am not a member of the Faculty staff, I was at the time of conducting the current research teaching a course on “Teaching and Instructional Technology” in the Department of Educational Foundations. I was therefore aware that the risks of bias were quite high, hence the use of a technician for video-taping teacher educators in practice. Thirdly, the discomfort of being videotaped demonstrated by some of the participants necessitated assuring them that the materials would be submitted to the Faculty of Education of the University of Pretoria in line with its ethical review policy. In

order to protect the participants' identities (Maree, 2007) letters of the alphabet were offered for completing the ethics clearance form, though all the participants had submitted preferred names to be used in reporting the findings.

2.2 Data Collection

Data collection was undertaken in phases, with the pilot study being the first and the actual data collection the second. The first phase helped establish the extent to which the topic was researchable, and to find out if teacher educators would be willing to participate. The actual study constituted the second phase.

2.2.1 The First Phase – Piloting the Idea

Seven teacher educators from the Department of Educational Foundations at the National University of Lesotho participated in the pilot study. Although all seven had indicated that they would be interested in participating in the study, due to various reasons only three were available at the time of carrying it out.

Most questions that were used in the guidelines for the pilot study were those to be used during the actual study. Most of the teacher educators who participated in the pilot study did not appear conversant with the term *professional knowledge*. However, the majority expressed interest in participating in the actual study. In their view the benefit to be gained from participating in the pilot phase was that this was the first time they had ever reflected on their work in such a structured manner. Most significantly, they were keen to reflect more on their professional lives through participating in the research.

2.2.2 The Second Phase – Conducting the Study

In undertaking the study a number of procedures were followed, intended to produce the data needed for the study.

2.2.2.1 Data Collection Techniques

Meetings were held with individual research participants to explain the data collection plan. The information discussed in the face-to-face meetings was followed up with a letter detailing the procedure to be followed. This process was intended to ensure that the research participants could refer to the documented information from time to time.

Data collection, in which observations were done and narrative data collected, was conducted over a period of six months, August to December 2007, and January 2008 being the period that the University was in session. This period was divided into classroom observation from August to November 2007, and narrative data collection, during the months of December 2007 to January 2008.

Most research participants were scheduled to teach for one hour, with a few exceptions where some had double periods. The extreme times during which lessons were captured were 07:00 and 18:00. A challenge was that the technician was not easily available during these times, hence, my involvement in the actual video taping of some lessons on those rare occasions.

2.2.2.2 Observation of the Teacher Educators' Teaching Practice

The idea of observing teacher educators in practice was to counteract receiving information solely through self-reported data, in this case narrative data. Most importantly, observation as a qualitative data gathering technique was used to enable the researcher to gain a deeper insight and understanding of the phenomenon being observed (Nieuwenhuis, 2007b). Although classrooms are regarded as private spaces or 'black boxes', the idea was to observe the research participants as they enacted professional knowledge.

The use of the video camera to capture the classroom activities helped reduce weaknesses associated with classroom observation. The major weakness being that observational data collection technique is by its nature highly selective and subjective. Additionally, it has a tendency to focus on a specific event or object but seldom the whole (Nieuwenhuis, 2007b). The issue of observer bias is shared by Macmillan and Schumacher (2006), who further indicate that observation as a data collection technique is costly and time-consuming, that researchers are unable to probe and clarify what they see, and that an observer might have an effect on those observed.

However, McMillan and Schumacher (2006) also see advantages to this approach of collecting data, since observational methods have as their primary advantage that the researcher "does not need to worry about the limitations of self-report bias, social desirability, and response set and that the information is not limited to what can be recalled accurately by the subjects" (p.208). Most importantly, as pointed out by Mercer (1991), there is a need to record very detailed classroom discourse. In doing so, the

behaviour of a research participant can be recorded as it occurs naturally (McMillan & Schumacher, 2006). The advantages spelt out by Macmillan and Schumacher help to convince other researchers that the observational technique is a reliable way of collecting data. In the context of this study there was no way of verifying the research participants' adopted theories about their practical knowledge other than actually observing them in practice.

In order to ensure consistency in capturing and presenting the data, an observation schedule, having the following features was developed:

- 1) Lecturer's instruction (e.g. giving a lecture)
- 2) Specific lecturer's activities (lecture room management and organisation, such as distribution of tasks, materials and standing or sitting in strategic positions)
- 3) Interaction between students and lecturer (e.g. students' questions posed to the lecturer)
- 4) Lecturer and students' interaction (specific to professional knowledge, e.g. "as a student teacher of English Language I expect you to behave in this way")
- 5) Interaction among students (e.g. during group activity)
- 6) Assessment procedures employed
- 7) Instructional strategies used
- 8) Type of instructional media used

2.2.2.3 Data Collection through Narratives

The process of negotiation for involving the educators who participated in this study has already been discussed. However, it is important to revisit this process here, given the sensitivity of using a narrative as a technique for data collection. I negotiated for entry into the field of the research participant aware that telling a story required them to feel free and to have time and mental preparedness to tell their stories. Connelly and Clandinin (1992) emphasise the fact that in narrative inquiry it is critical to negotiate entry into the field situation. This is particularly so in a situation where the researcher and the research participant are going to collaborate in the process. These researchers provide reasons such as that "... the negotiation of entry highlights the way narrative inquiry occurs within relationships among researchers and practitioners" (p.4).

I have already responded to the value of narratives in the context of research. It is in Chapter 1 of this thesis that I start with my own story. I have indicated that researchers such as Rogan and De Kock (2005) and Hatch and Wisniewski (1992) have actually studied or written about narrative inquiry methodology and methods. The research participants who were involved in a study undertaken by Hatch and Wisniewski (1992) saw its values and strengths. A narrative is understood to have as its value a means for understanding the human condition. Narratives are therefore person-centred and tend to be subjective, especially given that the participant's own account may represent a singular strength (Hatch and Wisniewski, 1992).

In this study I employed the narrative data collection technique, cognizant that narratives and autobiographies have, as forms of qualitative research been criticized as stories that lack reliability. However, with arguments raised by researchers such as Clements (1999), Connelly and Clandinin (1992) and Clandinin and Connelly (1995), who argue that storied lives are rarely made available in the public domain, using narratives as a strategy added value to current research. It was helpful to use this technique to complement the observation of teacher educators as they enacted their practical knowledge. Given the experience of using this technique I concur with Clements (1999) who argues that the narrative data collection technique is one of the best methods of collecting data on personal experience, albeit memories can be problematic.

However, the importance of narrative data was confirmed by listening to the research participants talk and use distinctive language as they shared their experiences; watching their body language as they laughed or frowned; hearing them confess that it was the first time that they had to reflect on their professional lives as teacher educators; hearing them share incidences of their first experience in a university classroom; and supporting their stories with incidents of events that were memorable.

Clements (1999) indicates that asking research participants to narrate their lives can be regarded as learning through hindsight. Moreover, Clements's (1999) citation of Abbs (1974) indicates that the process of autobiography is like an "act of writing perched in the present, gazing backwards into the past while poised ready for flight into the future" (p.22).

I have to acknowledge though, as I pointed out in the introductory section of this chapter, that while all the research participants had declared that they would cooperate and were prepared to share accounts of their professional lives, in reality it was not easy for some.

Two participants displayed signs of discomfort in relating their professional life stories. However, patience, probing and listening were strategies that proved helpful. I had to ask them, after transcribing their taped responses, to check their submissions intensively. This problem was experienced regardless of consultation made and explanations given about this particular data collection technique.

However, unlike the case of Hatch and Wisniewski (1992), who learned in a study in which they used narrative as a data collection technique that research participants tend to worry about the vulnerability of subjects of narratives, those participants in the current study who appeared uncomfortable sharing their stories, did not disclose reasons for appearing so. Hatch and Wisniewski's (1992) participants disclosed that exposing oneself to another in the research process involves issues of trust, truth telling, fairness, respect, commitment and justice. For these researchers the major challenge was their authority to interpret a life and the difficulty of keeping the complexity of life such that it was not reduced to simplicity as opposed to a coherent text. This caution was helpful as one engaged in the data collection process.

In order to ensure consistency of data collected from various research participants, guidelines were developed based on the research questions, and the participants asked to study these prior to the time scheduled for the narrative. Additionally, they were informed about the use of a tape recorder for recording their stories. The following are the broad major features of the guidelines (see Appendix I for detailed guidelines):

- 1) Biographic data
- 2) Conceptualisation and/or understanding of key concepts
- 3) A professional journey in an institution of higher learning or teacher education institution:
 - a. Experience within a teacher education institution and/or context:
 - i. Teacher education context
 - ii. Research
 - iii. Classroom practice
 - iv. Supervision of instruction
 - v. Supervision of research projects, theses and dissertations

- vi. Encounter with students and their different abilities
- vii. Development of instructional materials
- viii. Assessment
- ix. Challenges
 - x. Continuing Professional Development
 - xi. Experience as an administrator
 - xii. Participation in national education developments
 - xiii. Participation in conferences and professional development activities
- b. Other learning avenues

4) Support story with unique incidents

2.2.2.4 Data collection through use of documents

Two types of document, namely curriculum in the form of course outlines and assessment in the form of examination papers, were collected. These documents provided written discourse between lecturers and students. Harber (1997) believes that while documentation can be useful in the context of triangulation, documents tend to have as a major limitation to describe what is said rather than what is done. My view, on the one hand, is that course outlines, as much as they describe the lecturer's plan, serve as a mode of communication between the lecturer and the students, and a reference document for both. Both the lecturers and the students communicate about the content of the course outline for the entire academic period during which the course is delivered. Assessment is the culmination of teaching, and analysis of how teacher educators assess their prospective teachers could not be avoided.

2.2.3 Leaving the Field

Leaving the field was necessary as there was no new information generated and the level of data saturation had been reached. Classroom observations for a period of three months ended in not revealing anything new, hence the decision to leave the field work, especially as regards observation of classroom practice. In other cases some participants were not present. In particular, two of the most experienced lecturers were

mostly unavailable for classroom observation, one valid reason being that they were co-teaching courses with colleagues and could not be available during most of the data collection period. In extreme cases some were on leave and therefore not available.

2.2.4 Dilemmas Experienced in Conducting the Research

Avoiding bias was a dilemma, given that the participants were colleagues and therefore being an insider researcher meant confronting pertinent issues of objectivity, impartiality and bias, as well as issues associated with working in familiar settings (Pearlette, 1997). The above-mentioned measures for controlling bias helped address these problems.

The current research project could have benefited from a larger population of teacher educators in the Southern African region; however, a PhD thesis undertaken within time and financial constraints cannot cover as many institutions in which teacher educators are located and practise as one would have wished. Doing so would require sufficient human and financial resources. Settling for fewer members of staff and one institution is therefore one of the limitations of this study.

The decision to reflect on the research journey was informed by two questions asked at two different stages of the current study. The first implied a need for reflecting on “self as a teacher educator”, the second on lessons learnt by the participants and lack of clarity on what they had actually learnt. The question also pointed to the major research question and what was then the preliminary finding, which was that experiential or practical knowledge is the core source of teacher educators’ professional knowledge.

2.3 Data Analysis

This section of the methodology chapter presents the process followed in analysing the data, embarked on after the data collection phase was completed. The process was largely informed by the conceptual framework.

2.3.1 Conceptual Framework

The study adopted Eraut’s conceptualisation of professional knowledge in teacher education. While a large number of teacher education researchers, such as Connelly and Clandinin (1990), Shulman (1987, 1988) and Schön (1983, 1987) have undertaken research on and have critically analysed professional knowledge, Eraut (1994) has studied professional preparation in a wide range of professions, and refers readers to

the context in which knowledge is acquired, constructed and practised. He makes a distinction between academic, organisational and action contexts as they relate to professional knowledge, and then explores the nature of professional knowledge and how professionals acquire and use it from a number of perspectives. The work of Eraut provided a framework for the analysis of empirical research as it relates to the current study.

Eraut (1996) critically analyses professional knowledge as enabling the performance of professional tasks, roles and duties to standards of quality. An understanding of what this concept or construct entails is therefore important. A profession has a systematic knowledge base. Professional knowledge is therefore specialised, firmly bound, scientific and standardised (Schön, 1983). Stiggins (1999) adds that professional knowledge must be public so that it can be communicated among colleagues. This would require establishing methods that can be employed in sharing, verifying and improving it.

Eraut (1994) then maps professional knowledge into “knowing THAT” and “knowing HOW”. He equates knowing “THAT” with propositional or received knowledge, and knowing “HOW” with practical knowledge. The propositional form of knowledge is also known as formal teacher knowledge or, according to Stuart et al. (2009), received knowledge. It entails content or materials and curriculum or programmes. Propositional knowledge is written down as statements (or propositions) about facts, principles, theories and research findings (Shulman, 1987; Stuart et al., 2009). Eraut (1994) contends that although propositional knowledge and practical knowledge have a place in teacher education the many activities of teaching require an understanding of other kinds of knowledge as well. His characterisation of professional knowledge may help researchers appreciate and understand the importance of a professional knowledge base. Professionals, Eraut argues, largely depend on their claims to unique forms of expertise, which in a sense are not shared with other occupational groups. He points out that professionals prefer to present a knowledge base as:

carrying the aura of certainty associated with established scientific disciplines, ... sufficiently erudite to justify a long period of training preferably to degree level for all with specialist postgraduate training beyond that for some and different from other occupations (p.14).

This elaboration on attaining professional knowledge in particular institutions justified one of the questions that the current study posed: What are the sources of professional knowledge among teacher educators? Or, if indeed teacher educators have not

undergone formal education to acquire the scientific form of knowledge, then from where do they draw their professional knowledge?

Referring to practical knowledge, Eraut is convincingly supported by Clandinin and Connelly (1995) in his argument that practice in relevant contexts provides professionals with an opportunity to apply and to a large extent construct professional knowledge. He argues that learning takes place during action, and that the transformation of knowledge into a situationally appropriate form means it is no longer the same knowledge as it was prior to it being first used. His contention suggests that professionals in various contexts can construct new knowledge, be it through research or reflecting on experiences.

Practical knowledge is described as knowledge that focuses on a professional's actions, informed by the context and experience in the practice, then carved out of and shaped by situations. It is knowledge that is constructed by professionals as they live out their stories and tell and relive them through the processes of reflection (Clandinin, 1992, cited by Fenstermacher, 1994). It is the knowing in one's actions that Schon (1983) describes as practical knowledge, something that is private, implicit, tacit and difficult to express and/or hard to recognise directly. The term "implicitness" implies that it cannot be spoken or articulated or explained. He argues that practical knowledge lies close to the heart of many kinds of artistic expertise and even professional judgment. Practical knowledge is therefore experiential and not so readily available in books (Wallace 1991, cited by Stuart et al., 2009).

This form of knowledge is acquired not only from professional practice but also from other experiences, such as schooling (Paavola, Lipponen & Hakkarainen 2004; Shulman, 1988; Stuart et al., 2009). Eraut (1994) concludes that practical knowledge integrates complex understanding and skills into partly re-utilised performance, which then has to be deconstructed and deroutinised in order to incorporate innovations. Based on Eraut's explanations, it would seem that in studying professional knowledge one has to bear in mind the factors of skill, context and attitudes. Eraut cautions that knowledge creation takes place within a community. In the case of the current study it would be through a community of teacher educators.

Eraut (1996) takes this issue further and refers to experts in an intuitive mode. He indicates that expertise in this mode is based on what the individual practitioner has "gained from long experience of particular types of situations and their ability to rapidly access that knowledge and use it with wisdom" (p.11). The emphasis is on the way in

which practitioners accumulate experience, enabling them to recognise the critical features of each particular situation and to make an appropriate holistic response. However, Eraut (1996) raises pertinent questions: Does every teacher become an expert? If not, what factors determine their progress? How could we decide who the experts were (are)? What criteria could we use, and how fallible are the experts? (p.10).

Eraut's research work on professional knowledge relates to the current study. Employing the different techniques for data collection, narrative, observation of teaching practice and analysis of documents produced by the participants was a strategy that helped triangulate the data. For example, in practice it may not be easy to separate acquisition from construction or application of professional knowledge as these concepts are intertwined. However, observing teacher educators' practice in real classroom situations helped me to respond to the question: How do teacher educators enact professional knowledge?

Using Eraut's analogy of professional knowledge was helpful in analysing the data collected for this study. The research questions centre on the very broad knowledge areas that the study focused on: propositional knowledge by finding out if teacher educators received formal education that prepared them for the task of educating teachers, the extent to which they construct professional knowledge and how in practice they enact and model the said type of knowledge. Eraut's framework has guided the presentation and the analysis of the research findings. The same framework has been employed in the discussion and conclusion chapter of this study.

2.3.2 The Data Analysis Process

The process of data collection for a period of six months, particularly the observations of the research participants in practice, regardless of the fact that some of them were not always available, produced volumes of videotaped and audio-taped data. The presentation below illustrates the level of availability of each research participant:

- | | |
|--------------------|-----------------|
| 1) Fusi: | 13 observations |
| 2) Hoangoang: | 13 observations |
| 3) Lintle: | 12 observations |
| 4) Mafukuthoana: | 03 observation |
| 5) Masethabathaba: | 21 observations |

- | | |
|-------------|-----------------|
| 6) Peditta: | 13 observations |
| 7) Thabang: | 04 observations |
| 8) Zinzi: | 19 observations |

All in all 98 observations were made. Some research participant were, as pointed out earlier, more available than others.

The narratives by individual participants were of varying lengths as they reflected attempts to capture an authentic and personal account of their thoughts, feelings and attitudes. Some were elaborate and detailed in sharing their lived professional lives (with some of the transcriptions being more than 30 pages long), while others were not so elaborate and their audio-taped materials were as few as 13 pages long. The difference in length could be due to the level of experience in the field of teacher education, coupled with some participants being more articulate and open than others.

Additionally, the availability of documents produced by the research participants for purposes of teaching posed some problems. Some had produced modules and/or readers and games for teaching purposes, while others had nothing of the kind. In only two areas did all participants produce documentation of a similar kind, sharing their documented curricula in the form of course outlines and examination papers. The later forms of documents were used for purposes of assessing student teachers at the end of a semester or an academic year. The plan to analyse documents other than the curriculum and assessments was therefore abandoned because of the inconsistent availability of similar materials among participants.

Determining how the pile of data was to be sorted for analysis, so that a thesis could be written, posed a challenge. The initial plan was to use a computer programme and Eraut's (1994) analytical framework to guide the data analysis process. The latter maps professional knowledge into knowing "THAT," equated to propositional or received knowledge, and knowing "HOW," which is the same as practical knowledge, an idea supported by other researchers (Shulman, 1987; Stuart et al., 2007). Since the overarching question for the current study was, "What are the sources and application of professional knowledge among teacher educators?" knowing "THAT" relates to the question, "What are the sources of teacher educators' professional knowledge?," Knowing "HOW" was accomplished by analysing responses to the question: "How do teacher educators enact professional knowledge, what kind of professional knowledge

do teachers construct, how do teacher educators construct professional knowledge and how do they model professional knowledge?”

The data analysis progressed in phases, with some being more time consuming and exhausting than others, although most enabled me to become familiar with and internalise the data. The first phase, during which data was transcribed and transcripts edited, read and re-read, took more than a calendar year to complete. This process was, on some days, perplexing and forced me to ask questions such as: What is it that one was looking for in this study? Do I seem to be finding answers to the research questions?

On the one hand transcribing the classroom observations through repeatedly watching the videotaped material meant watching the participants in practice more than once. On the other, listening to audio-taped stories and transcribing them meant going over each story at least three times. Being immersed in the transcriptions helped me to internalise the data to the extent that going through the process appeared very enriching, learning what the research participants regarded as the sources of their professional knowledge and how they applied them. Additionally, the process helped me to identify the most revealing stories about the teacher educators' interpretation of their professional lives. The choice of interpretivism as a theory that underpins the current study was a good decision.

Entering the data into the Atlas ti. computer programme and then analysing it was dependent upon the critical step of organising the data into major categories for analysis. Therefore, the process of transcribing, editing the data and reading it several times, although challenging in many respects, was a helpful process as it facilitated the formulation of what the Atlas ti. programme (Bogdan and Biklen, 1992) and Creswell (2007), under various names, refer to as codes, code families and themes. The idea of studying or reading the data several times is fully supported by Bogdan and Biklen (1992) and Creswell (2007). It is in this process that “certain words, phrases, patterns of behaviour, subjects' ways of thinking, and events repeat and stand out” (Bogdan & Biklen, 1992, p.166). The process subsequently allows any qualitative researcher to identify themes and codes. Developing a coding system is a process that involves several steps in which researchers have to search for regularities and patterns as well as topics that the data covers, and then write phrases and coding categories. Following

these authors' suggestions, words, phrases and coding categories were developed. This process, they argue, is a means of sorting the "descriptive data" that has been collected.

Although Bodgan and Biklen (1992) advise against developing too many themes or code families, coming up with twelve in the current study, with each carrying multiple themes, was unavoidable. Despite several efforts to merge similar codes into five categories, the nature of the collected data defeated the undertaking. Several efforts were made to reduce the codes within each code family, and to some extent this was achieved. However, some code families appeared too large, with more than ten codes, while others were reduced to only three. For example, the code family "Lessons drawn from experience," attracted more codes than any other code family. This particular code family was informed by the data gathered through narratives and the guiding questions that were used.

However, with regard to the number of code families, Creswell (2007) proposes that researchers have to move beyond coding and classify the data, a process which he views as pertaining to taking apart the text or qualitative information, and looking for categories, themes or dimensions of information. He concurs with Bodgan and Biklen's (1992) idea of developing five categories, seeing a dilemma posed by large quantities of data, and pointing out that it is difficult, especially in a large database, to reduce the information to five or seven "families". Instead, in analysing large volumes of data he proposes following a process of "*winnowing the data*", whereby it is reduced to a manageable set of themes to be written into final narratives.

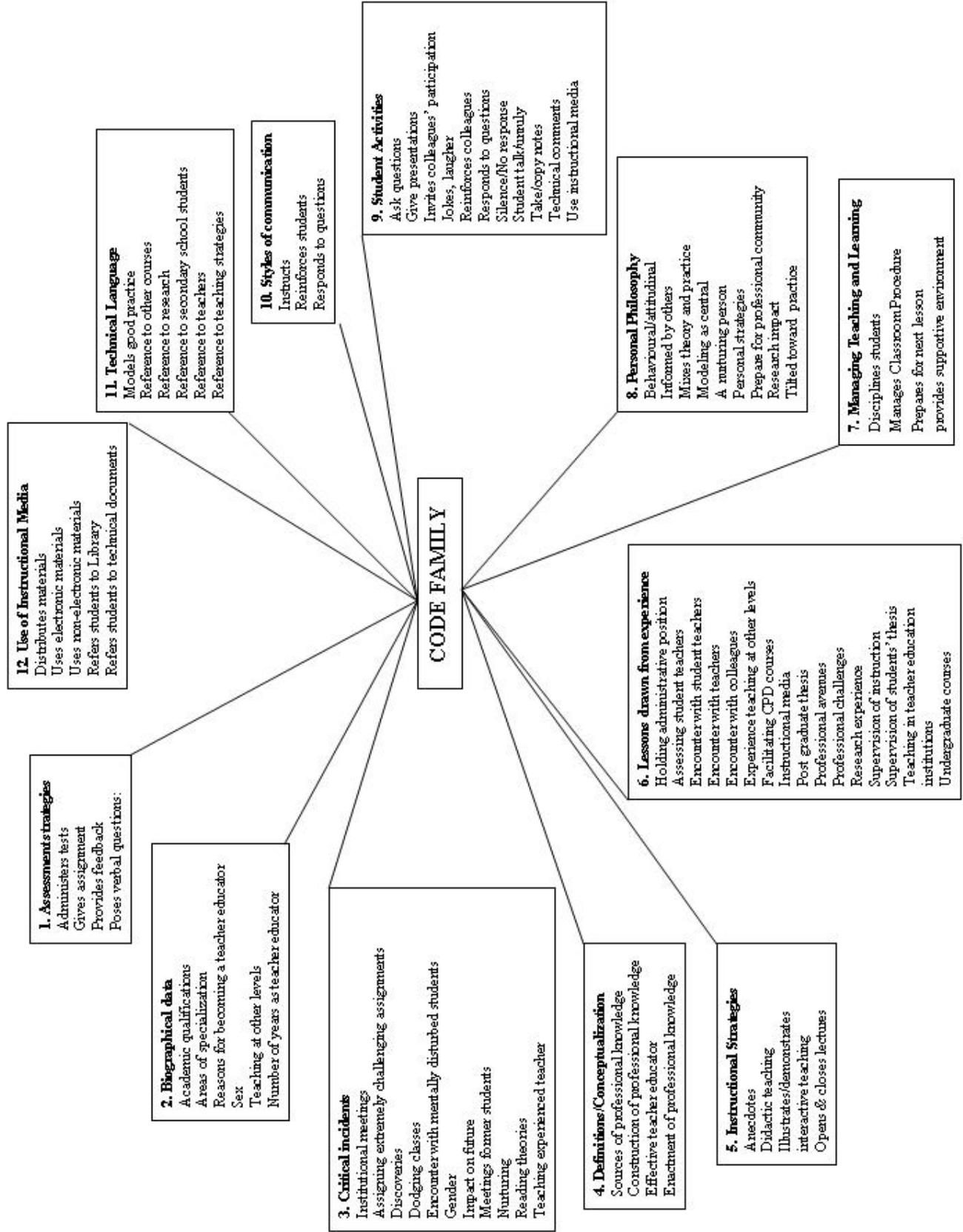
In the process of coding the data, as also noted by Bodgan and Biklen (1992) it was not uncommon to have overlapping themes. This problem emerged during the process of constructing code families and codes. Eventually, some codes were revised to avoid duplication while others were transferred to code families in which they seemed to fit better. Another strategy was to code the data twice, ensuring that no data would be lost or forgotten.

Although the terminology used to describe the code families and codes emerged from the data, to some extent it was also influenced by the researcher's own knowledge of the technical terminology used in teacher education. For example, in a situation where participants, during their teaching practice, use phrases such as "that's excellent; that's a very good question" after a student has given a response or raised a question, a code labelled "Reinforcement" was subsequently developed.

The actual process of coding the data under each code family or theme, and therefore generating quotations or passages of text, also posed a challenge. It was a process that required one to reread the data and at the same time assign codes to the many volumes of transcribed data. The Atlas. ti computer programme greatly facilitated this process. One of the code families, “Critical incidents” is what Bogdan and Biklen (1992) refer to as an “Event code,” which points to particular happenings that occur infrequently or only once. The critical incidents code family caters for unique episodes that either occurred during data collection or were referred to by the participants in their narrations. They are used to illustrate a point or support an argument in the actual presentation of the research findings, and had to be noted to ensure that they would not be lost or forgotten. Figure 2.1 (below) depicts the code families or themes and codes.



Figure 2.1 Code Families



Initially, dummy tables for the narrative and the observation data were developed separately. The quotations under each code family were posted accordingly under each data set. Developing separate dummy tables to cater for each of the data sets facilitated the process of categorising data into specific questions and was helpful to some extent. However, moving to a level that would help synchronise the data was necessary if the data was not to remain as separate entities.

Therefore, in order to ensure that there was a link between all sets of data, matrices were developed that clearly showed connections or helped in partitioning the data vertically and horizontally according to each participant and the data related to each research question. The idea of constructing matrices is supported by Miles and Huberman (1994), who point out that matrices should give a researcher reasonable answers to the question that is being asked or should “suggest promising new ways to lay out the data to get answers” (p.240).

The analysis of the data emanating from the documents was guided by internationally developed strategies for analysing the curriculum and assessment documents (Stuart et al., 2009): Looking at the overall aims: what kind of teacher will come out of the programme? The objectives: What will a student teacher have achieved at the end of the programme? The content: To what extent is it appropriate for achieving the aims? The pedagogy: How are the students taught? How do they learn? Regarding the analysis of assessment documentation, the questions included: How will students’ performance be assessed? Analysis of the pedagogy included not only teaching and learning methods, but also materials and resources, such as textbooks, lists of recommended books, laboratory equipment and how the instructional materials are used to support and explain the content.

An analysis of the assessment strategies through studying the examination papers was therefore undertaken. In this analysis it was critical to establish the extent to which questions were linked to the aims of the curriculum document and to what extent they fostered what teacher educators want student teachers to know and do. Additionally, as Stuart et al., (2009) point out, feedback is a key part of formative assessment and helps students make sense of their own progress. These authors further point out that feedback could also come from lecturers or from the students themselves, reflecting on their performance. The step that followed the analysis of the documented curriculum and

the assessment documents was to categorise the data according to the already developed matrices.

Some of the data emanating from the analysis of the curriculum document and the assessment papers facilitated “finding regularities in the data” (McMillan and Schumacher 2006). For example, analysing the examination papers is a strategy to cross-validate the findings against the classroom observation data, particularly the assessment strategies used in practice. In this regard data from the various sources has been triangulated, helping to establish congruencies and/or discrepancies in the findings.

The analysis of the biographical data could not fit in the matrices. The biographical data mainly provides data on the professional characteristics of the research participants, forming a basis for establishing who the teacher educators are. While correlating analysed biographical data to research findings on the research questions could reveal further findings, it would be going beyond the research questions. However this is something worth pursuing in future research.

There were temptations to count code frequencies in the process of analysing the data. Creswell (2007), in contrast to Huberman and Miles (1994), raises an opposing view to counting codes and then determining how frequently they appear in the database. His argument is based on the view that counting codes connotes different messages, as it does not

provide an indicator of frequency of occurrences, something typically associated with quantitative research or systematic approaches to qualitative research. ... This is because counting conveys a quantitative orientation of magnitude and frequency contrary to qualitative research. In addition, a count conveys that all codes should be given equal emphasis and it disregards that the passage coded may actually represent contradictory views (p.52).

From Creswell’s (2007) argument I make an assumption that counting codes in the current study would convey the wrong message to the reader. The observation data, for example, reveals that students often laugh and pass jokes during the teaching process. If the counting of such data were to be considered, it would imply a lack of seriousness during lectures. Yet it has been coded because it portrays a context in which students laugh or make noise. It also reflects the ways in which teacher educators respond to this, sometimes relaxed and at other times regarding it as misconduct.

Data analysis is completed when that data has been interpreted. Kincheloe and McLaren (2005) argue that the act of interpretation involves making sense of what has been, for example, observed. Articulation of or making sense of the data has to a large extent communicate understanding. These authors add that perception itself is an act of interpretation. They therefore point out that the

quest for understanding is a fundamental feature of human existence, as encounter with the unfamiliar always demands the attempt to make meaning, to make sense. The same, however, is also the case with the familiar. Indeed, as in the study of commonly known texts, we come to find that sometimes the familiar may be seen as the most strange (p.311).

I fully concur with Kincheloe and McLaren (2005) that interpretation of various types of qualitative research is a difficult task. I also concur with Nieuwenhuis (2007c) that it is indeed a tricky process. The tricky part that I personally experienced, given the massive volumes of data I had, was moving away from the level of interpretation to an “analytic understanding” (Nieuwenhuis, 2007c, p.111). This is the level that Nieuwenhuis (2007c) interprets as one in which a researcher begins to explain why things were the way they have been found.

2.4 Conclusion

The procedures followed in undertaking the study were informed by the qualitative research methodology. I provide justification for the choice of the research paradigm that underpins the study and the nature of the study necessitating the use of qualitative research methodologies. The chapter has benefited from the reviewed literature on qualitative research methodologies.

The computer program, Atlas ti. used in the process of data analysis facilitated a structure for a comprehensive data analysis. Data was grouped or categorised into code families, which made it easy to analyse the data according to the sets of themes or code families. Figure 2.1 (above) captures the code families and the codes accordingly.

In this chapter I have presented the steps followed in undertaking the research and how quality standards have been addressed. I reflected on the major questions asked in the process of undertaking the study and how it has impacted on the procedure followed. I close this chapter with a section on dilemmas that present a major challenge to the entire process of undertaking the study.

The procedures followed in undertaking the study have enabled me to achieve my objective of undertaking the study. The information collected and analysed could only make sense through using the procedures reported in this chapter. This chapter has been guided by the research questions that the study is addressing. Borrowing from Eraut's work informed the research framework for analysing the data. Therefore, the entire thesis follows Eraut's framework.