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# 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:

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## 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.

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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

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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).

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## 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 Schőn (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) Hoanghoang:        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

**CODE FAMILY**

**1. Assessment strategies**
Administers tests
Gives assignment
Provides feedback
Poses verbal questions:

**2. Biographical data**
Academic qualifications
Areas of specialization
Reasons for becoming a teacher educator
Sex
Teaching at other levels
Number of years as teacher educator

**3. Critical incidents**
Institutional meetings
Assigning extremely challenging assignments
Discoveries
Dodging classes
Encounter with mentally disturbed students
Gender
Impact on future
Meetings former students
Nurturing
Reading theories
Teaching experienced teacher

**4. Definitions/Conceptualization**
Sources of professional knowledge
Construction of professional knowledge
Effective teacher educator
Enactment of professional knowledge

**5. Instructional Strategies**
Anecdotes
Didactic teaching
Illustrates/demonstrates
interactive teaching
Opens & closes lectures

**6. Lessons drawn from experience**
Holding administrative position
Assessing student teachers
Encounter with student teachers
Encounter with teachers
Encounter with colleagues
Experience teaching at other levels
Facilitating CPD courses
Instructional media
Post graduate thesis
Professional avenues
Professional challenges
Research experience
Supervision of instruction
Supervision of student's thesis
Teaching in teacher education institutions
Undergraduate courses

**7. Managing Teaching and Learning**
Disciplines students
Manages Classroom Procedure
Prepares for next lesson
provides supportive environment

**8. Personal Philosophy**
Behavioural/attitudinal
Informed by others
Mixes theory and practice
Modeling as central
A nurturing person
Personal strategies
Prepare for professional community
Research impact
Tilted toward practice

**9. Student Activities**
Ask questions
Give presentations
Invites colleagues' participation
Jokes, laughter
Reinforces colleagues
Responds to questions
Silence/No response
Student talk/humuly
Take/copy notes
Technical comments
Use instructional media

**10. Styles of communication**
Instructs
Reinforces students
Responds to questions

**11. Technical Language**
Models good practice
Reference to other courses
Reference to research
Reference to secondary school students
Reference to teachers
Reference to teaching strategies

**12. Use of Instructional Media**
Distributes materials
Uses electronic materials
Uses non-electronic materials
Refers students to Library
Refers students to technical documents

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.

# CHAPTER 3

# 3 LITERATURE REVIEW

A literature review, if conducted carefully and presented well, will add much to an understanding of the research problem and help place the results of a study in a historical perspective (McMillan & Schumacher 2006, p.75)

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## 3.1 Introduction

The unit of analysis of this study is teacher educators. However, education as a whole in general, as well as education or teaching on pre-primary, primary, secondary and tertiary levels determines the nature and structure of teacher education and subsequently teacher educator professional development or professionalism. Unfortunately, as has been discussed in Chapter 1, much of the requirements of teacher educator professionalism is not explicit but has to be deduced from the demands of education and teacher education. The literature review will therefore source discourse on all the relevant levels and dimensions of education within the appropriate context. Since this research revolves around the sources and application of professional knowledge among teacher educators, teacher educators will be viewed as learners.

Some of the debates that I raise in Chapter 1 are aligned to the fact that the teacher educator profession, as all other professions has to have a knowledge base; hence the question:

where do teacher educators draw their knowledge from? This question relates to issues of quality assurance and professional bodies who ensure the maintenance of high standards.

In the next section I present the literature reviewed with regard to policies and innovations formulated by states and/or governments. There is an observation that recent educational reforms have been launched to improve education. However, they seem to be launched top down from governmental education departments. Although these developments are laudable on paper, they seem to be ignorant of the challenging demands of the super-complex world with an unknown future we are living in. However, as will be elaborated on in some sections of this chapter, some educational researchers have engaged in a new educational discourse. It addresses these new challenging demands and has also constructed requirements for a paradigmatically new corresponding curriculum and pedagogy. Examples of related teacher education programmes exist.

However, designing teacher education programmes remains the responsibility of teacher education institutions that should provide the quality of teachers required. Additionally, since contemporary education discourse suggests a paradigmatic shift in educational thinking, a discrepancy between governmental policy requirements and teacher education programmes will be inevitable. This might be particularly so if teacher education and subsequently teacher educators fulfil their responsibility in relation to the challenging demands of contemporary education. This will require courage from teacher educators to provide appropriate teacher education programmes that will fulfil the demands of contemporary education in the age of compliance. In the same way, the *education* of teacher educators will be submitted to the same risk and its consequent demand for courage.

 A presentation of policy and transformation developments in various parts of the world illuminates the above arguments.

### 3.1.1 Policies, Quality Assurance and their Implications for the Teacher Educator Profession

3.1.1.1 Quality Assurance Frameworks and their Implications

Research and experience worldwide, as clearly indicated in Chapter 1 of this thesis, point to general standards and/or requirements for the qualifications of teacher educators being non-existent. The major question then has been on their sources and application of professional knowledge. Closely related to this question is how quality and standards are measured in the teacher educators' profession or discipline.

An analysis of what pertains in other countries regarding qualifications and standards indicates that some education systems have in place qualification frameworks that include issues such as quality assurance. Although some of these countries, as will be illustrated in the following paragraphs, have clear policy measures for higher education institutions, it is not apparent how teacher educators are catered for in these broad national qualifications frameworks. However, it is equally important to indicate that teacher educators are classified like any other academic teaching in institutions of higher learning.

I consulted from some of the qualifications frameworks in various countries published on the Internet. The purpose is to illustrate that while, as argued in Chapter 1, professions have to be autonomous, governments or states play significant roles in order to ensure that standards are maintained and quality education is offered to learners. Presumably the intention is to ensure that the markets will receive or hire candidates of reputable calibre. I use these examples to also illustrate reactions of professional bodies as articulated in the literature to the managerial role played by governments or states.

The Republic of South Africa has policies and has instituted organisations to assume the role of implementing policies. The Wits Education Policy Unit (2005) reports that the South African Council for Educators (SACE) was established by the South African Government for purposes of recognition of teachers as autonomous professionals. As autonomous professionals they can decide on the nature of their work. Wits Education Policy Unit (2005) had undertaken a study and prepared a paper that was presented in a seminar organised by SACE in October 2005. The paper was based on document analysis and interviews. According to the Wits Education Policy Unit (2005) the Norms and Standards for Educators (NSE) were gazetted as a policy in 2000. These norms and standards

> envisage teachers who are not only competent and qualified, but they also envisage teachers who are curriculum developers. In addition, the policy conceptualises teachers as researchers and knowledge creators. These have implications for teacher autonomy, which is central to teacher professionalism. The implication is that teachers are given more space to exercise their professional judgement on the materials used in class and how they are used. This means that teachers are not seen as mere technicians who should implement curriculum conceived elsewhere without questioning it or engaging with it (p.20).

While this paper does not make reference to teacher educators or academics in institutions of higher learning per se, an important message is that the role of the state is portrayed as the manager of professions. The author of the paper summarises this observation by pointing out that the policy framework appears to be out of sync with the realities of teachers on the ground. Most significantly, the paper closes with the message that "the global trends of managerialism and bureaucratic accountability, cost cutting measures seem to [be]

manifesting themselves in South Africa as well. These tendencies do not only undermine teacher autonomy, but also result in deskilling of teachers and intensification of teachers' work" (Wits Education Policy Unit, 2005, p.32). The challenge seems to be on the Governments or states playing a significant managerial role in ensuring that professional standards are adhered to, to the extent that autonomy of professions remains threatened.

A South African Council on Higher Education and Quality Committee (2007) presents the Education Qualification Framework (HEQF) and revised Qualification Framework for Educators in Schooling. It discusses a programme for the transformation of higher education in South Africa. The policy provides the basis for integrating all higher education qualifications into the National Qualifications Framework (NQF) for standard generation and quality assurance. Most significant about this policy is that it is supposed to improve the coherence of the higher education system and facilitate the articulation of qualifications. In this regard the policy enhances the flexibility of the system which presumably enables students to move efficiently over time from one programme to another in pursuance of their academic or professional careers. Furthermore, the policy applies to higher education programmes and qualifications offered in South Africa by both the public and the private institutions.

A document on the Framework for Higher Education Qualifications in England, Wales and Northern Ireland (FHEQ) (2008) discusses the features of the framework for higher education qualifications, the relationship between the FHEQ and European development and the different levels of qualifications implementation issues and guidance. Every qualification has a title and it correspondingly reflects the level of achievement, the nature and field(s) of study undertaken and should not be misleading. In this regard, the FHEQ provides the public with a clear understanding of the achievements represented in higher education qualifications. In summary, the purpose of the FHEQ is to "enable higher education providers to communicate to employers, schools, parents, prospective students, professionals, statutory and regulatory bodies (PSRBs) and other stakeholders the achievement and attributes represented by the typical higher education qualification titles" (p.3).

The European Higher Education Area (EHEA) website (2010) stipulates that the qualification framework encompasses all the qualifications in a higher education system. Most significant about the framework is that it shows that learners know, understand what they are able to do on the basis of a given qualification and how the various qualifications in higher education systems interact and in a sense how learners can move between qualifications. It is not about procedures but it focuses on outcomes. The developers of the EHEA website, namely the Council of Europe, the Bologna Secretariat and the Coordination Group on Qualification Frameworks emphasise that qualification frameworks should be designed for purposes of

encouraging greater mobility of students and teachers and therefore should improve employability.

Australia is one of the countries that long established qualification frameworks in tertiary education. In a press release in November 2010, the Australian Minister of Tertiary Education indicated that the Ministerial Council for Tertiary Education and Employment (MCTEE) approved changes in this sector in Australia. In his view the Australian Qualification Framework (AQF) aims at providing greater clarity and transparency with regard to the expected outcomes of qualifications, enables stronger pathways between Vocational Education and Training (VET) and higher education. Taking VET subjects in schools facilitates better links between Australia and the global education market.

Other than information on overseas countries and the Republic of South Africa regarding qualification frameworks and quality in further education, there is progress in this area in some countries in the Southern African region. The Government of Botswana has two important bodies charged with responsibilities of a qualifications nature; there is a Qualifications Framework Authority and the Council of Tertiary Education. The Government of Namibia too has similar structures. With the qualifications framework the Government of Namibia has resolved to address a number of challenges including quality assurance in education and training. The decision to address education and training challenges means that standards will be set, accreditation will be addressed and that prior learning and qualifications will be recognised.

The Government of Lesotho has some initiatives towards establishing a qualification framework and a council on higher education. The draft document on the Lesotho Qualification Framework is in place. Government still has to approve this document so that it can be operational. In the context of higher education the Government of Lesotho established a Council on higher Education (CHE) in 2008. CHE has a broad mandate. It is expected to, among several objectives, provide a means for the more consistent recognition and acceptance of Lesotho's qualifications by employers and other users of qualifications within Lesotho and within the SADC Region. Towards the end of 2010 this Council launched a Higher Education Quality Assurance Committee (HEQAC) and is currently working towards developing a policy on higher education. These are steps intended to regulate higher education in Lesotho.

Robson (1998) who specifically writes on professional challenges for further education teachers in the United Kingdom makes reference to critical issues in this sub-sector. These include licences and conditions, the requirement that further education teachers should be fully trained, the growing number of part-time staff and the number of hours they teach as

well as the consequences of such developments, and the role of the state. Robson (1998) concludes by making reference to other stakeholders or players in the professionalisation process. He notes that the demand for training is "a state-led initiative with the state acting to protect its own and client interests" (p.4).

Therefore, as the literature illustrates, governments or states are justified to set standards and qualification frameworks if a nation's education system has to be regulated. The education provided should be of acceptable quality. Students at various levels of the education systems should most importantly meet employer and national needs. However, Groundwater-Smith and Mockler (2007) observe the following:,

> If professional standards in education hold any promise for improving quality of teaching and learning, then it is through their capacity to foster generative and authentic professional learning that this promise will come to fruition. The capacity of any system of accreditation or review in this area lies not in the 'quality assurance' implicit in quantifying the professional development 'hours' required to be undertaken by accomplished teachers in any period of time, but rather in the process the system utilises for review and accreditation of professional practice (p.58).

Groundwater-Smith and Mockler (2007) conclude this argument by pointing out that in situations where professional standards are being used, the opportunity to view standards as a catalyst for authentic professional learning is not realised. This view implies that professionals who may be striving after adhering to set standards and administrators who have developed them and have to see to their implementation still need to find synergy.

To a large extent the establishment of councils of higher education and qualification frameworks provide situations pertaining to the concerned countries' education systems. The information displayed on the Internet on qualifications and quality standards, while providing a useful reference point, is very broad and does not distinctly spell out how in such contexts professional standards for teacher educators are measured. Furthermore, the Internet does not distinctly provide clear information regarding procedures followed to evaluate quality and standards for teacher educators. Additionally it does not show measures or criteria used in employing teacher educators as they relate to standards and quality.

Nonetheless, a study undertaken by Gray (2010) of the University of Surrey (UK) illuminates the value of developing criteria for measuring competencies, especially as regards teachers and trainers. Gray (2010) argues that the value of having clear criteria is to ensure recruitment and career management and development of training, policy and plans. Additionally, SAQA also indicates that having a national quality assurance system ensures that education and training are delivered to certain standards. The content captured in various national frameworks indicates the value attached to having in place quality standards.

Research undertaken by Van de Groep, Admiraal, Koster and Simons (2005) confirms that worldwide the general standards and/or requirements for the qualification of teacher educators are an issue that has not yet been fully addressed. While the major question the study is addressing is on the sources and application of professional knowledge among teacher educators, the question arises as to how quality and standards of teacher educators can be measured. This is particularly important in my own context, in which some of the teachers educators who participated in this study never received any professional education to equip them with relevant knowledge or skills. Additionally, as already highlighted, quality standards have not yet been established in Lesotho. This is why employing teacher education institutions use their discretion in employing teacher educators. They do so perhaps not aware that at international level as will be illustrated later in this chapter, "characteristics of a professional" have been developed and these might serve as a guiding principle for professions and for hiring institutions.

Other than setting standards and ensuring that there are quality measures even for institutions of higher learning, governments tend to play a leading role in education developments. Governments and/or states tend to ensure that education does not suffer say for example, from lack of teachers or lack of qualified teachers. Developments in this regard have been observed in a number of countries including the United States of America. The US Government implemented the Teach for America Programme and/or policy as an innovation aimed at addressing education ills.

### 3.1.1.2  Transforming Education Systems and Implications

The Teach for America (TFA) Programme and/or policy is described as an alternative teacher certification programme. It is designed for adults with college degrees in a variety of backgrounds and majors. These would be individuals who would be interested in entering the teaching profession (Wetzel, 2009). Wetzel indicates the following:

> Teach for America Corps Training Programme's mission is to prepare recent college graduates from all backgrounds and career interests to become successful teachers. This adult education programme is designed to prepare adults to become educators in low-income communities in both urban and rural public schools. Adults entering this alternative teacher education programme make a two-year commitment to gain an understanding of the inequities that exist in school around the country (p.1).

Presumably the US Government's decision in coming up with the programme was to address the problem that the country was experiencing. The programme was designed to give trainees the foundational knowledge, mindset, and skills needed to become highly effective beginning teachers. The strategy employed is to offer the trainees a five-week training that focuses on broad issues such as teaching, observation, coaching, study, planning and self-

reflection (Wetzel, 1992). The Teach for America Programme is therefore considered to be a reform.

Information gathered from various sources, particularly the Internet, indicates that there are different views about the programme. There are those who are against the programme and some are in support of the initiative. Criticisms come from qualified teachers and other stakeholders, including education professors as exemplified by this submission: "*I dislike TFA because I am a teacher, and I am quite clear that you don't learn to teach in five weeks, much less teach students who have a range of social, economic and developmental problems; who are often hungry … and who come in unruly waves of 40-50 every 45 minutes*".

There are other reasons for criticising the programme. These include:

- the fact that it is not so much about reforming schools;
- it is not bringing about permanent investment in schools and cannot be regarded as a reform;
- the trained personnel do not stay in teaching;
- it has not helped to build permanent corps of excellent teachers who can train other career teachers or use their classroom training to become effective principals;
- they (TFA teachers) are not committed to teaching as a career given that it is a stopgap before, for some, registering in a law school;
- TFA teachers take jobs away from veteran teachers.

Responses of those who are in the programme indicate that the Teach for America Programme has benefits. Their comments indicate that they have learned from the programme through being attached to a mentor teacher. They indicate the feeling that there is probably no need for a pedagogy lesson; the programme has retained some for life; it is less expensive compared to full-time training over stipulated periods of teaching; they become apprentices for certain periods; and that having an impact on students taught and helping with the retention of the corps.

Although there are different views about the programme, an analysis of studies undertaken on Teach for America revealed that there are more benefits. Studies were carried out at the pre-primary, the primary and the secondary school levels. The following are some key findings of the said studies:

*Studies at the High School Level*

- Teach for America corps members had a greater impact on student achievement than did traditionally prepared teachers from UNC'S teacher preparation programme in middle school math, high school math, high school science, and high school English (Henry & Thompson, 2010);

- Teach For America corps teachers are more effective than other teachers, including experienced teachers and those fully certified in their field (Xu, Hannaway and Taylor 2008-2009);

*Studies at the Elementary School and Middle-School Levels*

- Students for Teach for America corps members attained greater gains in math and equivalent gains in reading versus students of other teachers, including veteran and certified teachers (Decker, Daniel, Mayer and Glazerman, 2004);

- Teach For America corps members in Louisiana outperformed other new teachers with the same level of experience and were as effective as veteran teachers across the state in math, science, reading and language arts (Boyd, Grossman, Hammerness, Lankford, Loeb, Ronfeldt and Wyckoff, 2009); Morgaen, 2008).

*Studies at the Pre-K Level*

- Pre-K students in Washington D.C Teach for America corps members made significant progress in vocabulary, letter recognition and easy math skills (Zill, 2008),

*Studies on Corps Members' Qualifications and Retention*

- Teachers recruited through Teach for America and the NYC Teaching Fellow significantly reduced the gap in teacher qualifications between the city's high-and low-poverty schools and contributed to student achievement gains that were most substantial in the city's highest-poverty schools (Boyd, Lankford, Loeb and Rockoff, Wyckoff, 2007).

*The Project on the Next Generation of Teachers, Harvard Graduate School of Education*

- Sixty-one percent of Teach for America corps members continue to teach beyond their two-year corps commitment. This retention rate is similar to retention estimates for other new teachers in low-income communities. The study also found that 44 percent of corps members remained in their placement schools beyond their two-year commitment (Morgaen, 2008).

Research-based information as indicated in the preceding paragraphs clearly shows that there are positive views about the Teach for America corps programme in the US schools. The research falls short of presenting research findings to the contrary. The research presented paints a glossy picture of the programme. Therefore, while the research findings cannot be disputed on the basis of the summarised presentation on the internet, the presentation shows a bias towards the positive impact of the programme. However, some research work has been conducted that illustrates the relationship of innovations in the context of education as these relate to teacher education.

One of the researchers whose work relates to the Teach for America Programme is Haberman. In one of his writings he makes reference to a common saying that education does not make up for experience (Haberman, 1976, 1997). He interprets this statement to mean that experience provides for more opportunities to gain knowledge and skills. The implication of statements such as this one is that academic education may neither be sufficient nor a necessary condition for effective teaching or management of schools. However, his analysis of the statement is that there definitely is a gap between attaining propositional knowledge and acquiring practical knowledge from experience.

Haberman's work also focuses on issues of star teachers among other areas in the field of teaching. Star teachers develop attributes that make them effective regardless of conditions that could otherwise contribute to ineffectiveness. They therefore survive in conditions that under normal circumstances would deter teachers from serving in poor and usually difficult urban schools. Haberman (2004a) illuminates characteristics of star teachers as broad and encompassing.

The characteristics of star teachers include their moral character such as persistence, physical and emotional stamina and ethical issues, which include focus on learning in the work place. Haberman (2004a) argues that star teachers tend to: protect student learning, translate theory and research into practice, cope with the bureaucracy, create student ownership, engage parents and caregivers and partners in student learning and support accountability for at-risk students. He further indicates that these "attributes predict the effectiveness and staying power of teachers serving diverse students in low-income schools. … " (p.3). Hence the relationship of his work to that of the Teach for America programme.

A contributory factor to these attributes is the fact that teachers being referred to hear have the freedom to express their views on issues that pertain to their professional activities. They are capable of analysing situations that will not add value to their work. While they value participating in learning communities, star teachers tend to analyse such communities for purposes of establishing the extent to which they can contribute to "developing the faculty as a necessary condition of school improvement" (Haberman, 2004a, p. 4). There is therefore an acknowledgement that innovations and schools can succeed in situations where teachers are effective. Evidence of the extent to which success is based on effective teachers is drawn from Haberman himself. He engaged in work in which he assisted failing schools through engaging teachers who would make a difference (Haberman, 2011) in those schools.

Haberman (2004b) observes that there are numerous challenges that impede government's initiatives. He contends that, regardless of challenges that tend to affect government's

initiatives, there are schools that succeed. Successful schools in his view have a number of attributes. These attributes include having a critical mass of star teachers whose work tends to contribute to the success in implementing initiatives.

Most critical about the output of Haberman's work is the fact that Star Teachers benefit from learning from the context in which they work. These contexts in his view empower teachers. For example, a typical learning environment is one that is cognisant of the fact that teachers, as faculty, have a role to play in their own learning.

There are other researchers who share Haberman's views regarding empowering teachers or teacher educators so that they learn from their practice and/or research experiences especially in the school context. These include Lingard and Renshaw (2010), Broadhead (2010) and Hulme and Cracknell (2010). For example, Broadhead in her study on insiders and outsiders researching together to create a new understanding and to shape policy and practice, studied the literature in the area of policy reforms and research. She concluded that books reviewed had the potential 'voices' of policy shaping. Having undertaken the study that brought together teachers at the school level and herself as an educator and a researcher she made further conclusions. One of these is that besides the two (herself as a researcher and the teachers) having gained substantial knowledge in engaging in the research, she had "made the greatest leap forward towards understanding ethical practice and towards the realisation that research can only shape policy and practice if ethical and political awareness go hand-in-hand with collaborative educational research" (p.51). In essence, Broadhead (2010) sees the relationship between governments' transformation initiatives and engaging in research that assists in implementing policies and in the process learning from that experience.

An analysis of the work of Haberman points to the impact of programmes and initiatives that aim at providing teachers the opportunity to learn in the context of their work. He has tested the impact of initiatives that have succeeded in addressing issues of an educational nature. Haberman's work seems to challenge teacher educators not only to learn from such initiatives but also to venture into testing them in their own programmes and/or institutions or, as was the case with Broadhead, in the context of research. In essence teacher educators are challenged to look into providing student teachers with opportunities to test new ideas in the context of teacher education.

Transformation at the school or college level has also been realised in other parts of the world. The Republic of South Africa and the United Kingdom are cases in point too. South Africa introduced outcomes-based education under the auspices of Curriculum 2005. This reform in the context of the country was aimed at changing the Apartheid type of education

system. Jansen in 2010 discussed what he described as the "not-so-obvious damages" of Outcomes-Based Education. He mainly talks about costs. Jansen points out that the most critical result of Outcomes-Based Education is with regard to human costs. In his view,

> Children already disadvantaged were exposed to a curriculum that made a fragile learning environment worse. Instead of learning those vital competencies of reading, writing and calculating, they were exposed to high-brow constructivist theories that kept many of them illiterate. Those effects not only forced many to leave the school system, they pushed weaker and weaker students into universities where they again struggled to succeed (p.1).

While there may be benefits resulting from introducing OBE in South Africa, the messages coming from the literature reviewed in this area points to problems experienced. One of the major problems is with regard to the impact of political decisions in education systems.

During the 1980s and 1990s education reforms were, experienced in the United Kingdom too. This was particularly so during the presidencies of Margaret Thatcher and John Major. Documentation on the deliberations between the Secretary of State for the Social Services and the Secretary of State for Education in 1970, revealed that Prime Minister Thatcher had a view that "provision would have to be made in future for teacher training and other types of further education to be provided not just as an immediate sequel to primary and secondary education but as something to which people could return, with a view to specific training, after a period in employment" (p.6).

In a paper presented in 2000 in a seminar, Witty reports on the policies that were introduced during the Thatcher regime. The new policies were, among others, intended to address the Labour Party concerns. The development of policies on General Teaching Council and Performance Management/Performance-Related Pay sought to combine techniques with "greater respect for the professionalism of teachers, albeit a 'modernised' professionalism" (Witty, 2000, p.4).

There are dilemmas associated with policies developed by national governments or states in the context of education. Governments may have as their priorities addressing market demands through legislature. Yet the markets, as Whitty (2000) observes, may not embrace the new developments. There seems to be a clash between what governments prefer in their policy deliberation as they transform education systems and developments and what the professionals themselves would see as pertaining to their practice. The views expressed by Furlong, Barton, Miles, Whiting and Whitty (2000) illustrate problems experienced in re-forming professionalism in the context of teacher education. This, as I indicated in Chapter 1, entails knowledge, autonomy and responsibility or accountability.

Secondly governments develop policies and establish education councils in which quality standards are set. These too are intended to ensure control measures. Groundwater-Smith and Mockler (2007) report on professional standards in teacher education as common practice in the western countries, particularly in the UK, the US and in Australia. These authors observe that setting professional standards for teachers is itself not a bad idea. However, standards and standardisation viewed as the "one size fits all"-agenda is problematic. It tends to be regarded as a panacea for an ailing teaching profession.

Whereas there are varying views about government's roles in setting standards and qualification frameworks and in transforming education systems, teacher educators as professionals have a responsibility too. Teacher educators have to find ways of setting appropriate standards in ways that will be universal and commensurate with possible yet unknown future demands. I argue here that governments and states constantly think of reforms and continue to implement those in the school systems, regardless of whether or not teacher educators infuse those in the teacher education programmes. It is therefore within the context of the challenging demands of an unknown future that education, teacher education and subsequently teacher educator professional development have unavoidably entered unfamiliar territory. The unfamiliar territory referred to here can be associated with contemporary discourse in the education context.

## 3.2  Contemporary Discourse in Education

There can be no doubt that a new discourse in education is emerging. The main thrust of the discourse is in the area of quality in education and subsequently enhanced teacher professional learning and development.  These current developments are many and varied and are taking place all over the world in countries like, USA, UK, Canada, Australia, Scotland, the Netherlands, Continental Europe and South Africa to various extents, from small scale projects to large projects. What I am attempting in this section of Chapter 3 is not to exhaust this field of study, but rather to highlight some of its main features as they occur within education as an umbrella discipline and to construct it into a framework that would be beneficial for the research to be undertaken.

The world, and presumably education as well, is currently witnessing one of the most significant shifts in human history. Drucker (2000) points out that the paradigm shift is characterised by an unprecedented change in the human condition. Unfortunately, this exhilarating prospect of unprecedented change in the human condition has been thwarted. In fact, Fielding (2007) reports that in England "secondary schooling is conducted in a mindset that is dangerously anachronistic and deeply superficial" (p.5). Groundwater-Smith and Mockler (2009) concur that it is the same "in most Australian States and territories and many

parts of North America" (p.78). In view of the recent Progress in International Reading Literacy Study (PIRLS) and Trends in International Mathematics and Science Study (TIMMS) research reports, there is enough reason to believe that this poignant condition might be a global phenomenon. One of the primary causes of this demise is that educators have been deceived by the strong emerging culture of compliance within which quality is trivialised because quality assurance processes may easily result in the *perception* of quality rather than the demand and provision of actual quality itself.

Groundwater-Smith and Mockler (2009) describe what is necessary in education to escape the paralysing compliance effect:

> While the culture of compliance … increasingly draws us to an approach of teacher professional learning that is 'training' orientated, quantifiable and easily measured or 'ticked-off' for quality assurance purposes … for teacher professional learning to serve the burgeoning needs of students and their teachers in the twenty-first century, we must value and vigorously pursue an alternative model … Putting the need of young people and indeed the transformational dimensions of education at the heart of professional practice requires courage and willingness on the part of educators to be deeply countercultural … (pp.10-12).

In fact, Dreyden and Vos, (1999) in writing about change indicate that "the seismic scope of this change forces us to completely rethink everything we've ever understood about learning, education, schooling, business, economics and government" (p.21). Consequently, education for the future requires a new discourse. Hargreaves, (2003) in concurring with Dreyden and Vos (1999) is of the view that the "future poses radically different challenges to those placed at the foundation of educational systems and that is why we require a qualitatively different approach to teaching in the twenty-first century" (p.x).

Hargreaves (2003) sees three challenges highlighted below:

- demands *on* young people;

- demands *of* young people;

- demands on *how we teach.*

I will address each of these demands to the extent the scope of this research warrants it.

### 3.2.1 The Demands on Young People

The demands *on* young people pertain to WHAT we teach. A very generally accepted traditional perception of education in a very simplistic sense is to teach learners the knowledge which they need to make sense of the world. It means that knowledge such as that found in textbooks already exists and that the learners need to know it. It is an education

characterised by teaching learners so that they will know the necessary knowledge, skills and values that already exist.

In a simplistic, static world this would be a very worthy cause and aim of education. However, the world is not static and the knowledge or information is increasing rapidly. During the era of the information revolution, the abundance of information causes knowledge overload. Over a very short period of time, the exponential increase of knowledge causes information ignorance because of the sheer abundance of knowledge that exists but which cannot be accessed by an individual even in a lifetime (Barnett, 2007). This makes the world extremely complex. To make sense of this complexity, educationists deem it useful to divide the knowledge into smaller groups called disciplines. However, the dire consequences of such fragmentation can only really be appreciated if it is presented in its original, somewhat lengthy quotation from the work of Bohm (1990).

> It is especially important to consider this question today, for fragmentation is now very widespread, not only throughout society, but also in each individual; and this is leading to a kind of general confusion of the mind, which creates an endless series of problems and interferes with our clarity of perception so seriously as to prevent us from being able to solve most of them. Thus art, science, technology and human work in general, are divided into specialities, each considered to be separate in essence from the others. Becoming dissatisfied with this state of affairs, men have set up further interdisciplinary subjects, which were intended to unite these specialties, but these new subjects have ultimately served mainly to add further separate fragments … The notion that all these fragments are separately existent is evidently an illusion, and this illusion cannot do other than lead to endless conflict and confusion. Indeed, the attempt to live according to the notion that the fragments are really separate is, in essence, what has led to the growing series of extremely urgent crises that are confronting us today. Thus, as is now well known, this way of life has brought about pollution, destruction of the balance of nature, over-population, world wide economic and political disorder, and the creation of an environment that is neither physically nor mentally healthy for most of the people who have to live in it. Individually there has developed a widespread feeling of helplessness and despair, in the face of what seems to be an overwhelmingly mass of disparate social forces, going beyond the control and even comprehension of the human beings who are caught up in it (pp.1-2).

Following on Bohm (1990) it would seem that the external environment is being destroyed at an alarming rate. Consequently, our internal environment suffers and a snowball effect and self-fulfilling prophecy seem to be reigning. The demand on young people is to get us out of this mess because they are inheriting it. The resolution for this challenge is only possible through extraordinary novel ways and means.

To aggravate the observed situation, the overwhelming abundance of knowledge currently available, especially on the Net even if all of it could be accessed does not suffice in attempting a resolution to our irresolute destruction. The reason might be that this knowledge could have been posted on the Net by anyone ranging from an uneducated ignoramus to a phenomenal expert. This knowledge is subsequently always contested because it does not

carry a tag that guarantees its value or integrity. These developments make the world super-complex (Barnett, 2007).

Existing knowledge is therefore insufficient to make sense of our rapidly changing world, because it is effectively knowledge of the past. In addition, knowledge of the future does not exist. It is difficult not to rely on anything that is in existence to make sense of the super-complex world given that the future remains unknown. Grulke (2000) describes the current situation as "the revolution of the empowered individual" (p.3). But, paradoxically, our individual, contested constructions of the world cause not only external uncertainty but a serious internal uncertainty which shakes our sense of being. Human beings find themselves living in "an anxiety-ridden age of insecurity" (Hargreaves, 2003, p.28) and a subsequent "absurd psycho-drama of self-destruction" (Slattery, 1995, p.248). Vail (1999) is of the view that:

> the rise in insecurity in contemporary society … has been immensely destructive of human potential and social justice. Insecurity damages individual lives, it destroys self-worth and self-esteem, and it has generated intolerable levels of fear, anxiety, hopelessness and powerlessness (pp.3-4).

Even though all the knowledge is out there and easily accessible by virtually anyone (including young people at anytime in the abundance that they choose, even without a teacher) it is unreliable to the extent that it is always contested. One may ask: what is the resolution of education for this debilitating disillusionment? Barnett (2007) is adamant when he warns in this regard: "Learning for an unknown future cannot be accomplished by the acquisition of either knowledge or skills … neither domain can carry the day in a world of uncertainty" (pp.258-259).

Although this is not the last word said about knowledge and skills in education, I interrupt the argument at this stage to emphasise that the demands *on* our young people is a case of a self fulfilling "double jeopardy". Not only are these post modern youngsters already caught up in a state of insecurity, the best resolution education seemingly has on offer as well as what is available outside of education are unreliable knowledge and skills.

It should be obvious that this condition places unique demands on young people, which, at the same time, produces the demands *of* young people.

### 3.2.2 The Demands of Young People

It is important first of all to consider the result of the experiences of young people in this condition of disillusionment.

Although there may be arguments to the contrary, Jukes and Dosaj (2006) believe that 'kids of today ARE different! … Really different! … fundamentally different from previous generations" (pp.2-3). These are some of the reasons for the observed difference:

They have lost their trust in all authority which is currently still represented by adults in general – past, present and future authority is out because it is that authority that has plunged the world into the self-destructive state that it is in.

Because they have lost their sense of being, their frame of reference is nothing in particular – it is "whatever": Whatever is important to them at any particular moment for as long as that moment lasts.

Instant gratification is their primary concern.

Their relationships are face-to-screen relationships – even when they are sitting next to one another.

They have become exceptional in visual-spatial dynamic information processing: up to 70% faster than adults, being and increasingly becoming the intellectual superiors of many adults – including teachers.

They are digital experts for whom multitasking has become second nature.

They adore new things, new innovations that challenge them and will emerge in their exploration until they become bored.

Technology has therefore become their refuge: with the touch of a button there is immediate response. Therefore they trust technology more than humans.

This has caused the fact that they unfortunately have become socially and emotionally detached.

They deal with human beings in the same way that they do with technology: Switch to another channel if you bore or agitate them or switch you "off" for that matter.

Human dignity and exploitation have become a commodity in all areas and on all levels of socio-economic society: Cyber bullying, happy slapping, knifing, and the many other modes of unprovoked, intentional and deliberate human-on-human abuse are captured on electronic devices and posted on the internet even as a commodity for sale. The higher the resolution, the better the sound, the longer the clip and the more extreme the violence, the higher the price (De Villiers, 2006; Juke and Dosaj, 2006). This information is based on student teachers' experiences written in their reflective journals during their school based learning periods, 2008-2010). Although this is a generalised, bleak and perhaps even an eschewed picture of post modern youth, some might claim, its destructive potential can never be

underestimated because educators are already witnesses thereof. However, neither these youngsters, nor their teachers are necessarily to blame. Instead, one has to recognise their mute utterance of a desperate cry to be rescued. It would seem that their unexpressed demand in an overall sense is a call for restoration of their sense of being.

The challenge though, is that their outcry can be addressed by anyone. Doing anything for them would mean doing it for them and/or on behalf of them. Yet only they themselves can do that. A critical challenge for teachers given that they have an inherent human potential should be to create the most powerful learning environment. The creation of that powerful learning environment will demand that they earn it.

### 3.2.3  The Demands on how we Teach

Although this section deals with the demands on *how we teach* the issue on exactly *what* to teach has not yet been established. What has been concluded, though, is that knowledge and skills cannot be the focus of teaching. However, the acquisition of knowledge and skills in education is indisputable. But, as argued by Barnett (2007), policy makers cannot begin to offer us a sufficient set of ideas for education in the twenty first century. "At best … they offer us just two pillars of an educational project … By themselves, these two pillars, … will topple over: they need (at least) a third pillar – the ontological pillar – to ensure any kind of stable structure" (p.7). This third indispensable ontological pillar is characterised by dispositions and qualities and is durable in its nature.

Moreover, "they constitute the student's pedagogical being. It is they that have to be the focus of 'teaching'…" (Barnett, 2007, p.102). It is, as Barnett (2007) further argues, through their dispositions and qualities that students have the capacity to acquire both knowledge and skills. Furthermore, it is through their qualities and dispositions that they become themselves (Barnett, 2007). With this significant statement, Barnett (2007) reveals the key concept in the deep ontological structure of education, namely authenticity. Although this may seem a somewhat philosophical perspective towards education, "it is crucial to getting to grips with what it is to be a student in the contemporary world and with what kinds of human being  are appropriate, indeed called for, in a contemporary world that is full of perplexity" (Barnett, 2007, p.3). However, as Barnett (2007) points out, an education that does not call and does not insist on authenticity in the learner is no education.

Correspondingly, an education that calls for authenticity in students' needs must necessarily be characterised by *authentic pedagogy*. This is a pedagogy that require learners to "become 'active learners', capable of solving complex problems and constructing meaning that is grounded in real-world experience" (Newman, Marks and Gamoran, 1995, p.1). This kind of authentic learning "calls for a transformatory curriculum and pedagogy … This is a

curriculum that is aimed at the transformation of the human being; nothing less" (Barnett, 2007, pp.256-257).

In designing curricula, there is a need to recognise the demanding challenges of the post-modern era we are living in. There is need to, according to Slattery, (2006):

> move from the modern paradigm of curriculum development in the disciplines to the post modern paradigm of understanding curriculum in various contexts in order to move toward ..., the construction of the individual in relation to educative moments, the development of autobiographical, aesthetic, intuitive, and proleptic experience, and the socio-cultural and socio-political relations emerging from an understanding of the individual in relation to knowledge, other learners, the world, and ultimately the self (p.292).

It is important to emphasise that learning is the pivotal constituent that qualifies education as education. Correspondingly, recent developments in psychology, experimental psychology, cognitive science, neuroscience and associated fields have revealed a new conceptualisation of learning that has turned our conventional corporate and educational wisdom on its head (Claxton, 1999, p.10). These developments have confirmed that the biological and physiological functioning of the brain supports the fact that authentic learning is essentially radically socio-constructivist in nature (Heyligen, 1997; Boylan, 2005: Von Glasersfeld, 2001).

Authentic learning also means that human beings are born to learn (Smilkstein, 2003) and are subsequently able to solve complex problems grounded in real-life experiences. To accomplish this feat, human beings are endowed with a multi-dimensionality in the form of more than ten multiple intelligences (Sternberg, 2007 and 2008; Gardner 1997, 2004; Goleman, 1995; De Beauport, 1996; Zohar and Marshal, 2000; Bar-On, Maree and Elias, 2006). These multiple intelligences could be categorised into four intelligence domains, namely physical intelligence (PQ), mental intelligence, (IQ), emotional intelligence (EQ) and spiritual intelligence (SQ). These intelligence domains are not only at our disposal for authentic learning itself, but the added competence of being in complete control and therefore management of our authentic learning through metacognition (Flavell, 2004), metalearning (Slabbert, 2002; Slabbert et al., 2009) and self-regulated learning (Zimmerman, Bonner and Kovach, 1996) as competences to improve the quality of authentic learning (Sternberg, 2008).

What makes us really unique, however, is not our multidimensionality, but the incredible potential, encapsulated in our human virtues, each and every one of us is endowed with. These virtues compose our holistic nature. Life and the world present itself holistically and not fragmented into bits and pieces. That is why we have been endowed with a holistic nature to live a prosperous life within the challenges it presents. Our asset is our

consciousness. Consciousness is our experience of life and the source of all meaning, value and purpose in our lives and in the world (De Quincey, 2005). Authentic learning as "the growth of consciousness is possible if the factors responsible for the integrity of all inseparable constituents of human individuality, that is, *body*, *mind*, *soul*, and *spirit* are simultaneously activated" (Dimitrov and Wilson, 2002, p.6). This natural multidimensional holistic interactivity provides the wisdom we need to create a safe sustainable and prosperous future for all (Sternberg, 2003, 2008; Craft, Gardner and Claxton, 2008, Slabbert et al., 2009).

However, we are not alone in the world, but we share it with others. As noted by Jacobs, Power and Loh (2002), since people share the same life in the world, there is an inevitable sociological relationship which, in education, is manifested in a sociological nature of knowledge. This is manifested in cooperative learning.

Acknowledging that learning is not about finding things, but it is about finding ourselves (Purpel and McLauren, 2004), then metalearning will reveal our identity and cooperative learning our integrity. But what is of crucial importance is that this can only happen in community and within the context of authentic learning. It has to be a community of authentic learning practice.

It would be difficult to comprehend learning outside the realm of truth being a very contentious issue, especially in education. What makes it so contentious is the proliferation of absolute relativism in the post-modern context, and, towards its opposite pole, the reigning of mythical objectivism through positivist exclusion. However, Purpel and McLauren (2004) state very clearly that "the crises that we face today will not abate until we have found a way to wisdom" (p.203) and wisdom is the love of truth. Our conception of truth is therefore encapsulated in the Greek word *Aletheia* meaning unconcealment, exposure or uncovering. Or in the more concrete description of Palmer (1998): "truth is an eternal conversation about the things that matter, conducted with passion and discipline" (p.104).

Therefore, the firmest foundation of learning is the *community of truth*. It enhances the quality of learning through conflict. It is in our willingness to put forward our observations and interpretations for testing by the community and return the favour to others. Conflict is the dynamic by which we test our constructions in the open in a communal effort to stretch one another and the constructions we create. As pointed out by Palmer (1998), we submit our assumptions, our observations, and our constructions indeed, ourselves: our identity and integrity to its scrutiny.

Such an education, as indicated, requires a unique curriculum and pedagogy. It should be a paradigm not of outside-in (teacher to learner) but inside-out (learner to real life). It should be

a curriculum, not of learning to know, but of learning to be. It should be a pedagogy, not of the transmission of knowledge, but of facilitating learning in such a way that the learners will maximise (completely develop and fully utilise) their potential. This is encapsulated in essential human virtues that generate the power and will to fulfil their purpose of life.

However, the concept of facilitating learning as a proposed pedagogy to achieve the aim of authentic learning is clouded with gross misconception. In the literature it includes anything that is educational, from accurate imitation and transmission of knowledge to projects and research.

When Rooth (2000) defines facilitating learning as "not teaching, not telling, not lecturing, not preaching, and not directing" (p.35) and subsequently *not* employing the myriad of teaching methods, she points out that facilitating learning is something ***distinctly different*** from teaching. Secondly, "central to the definition of teaching as facilitating learning is the shift of focus from the teaching process to the learning process that happens in the mind of the learner. If so, the ultimate measure of excellence in teaching is the quality of learning that it leads to" (Mohanan, 2005, p.1). This means that the ultimate measure of excellence refers to the quality of the learning that is the primary focus of facilitating learning. Facilitating learning is therefore ***qualitatively different*** from teaching.

Finally, "[T]he problem is that teachers think that if they "teach", students learn (Sternberg, 2008, pp.143-144) which is obviously not the case. Subsequently, "if the teaching activities do not result in learning, there has been no teaching. Likewise, if the learning is lacking quality, the teaching is unsuccessful to that extent" (Mohanan, 2005, p.2). Since teaching does not have learning as its conscious, singular focus, consequently it is incapable of ensuring learning quality; the concept of ***teaching cannot be justified*** in education. The contemporary discourse in education, therefore, discards the concept of teaching within the context of authentic learning because of its irreconcilability with the challenging demands of an education within a super-complex world with an unknown future and replaces it with ***facilitating learning***.

Facilitating learning is a *unique* professionalism with very distinctive characteristics regarding its purpose, functions, requirements, actions, and options. In fact, in a very concrete fashion and a significant sense and as argued by Slabbert et al. (2009) facilitating learning is the direct opposite of the concept of teaching. As indicated in the preceding paragraphs, the traditional sequential concept that learners must first be taught to *know* something (knowledge), then they will be able to *do* something (skills) with what they know and that will result in what they will *be* (values) someone with moral authority is fundamentally flawed. In fact, as Buscaglia (1996) points out, some of the wisest people who have the fewest answers

and the least amount of certainty have found that the most important thing about knowledge or learning is not the knowing, but the seeking. The seeking (skills), therefore, effectively precedes the knowing (knowledge). But it is our primary motivation in life, our desire for meaning (*be*: the values which allow us to live a meaningful life), that propels our search for meaning (*do*: knowledge constructed *personally under conditions that make it meaningful*) into action and that subsequently has the construction of knowledge as a result (*know*: a temporal fruit of being). It is our authentic being as a perpetual desire for meaning that requires an opposing paradigm: Not a know-do-be, but a be-do-know curriculum and pedagogy of living real life.This is why Dewey (1938) is one author who insists that education is not a preparation for a future life, but that it must be an experience of life itself.

This brings one to the question of what the core business of education in this context should be. Contemporary research in learning and instruction and in particular instructional psychology, instructional design and instructional technology proposed new theoretical frameworks in the design, implementation and evaluation of powerful learning environments (De Corte, Verschaffel, Enwistle and Van Merriënboer, 2003). This development has prompted the realisation of what the core business of education and subsequently that of the teacher educator is, namely to design, operationalise (or implement) and maintain the best possible learning environment in order to ensure the highest possible quality of learning.

The developments in all the mentioned intersecting research fields are obviously characterised by similarities and differences. Although there are differences, it seems as though there is some consensus about what has become a matter of primary importance: "Now, it becomes important to answer the question how to design and develop powerful learning environments in an efficient and systematic manner" (Van Merriënboer and Paas, 2003, p.18). Van Merriënboer and Paas, (2003) purport that

> In the last decade research has been conducted on the necessary characteristics of powerful learning environments. These include: (1) use of complex, realistic and challenging problems that elicit in learners active and constructive processes of knowledge and skill acquisition; (2) the inclusion of small group, collaborative work and ample opportunities for interaction, communication and co-operation; and (3) the encouragement of learners to set their own goals and provision of guidance for students in taking more responsibility for their own learning activities and processes (p.5).

The world of work has become central in designing, implementing and evaluating powerful learning environments. "Learning tasks nicely fit the ideas that are prevalent in the world of work. Learning tasks are concrete, authentic and meaningful real-life experiences that are provided to learners" (Van Merienboer and Paas, 2003, p.9). However, these concrete, authentic and meaningful real-life challenges present themselves in their uncompromising complexity and will subsequently constitute the highest possible quality of learning.

The issue of trivialised quality through compliance that creates the perception of quality as opposed to actual quality itself has been addressed in the opening sentences of this section of Chapter 3. What actual quality explicitly entails has therefore grossly eluded the pages of research literature. Fortunately the groundbreaking work of Furlong and Oancea (2008) has brought a more concrete perspective on actual quality in education. In their response to the said work, Groundwater-Smith and Mockler (2009) state that the overriding criterion governing quality is to be ethical in professional practice. I cannot agree more with them when they say: "clearly, for us, recognising the relationship between quality and ethics is no trivial consideration … As we have argued, ethical practice is the essential foundation upon which authentic quality enterprises are built" (p.69).

Education, no doubt, has to be such an authentic quality enterprise. Unfortunately the different needs of different kinds of learners in different kinds of contexts may differ vastly, which may complicate what actual quality will entail. The challenge therefore is to design an authentic quality education that will encompass all kinds and levels of learners irrespective of place and time. Such an educational enterprise may be characterised by its aim. Therefore, if the aim of education is to maximise (completely develop and fully utilise) human potential through facilitating lifelong authentic learning in order to create a safe, sustainable and prosperous future for all, as Slabbert et al. (2009) suggest, actual quality is clearly expressed with an educational aim that could be regarded as universal. Actual quality education is therefore characterised not by how much you know, but how well can you learn. That is why Heidegger (1962) is of the view that the real teacher is one who lets nothing else be learned than learning. The product of education is therefore not primarily an epistemological task (*knowing* something), but an ontological challenge (*being* the best possible learner *employing* the highest possible quality of learning – doing - in order to *produce* the highest possible quality of knowledge – knowing).

One may ask: what does the highest possible authentic quality in education constitute? This has been a hidden secret in plain sight because of the deception of compliance standards. Table 3.1 indicates what quality generally constitutes authentic learning.

In table 3.2 the work of several authors has been compared in order to reveal how their work relates to authentic learning quality. These authors include, Dewey, 1944; Vygotsky, 1978; Joyce, Weil and Showers, 1992; Miller, 2003; Engestrom, 2004; Darling-Hammond and Bransford, 2005).

Finally in Table 3.1 authentic learning quality is indicated by comparing four education paradigms. The first three depicted models in education, namely transmission, transaction

and transformation, have their origin in the work of Dewey (1944), Piaget, (1958) and Vygotsky (1978). Joyce, Weil and Showers (1992), Miller (1996) and others substantiated them subsequently. Some contemporary authors like Arons (1997), Freiburg and Driscoll (2000), Miller, (2003), and Darling-Hammond and Bransford (2005) believe that another model should be added beyond the transformation model. However, it is in particular the work of Engeström (2004) who included qualitative transformation as a higher level of learning quality beyond that of the existing models. Since this addition was so transcendental in its nature, Slabbert et al., (2009) reconceptualised the models as paradigms. These researchers labelled the latter one the transcendental paradigm because it transcends the limitations and deceit of the compliance culture going beyond the prescribed curriculum, the classroom, the school, learning to know, the self and the limited ways of knowing, and immerses the learner directly into real-life experiences. The dominant characteristics of each paradigm are depicted in table 3.2 and it is obvious why the transcendental paradigm constitutes the highest possible level of learning quality. The ethical competence of moral authority and excellence is inextricably linked with authentic quality. I agree with Groundwater-Smith and Mockler (2009) when they assert that

... quality is to be regained as a genuine virtue, then genuinely meeting accountability and professional responsibility standards is central … In the end, quality will be determined by the extent to which professional responsibility is enacted …reclaiming of 'quality' is a key element and tool of teacher professional knowledge …" (p.11).

It is within the context of the preceding exposure of a contemporary educational discourse that the subsequent sections of this chapter should be interpreted. The purpose of the following sections is not to address each aspect of the contemporary discourse already discussed. Instead, the purpose is to address only those aspects that have a direct bearing on the current research question. It therefore becomes important to establish what an appropriate teacher education and teacher educator professional development epistemology should entail. Figure 3.1 depicts what the construction of learning quality in education entails in general.

**Fig 3.1 A construction of what learning quality in education entails in general**
(Adapted from Brunner, 1996:11)

HIGH

Level of commitment and understanding by all those involved

Depth of learning

Capacity for continuous generation of knowledge

Amount of time required

**Creating knowledge**

Teachers challenge learners to generate knowledge

**Constructing meaning**

Teachers require learners to construct meaning of what already exists

**Telling**

Teachers tell learners what to do and learners follow the instructions

**Showing**

Teachers show learners what to do and learners imitate teachers

LOW

91

**TABLE 3.1     LEARNING QUALITY**

| | | BLOOM'S TAXO-NOMY (1980) | BIGGS'S SOLO TAXONOMY (1991) | BRUNER'S LEVELS (1996) | CLAXTON DE CORTE POWERFUL LEARNING ENVIRONMENTS (2003) | MILLER'S HOLISTIC EDUCATION (2003) | ENGESTROM'S TYPES OF LEARNING (2004) | | |
|---|---|---|---|---|---|---|---|---|---|
| **High** | | | | | | | | **High** | |
| L E A R N I N G  Q U A L I T Y | C O M P L E X I T Y | Evaluation | Extended abstract | Creating knowledge | Real life in its uncompromising, holistic complexity Authentic context Personal meaning | **Transcendence** Creating knowledge Real life | **Radical Exploration** Creating knowledge Qualitative transformation Real life | T I M E | H O L I S T I C |
| | | Synthesis | Relational | Constructing meaning | Project Clearly defined More than one focus Gather information More than one answer | **Transformation** Participatory exploration Projects | **Incremental Exploration** Constructing meaning Project based learning Problem-based learning | | |
| | | Analysis | Multistructural | | | | | | |
| | | Application | | Telling | Application Clearly defined More than one focus All information given One answer | **Transaction** Participatory understanding Questioning | **Adjustable exploitation** Internalisation of knowledge Application | | |
| | | Comprehension | Unistructural | | | | | | |
| | | Knowledge | Prestructiral | Showing | Clearly defined One focus All information given One answer | **Transmission** Imparting Knowledge Lecturing | **Transferable exploitation** Transmission of knowledge Traditional school learning | | |
| **Low** | | | | | | | | **Low** | |

## Table 3.2 Four Education Paradigms

| EDUCATION PARADIGM / EDUCATION COMPONENT | Transmission | Transaction | Transformation | Transcendental |
|---|---|---|---|---|
| **Aim** | To impart knowledge | To understand knowledge | To apply knowledge | To maximise human potential |
| Foundation *Basis* | Content | Content | Content | Process (for content) |
| **Education mode** | Direct teaching | Interactive teaching | Project education | Facilitating learning |
| **Focus** | **Learning to know (facts)** | Learning to "understandnd" (facts) | Learning to apply (facts) | Learning to be (authentically and holistically human) |
| **Educator action** | Tell, illustrate, demonstrate, explain | Questioning, discussing | Give assignments, projects, guidance, help | Confront the learners with a real life challenge they have to resolve themselves |
| **Learner action required** | Absorb, memorise, drill, practice | Answering questions, discussing | Exploration, discover, experimentation, | Creatively constructing new meaning |
| **Learning mode** | Receptive | Interactive | Self-active | Self-directive and collaborative |
| **Learner autonomy** | None | Some | Much | Total |
| **Level of learning** | Shallow | Insight | Deep | Transcendental |
| **Learning outcome** | Cognitive | Social | Multiple | Holistic |
| **Outcome** | Core concept reproduction | Core concept understanding | Enriched curriculum | Authentic: Living real life wisely |
| **Learning quality** | Low | Medium | High | Maximum |

(Adapted from Dewey, 1944; Vygotsky, 1978; Joyce, Weil and Showers, 1992; Miller, 2003; Engestrom, 2004; Darling-Hammond and Bransford, 2005)

## 3.3 A Contemporary Teacher Education and Teacher Educator Professional Development Epistemology

The preceding section puts into perspective the main features of a contemporary teacher education and teacher educator discourse. The main thrust of a new contemporary educational discourse is that of a contemporary educational epistemology and subsequently a contemporary teacher education and teacher educator professional development epistemology.

I do not in this section intend to engage in an elaborate explication of knowledge theories, rather I focus on two theories underpinning knowledge. These theories have an exceptional consequence, especially regarding a longstanding dichotomy of the theory-practice gap in teacher education. The theories originate from the perceptions of knowledge espoused by ancient philosophers, namely Aristotle and Plato.

Some researchers have studied knowledge broadly to the extent of categorising it into *episteme* and *phronesis*, often with reference to the work of Aristotle and Plato (Korthagen, Kessels and Koster, 2001). Korthagen et al. (2001), for example, elaborate on these concepts by presenting a scenario illustrating practices followed and consequences of such practices in teacher education, and in so doing provide an analysis of the difference between episteme and phronesis.

**TABLE 3.3:  TYPES OF KNOWLEDGE**

| KNOWLEDGE AS EPISTEME | KNOWLEDGE AS PHRONESIS |
|---|---|
| Expert, scientific knowledge (theory) needs scientific understanding | Individual practical knowledge needs practical, creative, spiritual wisdom |
| Knowledge of principles | Knowledge of concrete particulars |
| Locus of certitude: Principles | Locus of certitude: Particulars |
| Knowledge is conceptual | Knowledge is perceptual |
| Knowledge is rigid | Knowledge is flexible |
| The concept dictates the practice | Uses the practice to construct a guiding rule/principle/procedure/method |
| Knowledge learned (memorised) and "applied" | Knowledge acquired through enough, appropriate and authentic *experiences* and enriched, adapted or changed by reflection and existing research (critical assessment: perceiving, assessing, judging, choosing actions, execute them, be confronted with its consequences and learn from them) |
| Provides concepts | Provides authentic, holistic insight (wisdom principles) |
| Teach the student concepts – avoid will, emotions, etc. – they disturb | Immerse the student in experience – celebrate will, emotions, transcendence, etc. – they provide insight |

(Korthagen et al., 2001, p.15)

In the context of teacher education, especially as regards episteme, Korthagen et al. (2001) argue that teacher educators tend to be expected to solve the problems of the students, have knowledge at their disposal and therefore should be in a position to use such knowledge in a manner that students will be helped by it. The authors argue that such expectations present problems for teacher educators themselves. Therefore, their understanding of phronesis is that it is a different type of knowledge; it is not so much concerned with existing or concrete scientific theories which teacher educators tend to present to student teachers as conceptual. It is therefore unlike episteme perceptual. These researchers conclude that in the context of teacher education:

... there is nothing or little to transmit, only a greater deal to explore. And the task of the teacher educator is to help student teachers explore and refine their perceptions. This asks for a well-organized arrangement in which student teachers get the opportunity to reflect systematically on the details of their practical experiences, under the guidance of the teacher educator both in individual supervision and in group seminars" (pp.29-30).

Discussions on these theories which underpin the conceptualisation of knowledge in its broadest terms help to situate professional knowledge and other forms of knowledge as they pertain to teacher education. Most importantly, as can be deduced from the information presented in Table 3.3 (above), there is a clear difference between theory and practice.

This distinction between theory and practice has also been an inconvenient problem in teacher education throughout its existence in that the theory does not result in practice as it is expected to do:

> We saw that the theory-practice gap is a result of the view that the traditional goal of teacher education is to teach expert knowledge (resulting from psychological, sociological and educational research) to student teachers, who can then use this expertise in their practice … This view leads teacher educators to make a-priori choices about the theory that should be transmitted to student teachers. Research has shown that this approach has a very limited effect on practice" (Korthagen, 2000, p.255).

The reason for the above is the implicit assumption that the conceptual scientific discipline (*episteme*) is the real thing – the teaching itself.  In fact, such abstract knowledge is a very poor device to provide any value to acquire a professional practice such as teaching. Having general, theoretical, technical, rationality disciplined knowledge at their disposal is not what they need. They need something else, if the ever-increasing and devastating theory practice gap is to disappear. "This something else is knowledge of a different kind, not abstract and theoretical, but it's very opposite …" (Korthagen, 2000, p.225). In actual fact, even if the teacher education through expert discipline knowledge was excellent or completely absent, what teachers actually do in practice, is quite a surprise:

> What teachers use, in practice, is *phronesis*: situation-specific principles, context-dependent, that help them to rapidly arrive at decisions to solve practical problems … What is important is that it helps the teacher, within the practical situation, to quickly perceive what is relevant in the situation and to base his or her actions on that perception (Korthagen, 2000, p.255).

It would therefore be inappropriate to think of the theoretical dimensions of professional knowledge as theory (*episteme*) to be applied to practice (*phronesis*). Such fragmentation is also the major contributor to the theory/practice dichotomy in teacher education and the teacher educator providing the education.

The construction of the professional praxis knowledge is accomplished through concrete experiences of that practice itself. However, to ensure that what has been experienced in practice becomes knowledge requires a crucial intermediate intervention. This intermediate intervention is a conscious reflective practice (Schőn, 1983) because reflection is the instrument through which the concrete experiences are translated into dynamic, meaningful knowledge (Korthagen, 2001). Such a constructed theory of concrete experiences represents practical wisdom (*phronesis*: consisting of principles of situation-specific, context-dependent contexts) is called a practice theory (Furlong, 2000). Korthagen, (2000) indicates that in order to develop good teachers there is need for another pedagogy. Such pedagogy should start from a different view of what is important for student teachers especially if the interest is for helping them to become people of practical wisdom. Immersion in concrete practical experience (*phronesis*) is the foundation of the contemporary pedagogy. The curriculum is therefore an own construction of a practice theory; a theory of the experienced practice.

However, this constructed practice theory is continually informed and enriched by each subsequent education practice of the student teacher as such (through reflection and/or action research on his/her own practice). It is also informed and enriched by practices of other practitioners and experts as well as the exploration of existing education research (*episteme*: disciplinary theories) that may contribute to the improvement of the professional practice of education. The relationship between *episteme* and *phronesis* is therefore not the one **or** the other, neither the one **and** the other. Crucially *phronesis* is primary and *episteme* becomes a source for exploration to improve the professional practice that has already been constructed. The abstract disciplinary knowledge then becomes meaningful within the context or framework of education in practice, contributing to a repertoire of concrete, principled, practical wisdom (phronesis) of and for education in practice – where it manifests.

### 3.3.1 *Addressing the Teacher Educators' Professional Needs through Self-Study Research*

In this section of Chapter 3, I align the literature reviewed to arguments that professionals in the education sector can benefit from engaging in research and learning from the experience.

As alluded to in Chapter 1, at the regional and international levels, teacher educators have responded to questions about the extent to which they can be classified as professionals by engaging in numerous activities, including research of a self-study nature, collaborating with either colleagues or student teachers in engaging in such research and presenting research based papers in conferences (Clarke, 3001).

It is important in discussing teacher educators' professional needs to refer to some of the work undertaken by some researchers in this area. I recognise the work of Groundwater-Smith and Mockler (2009), particularly as this work relates to research to be undertaken by teachers and teacher educators as professionals in their own right. They encourage teachers and teacher educators as practitioners to form "Professional Learning Communities" through which learning would be collective, collegial and collaborative. Among the distinct features of such a community would be engaging in reflective professional inquiry. I choose "reflective professional inquiry" out of five features of Professional Learning Communities for its relevance to this study.

Presumably, formation of such a community requires the practitioners themselves to be proactive and address the challenges that might emerge as they implement their professional activities. Groundwater-Smith and Mockler (2009) point to possible challenges and call for "action-for the teaching profession itself as well as those who serve it, such as teacher educators to pose a challenge to the compliance agenda in education in all its manifestations. Such a challenge is not likely to be easy, [though] … "(p.139).

Groundwater-Smith and Mockler (2009) argue for inquiry-based professional learning for teachers. They point out that embracing the idea of inquiry-based professional learning would challenge teachers and teacher educators to develop some level of courage. They propose 8 attributes of courage. For example, teachers should have the courage to be true professionals in their practice, to take a transformative and libratory stance and to propose the challenging solution, just to mention a few. They argue that courage has

always been part of practising teachers but that it is even more relevant to have courage in the context in which they are expected to succumb to demands posted by those who, for example, have the power to develop and impose standards.

There are other researchers who argue that teachers and teacher educators should develop the practice of researching. Lingard and Renshow (2010) write about teaching as research-informing professions; research undertaken by teachers should not only be classified as teacher inquiry or action-research but should in their view be a "researchly disposition" which should be instilled in teacher education institutions as educational research in its broadest sense. In this regard teachers and teacher educators would be empowered to engage in "productive pedagogies research" for its significance to practising teachers or teacher educators.

Another form of research that is commonly practised by teacher educators is known as "self-study". Self-study is valued by teacher educators for its benefits. The benefits include empowering practitioners to examine their learning about practice, exploring scholarship through reflecting on their teaching, maintaining focus on their students' learning and collaborating with colleagues or teachers in schools. Most significantly, as argued by Loughran (2010), the interplay between practice and scholarship could be appealing to educators as their work becomes more holistic as opposed to being placed in sections such as being in a teaching department and not in a research one.

There seems to be a close relationship between self-study and action-research. They both embrace reflection and reflective practice and are therefore aimed at empowering the practitioner. These concepts have been in the education sector for many years and are promoted by researchers such as Schőn (1983, 1987). Kitchen and Stevens (2010), teacher educators at the University of Toronto, used self-study as an approach in an action research project in which they worked with their student teachers. Lessons learned from the research include the fact that Kitchen who had utilised reflection on past experience and present practice, as well as critical analysis and additional field experience as the tool for professional growth of student teachers, had plans to, as a result of lessons learned from the study, add inquiry through action research in the pre-service teacher education programme. Kitchen and Stevens (2010) conclude that

> self-study was vital to our growth because it heightened our level of reflection during the action research process. By consciously examining our teaching

practice through action research and self-study, we were able to make adjustments to this assignment and the curriculum as a whole. By reflectively engaging in interdisciplinary and collaborative teaching we enhanced our skills as co-constructors and renewed our commitment to work with other teacher educators. Self-study was a very important part of our process. By reflecting on both this project and our teacher education practice generally, we developed deeper understanding of our research findings, identified possibilities for action research in teacher education, and examined closely our beliefs and practices as teacher educators (p.4).

In Kitchen and Stevens (2010) we learn about cooperation or partnering as colleagues with own students and in the process generating new knowledge and developing professionally. This idea is supported by researchers such as Groundwater-Smith and Mockler (2010) who report on partnerships between classroom practitioners and academics. It is a study whose outcomes, regardless of some challenges experienced in the process, proved to benefit all participants. Groundwater-Smith and Mockler (2010) conclude that this was a professional learning journey that they valued for its "capacity to open classroom doors, draw teachers and academics into new ways of working together and foster critical professional discourse [which is] surely an essential part of true professional learning and collaboration (p.167).

### 3.3.2 Relationship between Research Undertaken and Learning

The major question that underpins this study is with regard to where teacher educators draw their professional knowledge from. The literature presented in this section of the literature review chapter focuses on quality assurance and management issues, challenges facing teachers and teacher educators in the context in which teaching takes place. It further focuses on engaging in research as a possible strategy for teachers and teacher educators to learn from their experience. With the question that underpins this study in mind I now venture on literature on learning and its various facets for its relevance to the major question. It is critical to begin with metacognition and metalearning, given their importance in this study.

Flavell is one of the researchers whose educational psychology work has focused on, among other areas, metacognition. His 1971, 1976, 1979 and 1987 work is reported to have focused on, among others, educational psychology areas: metacognition and cognitive monitoring. In his work he is said to make reference to metacogitive knowledge and metacognitive experiences. In the description it is indicated that metacognitive experience can also be a 'stream of consciousness' process in which other information,

memories or earlier experiences may be recalled as resources in the process of solving a current-moment cognitive problem. The description goes further to indicate that metacognitive experience also encompasses the affective response to tasks. In the final analysis, success or failure, frustration or satisfaction, and many other responses affect the moment-to-moment unfolding of a task for an individual. The unfolding of the task may in the end help determine an individual's interest or willingness to pursue similar tasks in the future.

The Institute of Education, London (2001) further provides a description of metalearning and metacognition and shows the difference between these two concepts. The Institute asserts that metacognition refers to awareness of thinking processes and 'executive control' of such processes whereas metalearning refers to making sense of one's experience of learning. The Institute indicates that metalearning "covers a much wider range of issues than metacognition, including goals, feelings, social relations and context of learning (p1). Livingston (1997) takes the point further. He elaborates on metacognition and concludes that knowledge of a person variable refers to general knowledge about how human beings learn and process information. Knowledge of a person variable also includes individual knowledge of one's own learning processes.

Ridley, Schutz, Glanz and Weinstein (1992) have summed up metacognitive skills. They include taking conscious control of learning, planning and selecting strategies, monitoring the progress of learning, correcting errors, analysing the effectiveness of learning strategies, and changing learning behaviours and strategies when necessary.

Besides researching learning as a construct, other researchers have ventured into researching metalearning and metacognition. Jackson (2003) explored metalearning as a concept. In preparation for a paper he was going to present at a symposium, Jackson engaged in research that would help make his paper research-based. His research involved symposium participants. The study was guided by a question: "**Is metalearning a valid and useful concept**?" [Jackson's emphasis]. He acknowledges that he borrowed the description provided in 1985 by John Biggs. The description indicates that within the concept are ideas such as that "people need to have knowledge of how they learn; have the motivation to be proactive in managing themselves in this way and have the capacity to be able to regulate their learning" (p.3). Jackson (2003) went further to associate metalearning with the concept of managing own learning and concluded that this concept is a complex mixture of "knowledge products – knowledge of learning / own

learning and how self learns, attitudes such as being prepared to do whatever one wants to do, capacities and skills involving thinking and acting on thinking and processes for doing whatever it is one wants to do. He presents what he thinks he has learned about how other people and how he has learned in a figure.

Jackson (2003) presents how people learn as individuals in the figure below. This figure, he argues, is informed by the research he did in an institution of higher learning. The research involved 15 medical general practitioners who were at different stages of their career.

Figure 3.2 How I think I have learned about how other people and I learn
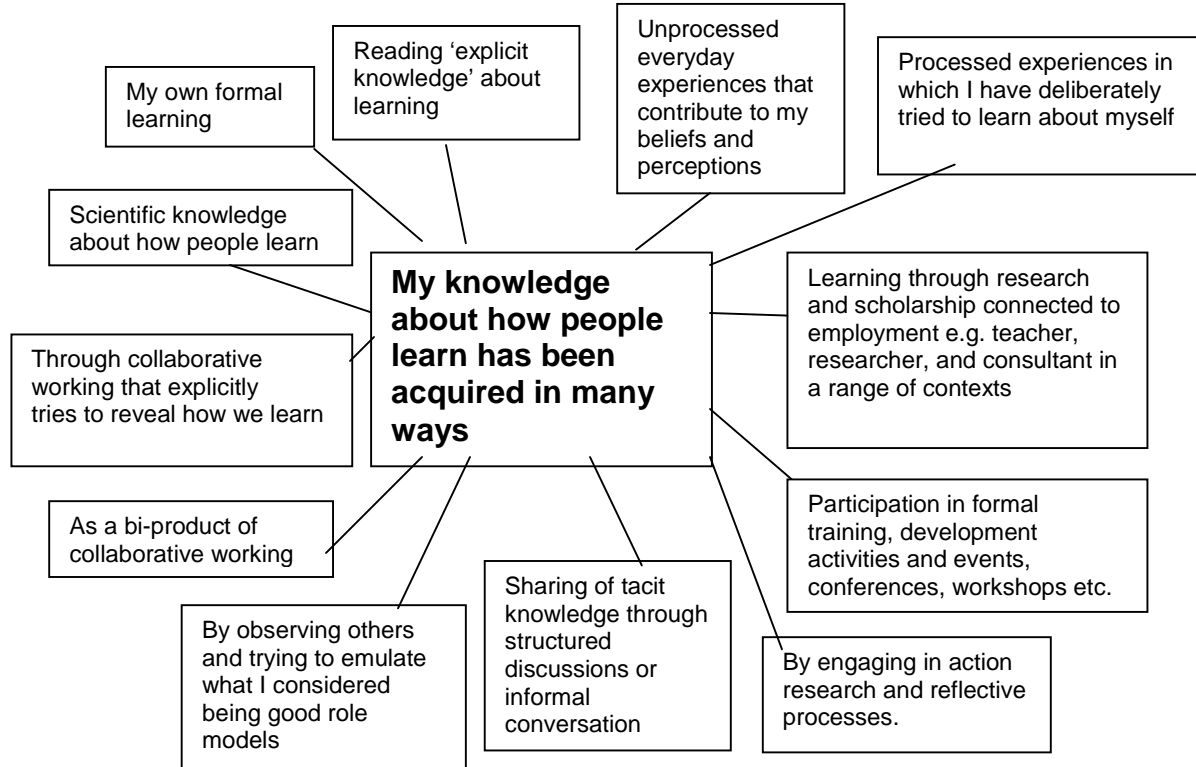


Jackson (2003, p.6)

Jackson (2003) concludes his understanding of how people learn by making reference to a study that was carried out in 1999 by the United States of America National Council. The study identified three principles for effective learning and Jackson adopts these. He then argues that if metalearning means anything then it must relate to these fundamental principles:

- Principle 1: Students come to the classroom with preconceptions about how the world works. If their initial understanding is not engaged they may fail to grasp the new concepts and information.
- Principle 2: To develop competence in an area of inquiry students must
  (a) have a deep foundation of factual knowledge;
  (b) understand facts and ideas in the context of a conceptual framework;
  (c) organise knowledge in ways that facilitate retrieval and application.
- Principle 3: A metacognitive approach to instruction (*presumably self-instruction also*) can help students learn to take control of their own learning by defining learning goals and monitoring progress in achieving them.

There are similarities in the analysis of the concept as presented by Jackson, Slabbert et al. and the Institute of Education London (2001). While Jackson (2003) concludes that metalearning is the sort of knowledge that enables individuals to be effective learners, Slabbert et al. (2009) conclude that it is the process where learners are in complete control of their own learning. Solely the purpose for a learner would be to ensure that the highest possible quality of learning is attained. Slabbert et al. (2009) take the point on metalearning further by pointing out that metalearning is the instrument through which "flexible learning, situated learning, contextual learning and contingent learning are acquired and practised as integrated constructed competence" (p.110).

The other aspect of learning discussed in the literature is metacognition. Jackson (2003), while making reference to various researches and people such as Flavell (1979) and Cowan (2003), comes up with his conceptualisation of the word *metacognition*. In his view metacognition entails "thinking, to good purpose, about how the processes of cognition work, and in particular, about how they can work for us …" (p.12).

Reference to issues of learning in its broad sense is made to Mezirow (1991), Slabbert et al. (2009), and the Institute of Education London (2001) where the concept *learning* is described. Mezirow (1991) describes learning in the context of adult learning and indicates that

> Learning may be defined as the process of making a new or revised interpretation of the meaning of an experience, which guides subsequent understanding, appreciation, and action. What we perceive and fail to perceive and what we think and fail to think are powerfully influenced by habits of expectation that constitute our frame of reference, that is, a set of assumptions that structure the way we interpret our experiences. It is not possible to understand the nature of adult learning or education without taking into account the cardinal role played by these habits in making meaning p.1.

The literature indicates that learning is a complex undertaking. Learners have to construct meaning themselves; in this regard they have to be active and creative (Slabbert et al., 2009). Additionally, learners tend to, especially in situations where they encounter an unfamiliar context, direct the way they collect additional information, compare incidents and consequently relate emergent patterns metaphorically to their meaning perspective. Mezirow (1991) further indicates that it is critical to validate results, especially in contexts in which learning involves the ability to control and manipulate an environment or other people.

The Institute of Education, London presents a report in the National School Improvement Bulletin focusing on learning about learning. The report whose purpose it is to review evidence which connects learning about learning with higher levels of performance is based on an analysis of about 100 research studies. It is acknowledged in the paper that the review is structured according to periods of schooling (preschool, primary school and secondary school) which may imply a developmental trend to learning about learning. However, the conclusion reached is that an "explicit focus on learning is an infrequent experience at any stage of education, and many learners show signs that they have little understanding of their own learning processes" (p.7). This gap displayed by learners could justify the reason for this Institute to emphasise the value of reflection in which "expert learners" employ reflective thinking skills to evaluate the results of their learning efforts. Therefore learning about learning is a complex undertaking which requires learners to build on their learning skills through reflecting on the learning itself.

This literature review on learning and the various aspects of learning reveal that individuals have numerous ways of learning. In a nutshell as pointed out by Watkins (2001), while metacognition is a defining characteristic of our species, metalearning is the dynamic episteme.

### 3.3.3 *Research Questions and Implications for Learning as a Construct*

At the teacher education level, teacher educators' practice is partly informed by the objectives articulated in teacher education programmes. Teacher education objectives are in turn informed by the broad aims of an education system as captured in national curricula. Therefore, in this context, teacher educators would be expected not only to engage in teaching that is cognizant of national educational aims but should do so in the most efficient ways, thereby ensuring that student teachers benefit from such endeavours. The implication is that teacher educators are heavily influenced by developments prevailing in education systems since they have to remain relevant to national educational goals.

Another implication is that the process of learning is not only targeting student teachers and their future students but also has to begin with teacher educators themselves. In ensuring that the teachers' teaching results in the anticipated learning outcome, they have to challenge their learners in a manner that will ensure that the aim of education is

achieved. In this regard, what needs to be taught and how it is taught is crucial so that teacher educators act out or model what they themselves expect of their student teachers.

The conclusion drawn by Van de Groep et al., (2005) on professional development of teacher educators is helpful. These researchers indicate that the most stimulating condition for the profesionalisation of teacher educators is for them to find an occasion to reflect. This means that in practice they are learners in their own right and as such have to be asking questions such as what it is that they want to learn and what it is that they find important in their work. Such questions could contribute to helping them find passion and motivation for their work.

Therefore, the need to reform current practice in educating student teachers as articulated by James (2009) is long overdue. James refers to the frustration experienced by student teachers in practice. The frustrations experienced are brought about by global teacher education situations in which the traditional aim is to have student teachers learn knowledge constructed by experts and use the expertise in their own teaching (Slabbert, 2003). In her further arguments on the need to change the pedagogy of teacher education, James also makes reference to Schőn's technical rationality. James's (2009) argument is based on a recently undertaken research for the fulfilment of her PhD programme. She concludes that it is in embracing the technical-rationality approach that teacher educators make "a priori choice" about the theory that should be transmitted to student teachers. In the end they tend to use transmissive methods of delivering the content.

The argument raised by James (2009) points to the current practice as being biased towards teacher educators modelling *episteme*; yet currently, as demonstrated by her study, the trend should be to model *phronesis*. Further argument on Schőn's (1987) technical rationality approach will be elaborated on below, as it is commonly used in most teacher education contexts, albeit with limited impact on practice.

The other specific question that this study is addressing is on the construction of professional knowledge. As will be detailed below, constructivism has much relevance to learning. The argument raised in the literature is that knowledge is constructed internally and through a process of interaction with the social world (Berman, 1988). Underpinning the arguments raised about constructivism is that learning is both fundamentally and radically constructive in nature. Heyligen (1997), in elaborating on knowledge as

fundamentally constructive in nature, is of the view that it is constructed in situations where students attempt to make sense of their world.  Von Glaserfeld (2001) expounds on learning as radically constructivist in nature, with the emphasis on the ability of individuals to construct knowledge.

These elaborations on constructivism help to justify the fact that providing student teachers with an opportunity to construct knowledge is a way of ensuring that they too will practise what they would have learned from their teacher education programmes. A graduate's ability to let his/or her students develop skills that will enable them to uphold constructivist ideals would be providing them an opportunity to become independent.

### 3.3.4 *Implications of Research and Research Questions on Teacher Educators*

I acknowledge here that teacher educators constitute an important section of any education system. In practice they play a fundamental role of educating teachers for various levels of education systems. Therefore, while this research revolves around teacher educators, and more specifically on their sources of professional knowledge, attainment of that knowledge and relevant qualifications, in the end, is targeted at the student at the school level. The school level student is expected to achieve a particular educational aim (Slabbert et al., 2009). The challenge therefore remains for teacher educators to make that connection as they too learn in practice on best approaches to educating student teachers.

Consequently, those school level students will benefit from good practice demonstrated by graduates of teacher education programmes. Therefore teacher educators, given the very mandate of educating teachers, should be concerned about the ultimate goal of educating student teachers who enrol in teacher education programmes. In practice, therefore, learning has to take precedence as a contextualising factor, given that currently people, including professionals in education, talk about "good teaching when the teacher has brought the students to good learning" (Vermunt, 2003). It is important to reiterate here that teacher educators therefore have to educate student teachers in a manner that will help them engage in a kind of teaching which should aim at achieving an education aim, and they should do so in the most efficient manner if students are going to benefit from such teaching endevours.

The challenge for teacher educators and education systems in general is educating student teachers in a manner that ensures that the required learning takes place. This centres on the ability of teacher educators to deliver teaching in a manner that ensures that the student teachers' teaching activities will result in the intended aim of education being realised. The challenge therefore is on the teacher educators themselves, as they too would have to rethink the strategies they have been using to embrace new developments. For example, issues of co-operative learning (Slabbert et al., 2009) require a rethinking of the common practice of grouping students to undertake a particular task. The teacher educator who focuses on rethinking the manner in which students are helped to become radical in their ways of thinking and teaching is cognizant of the role of concepts such as metalearning and metacognition in teacher education.

Teacher educators who embrace such concepts strive for empowering student teachers with the ideals of constructivism that are built on an understanding that knowledge is not passively received but actively constructed by the individuals through interactions with the environment (Slabbert et al., 2009). The context of metalearning is such that students become effective, self-directed, independent lifelong learners. In this regard teacher educators would be required to encourage their student teachers to uphold the ideals of encouraging their own students to create interactive environments in which they would be required to construct meaning. It is in a real life context in which students can be challenged so that they can resolve real problems, which more often than not do not necessarily need the support of teachers. Students require skills for resolving challenges and they would be compelled to do so by prevailing circumstances (Slabbert et al., 2009).

### 3.3.5  Implications of Professionalism for Teacher Educators

Having discussed professionalism in Chapter 1, I revisit the concept here for its relevance to this chapter. I wrote about the need for teacher educators to, as is the case with all other professionals in other disciplines, be certificated (Clarke, 2001). In this context I refer to professionalism as it relates to choices that teacher educators have to make in executing the teaching of student teachers. The emphasis here is that teacher educators should, as they make teaching decisions, be cognizant of the fact that "professional knowledge is derived from practice" (Slabbert et al., 2009, p.132). In this regard a professional would act in ways that are illustrative of his or her professional knowledge, skills and values that are uniquely those of teacher education. In the latter

researchers' view, teacher educators would therefore be upholding values that demonstrate their integrity in such a manner that they are distinguishable from other professionals.

The challenge for teacher educators as professionals therefore is to harness phronesis through exposing student teachers to and challenging them through what Korthagen, (2001) refers to as new experiences and continuously ensuring that they understand the principles that cause their practice to be successful (Slabbert, et al., 2009). Therefore, it is only in situations where student teachers are exposed to opportunities that require them to think beyond education taught in teacher education institutions that they can construct new conceptions and internalize fundamental changes in their own learning, and so educate their own students. However, as they adopt new ideas, teacher educators should bear in mind fundamentals of human virtues which, when examined alongside professional integrity, call for upholding moral values and norms. Palmer (1998) summaries fundamentals of human virtues and professional integrity by indicating that knowing one's students and own subject:

> depends heavily on self-knowledge. When I do not know myself, I cannot know who my students are, I will see them through a glass darkly, in the shadows of my unexamined life and when I cannot see them clearly, I cannot teach them well. When I do not know myself, I cannot know my subject not at the deepest levels of embodied, personal meaning. I will know it only abstractly, from a distance … as far removed from the world as I am from personal truth (p.2).

In the final analysis teacher educators, by the nature of their work, have demands to address in their day-to-day activities. In practice they are not only concerned about their own learning but they at the same time have to think beyond a teacher education context. This is a context in which there are learners in the school system; most of them will be taught by graduates of teacher education programmes.

## 3.4 Researching Professional Knowledge

Professionals are known to have a unique knowledge base. The "Professional Character" presented in the box below stipulates professional competencies that could serve as a guiding principle to professionals. It helps to illustrate what professional competences entail.

| CHARACTERISTICS OF A PROFESSIONAL |
| --- |

a. Professionals possess an expert body of knowledge, skills, attitudes and values in their field of practice
b. Professionals belong to a professional body and submit to a professional code of conduct.
c. Professionals exercise a professional practice.
d. Professionals design their unique professional practices from the dynamic interplay between their expert body of knowledge, skills, attitudes and values and their practical experience of their profession.
e. Professionals are able to monitor and critically assess all their actions and their consequences against a solid foundation in a reflective mode to:
    - precisely pinpoint the very instances of their success, failure or uncertainty;
    - accurately diagnose its cause;
    - correctly identify – but even much more importantly – creatively generate alternative possibilities;
    - confidently make the best possible choice for follow-up action; and
    - boldly engage in the improvement of the original attempt;
f. This means that professionals are able to make the most appropriate, responsible, accountable and instantaneous decisions at any required moment to pursue the best possible outcome despite what has originally been designed or prepared.
g. Professionals are always working at the cutting edge of their professions: ensuring that they access the most recent knowledge and skills to make the best possible choices for incorporation into their practices in a responsible way to ensure the highest possible quality of professional practice.
h. Professions are problem-solvers. Whenever a professional experiences an obstacle of a kind or finds an opportunity to improve the quality of the profession, he/she engages in the process of problem-solving even if it requires creativity constructing new knowledge and designing new skills for the profession.
i. Professionals are therefore continually improving their practice.
j. Professionals are responsible in all respects. They do not need checking-up on executing their professional task exceptionally well, and they bear the consequences for the action they take and the choices they make.
k. Professionals are professionals because no one else but the professional can do he job of that particular profession. If a professional therefore engages in activities that someone else outside the profession can do, then the professional does not do a professional's job.

Slabbert, De Kock and Hattingh, (2009, pp.129-130)

The search for literature on professional knowledge has revealed that extensive work in the form of research and review of published research that highlights the various kinds of knowledge has been researched and written about (Hofer & Pintrich, 1997, Paavola,

Lipponen & Hakkarainen, 2004, van den Beg, 2002, Schőn, 1983, Shulman, 1988, Rando & Merges, 1991, Trip, 1993; Fenstermacher, 1994). In presenting various forms of knowledge, Fenstermacher's (1994) review of work undertaken on knowledge focuses on the knower and the known, and looks at the nature of knowledge on teaching. What makes his review relevant to the current study is the justification he provides for his review, which, unlike other teacher knowledge reviews, examines research on different research programmes that "either explicitly purport to be about teacher knowledge or that expand what is known about teaching" (p.3).

Festermacher (1994) then describes knowledge as ranging from formal teacher knowledge (TK/Formal) to practical knowledge (TK/Practical), and in doing so terms such *as personal practical, situated, local, rational* and *tacit* knowledge are presented. He describes knowledge in the context of the mental state and activities of teachers, pointing out that "knowledge is simply a generic name to describe a broad range of mental states of teachers that arise from their training, experience, and reflection and has little if any epistemological importance" (p.35). His review is broad and encompassing, and helps to illustrate that extensive research has been undertaken in this area.

However, research on knowledge in the area of teacher education seems to have focused on teachers and teacher educators in institutions in developed countries more than in institutions such as the one in which the current study was carried out. Festermacher's (1994) review is broad and it raises a series of critical questions that informed his approach to the review: What do teachers know as a result of their experience as teachers? What knowledge is essential for teaching, and who produces knowledge about teaching?

Embodied in the research that has focused on knowledge is the categorisation of knowledge as an idea, which suggests that there are different types of knowledge that have been researched. A large number of researchers, including Tom and Valli, (1990), Hiebert, Gallimore and Sigler (2002), Stuart, (2002), Eraut (1996), Eraut (1994), Schőn, (1987) and Schőn (1983) have studied and analysed, among other types of knowledge, professional knowledge. Eraut (1996) defines professional knowledge as "knowledge possessed by professionals which enables them to perform professional tasks, roles and duties with quality" (p1). Schőn (1983) adds to this description by pointing out that a

profession has a systematic knowledge base, which means that it is specialised, firmly bound, scientific and standardised.

In the context of these studies it seems that professional knowledge distinguishes one profession from others, while also unifying those who are in the same profession. Stiggins (1999) concludes that professional knowledge must be public, which in his view means that it should be represented in a manner in which it can be communicated among colleagues; hence, the value attached to ensuring that professional knowledge is storable, sharable and that there are established mechanisms for verifying and/or improving it (Stiggins, 1999).

There are other research studies that have been undertaken on professional knowledge, some of which point to professional knowledge as often tacit. It is knowledge that broadly covers a myriad of activities, including: knowledge of: subject matter, classroom organisational and instructional techniques; the structuring of learning experiences and curriculum content; students' needs, abilities, and interests; the social framework of the school and its surrounding community; and their own strengths and shortcomings as teachers. The descriptions conclude with a note from Goodnough's (2001) acknowledgement that teachers' knowledge is dynamic, that it is held in active relation to practice and used to give shape to that practice. It is summed up as follows by Slabbert et al. (2009):

> Professional knowledge is practical knowledge harnessed to an ethical ideal. Its outcome is creative wisdom. It is therefore qualitatively a different kind of dynamic knowledge. It is different from academic and technical knowledge because it is characterised by a professional ethos. A professional ethos is established through professional development of which the purpose is to improve the quality of the professional knowledge (p.41).

It would seem that comprehending teacher educators' work requires an insight into how they themselves interpret the complex nature of their work. Unless tacit knowledge is made explicit by the professionals themselves, professional knowledge in the context of teacher educators could remain implicit. This might explain the new wave of research into self-study, mainly undertaken by teacher educators. Teacher educators, as will be discussed below, seem to, in undertaking this type of research, explicitly share their otherwise tacit knowledge.

The major question that this study is addressing is with regard to sources of professional knowledge among teacher educators. The literature review has revealed that there are

numerous sources from which teacher educators draw their professional knowledge. The literature further indicates that these range from those that can be solicited from the academic institutions and those that are acquired from practice. The work of Jackson (2003) referred to earlier in this chapter illustrates this point. The sections that follow elaborate on the various sources of knowledge as they relate to teacher educators. Therefore the literature in this part of the chapter helps to contextualise the research questions in the literature.

### 3.4.1  Propositional/Received Knowledge

Teacher educators acquire knowledge that allows them to engage in professional activities. The need to prepare teacher educators academically for teaching in teacher education programmes is real. Teacher educators operate in a double-layered context in which they prepare adult learners for whom teaching is governed by andragogical principles. These are the principles by which teaching and learning methods are considered appropriate for adults and not children. In such a context teacher educators have to bear in mind that the same adults that they are teaching are being prepared to teach children (Ntoi & Lefoka, 2003; Mazirow, 1990).

Studies focusing on the offering of formal or propositional knowledge for teacher educators have been undertaken by Harris (2003) and Kosnik (2005) who looked into programmes and research on propositional knowledge. Harris's (2003) study involved 11 universities offering doctoral programmes in education and established that there are universities that offer teacher education programmes. However, Harris' study, which was undertaken in the USA, may not necessarily be generalised to other parts of the world. Although it is not clear whether there are teacher educator programmes offerings in other institutions outside the USA there is no doubt that such programmes are needed by teacher educators. This is particularly so in other parts of the world, especially in the context in which this study was carried out.

Kosnik (2005) claimed that engaging in research referred to above had been facilitated by being a member of a Special Interest Group of the American Educational Research Association (AERA). A realisation by Kosnik (2005), as a teacher educator, was that failure to move in her professional life implied being left behind as a teacher educator. Kosnik (2005) engaged in the production of various publications, which in her view helped in developing a knowledge base for teachers and teacher educators. She points

out that conversation with other professionals on the use of research to define a good teacher education programme, clarifies effective practices and helps novice teachers. In Kosnik's (2005) view, learning from other professors entailed discussions with scholars such as Shulman, whose suggestions concluded that the use of cases in teaching as is commonly practised in disciplines such as law, is also relevant in the teaching of teachers. Therefore, propositional knowledge received in teacher education institutions can benefit from research undertaken with the intention of improving programmes offered in such institutions.

In a study in which student teachers were involved in research, Kroll (2005) examined a possible outcome in a situation which involved student teachers in a two-year graduate programme. The study required student teachers to research the application of technical and theoretical knowledge as they systematically answered questions, collected data and engaged in controlled experimentation. In a case study Knoll (2005) examined students' experiences to learn within the specific context of the students' teaching seminar. The student teachers were to examine their learning within their student teaching placements individually. The study allowed her to use her own notes, plans and reflections about the process as a participant-observer. In a way she fostered self-study through a case study approach.

The study undertaken by Kroll (2005) illustrates that teacher educators and their student teachers can benefit from a study in which they are both involved. For her part, Kroll (2005) learned from the experience in that the study supported "the meta-cognitive processes associated with developing the inquiry skills needed for the study of one's own work as a teacher educator" (p.192). Kroll (2005) concludes by arguing that inquiring into one's own practice is essential since it contributes to becoming a life-long learner. The student teachers who participated in the study also benefited from this experience. They had been initiated into research that could help them develop techniques, knowledge and habits of mind that in turn could enable them to address the issues of practice that would inevitably arise as they teach (Kroll, 2005).

Concerns have been expressed (Lunenberg & Willemse, 2006) with regard to the lack of formal training of teacher educators to the extent of concluding that "a number of problems that teacher education experiences could arise from the fact that the whole issue of education of teacher educators has been rather neglected" (Buchberger, Campos, Kallos and Stephenson, 2002, p.56). However, the emergence of self-study

type of research addresses some of the identified problems. Teacher educators in some parts of the world have taken seriously the need to research their work, to the extent of involving their own students (Kroll, 2005). The fact that teacher educators in some teacher education institutions have found self-study to be a niche area is exemplified by studies such as those undertaken by Lunenberg and Willemse, (2006). These researchers engaged in three studies that focused on research as it relates to the professional development of teacher educators. Each of the three studies was followed by reflections on the process that was pursued.

However, while Lunenberg and Willemse (2006) established that teacher educators are aware of self-study as an effective means of connecting the academic task of conducting research to their own professional development, self-study has been found to be challenging for some teacher educators. According to Cochran-Smith (2003), teacher educators either do not have time to undertake research or lack skills for conducting it by themselves on their own practice. Hence Lunenberg and Willemse's study was intended to bridge the identified gap; their efforts may have helped those teacher educators who participated in their study. It may also have attracted some teacher educators in other parts of the world to engage in similar studies. It is difficult, though, to establish the extent to which the idea of undertaking research on own practice has spread throughout the world or the degree to which propositional knowledge generated has advanced the field of teacher education in general.

### 3.4.2 Practical knowledge

Descriptions of practical knowledge seem to be based on research undertaken in specific contexts, such as the field in which teachers are situated. The work undertaken by several researchers, including Clandinin (1992), Calderhead, (1988), Hiebert, Gallimore and Stigler (2002) and Fenstermacher (1994) has contributed to the conceptualisation of practical knowledge. Clandinin (1992) describes personal practical knowledge as being in the person's present mind and body and in the person's future plans and activities.

In Clandinin's (1992) view, practical knowledge reflects the individual's prior knowledge and acknowledges the contextual nature of the teacher's knowledge. It is considered to be a kind of knowledge carved out of and shaped by situations. It is constructed and reconstructed as professionals live out their stories and retell and relive them through

processes of reflection. Practical knowledge is therefore that knowledge that is readily accessible and applicable since it is mainly derived from teachers' own experiences (Calderheard, 1988).

Because "practitioner knowledge" is linked to practice it has been found to be useful to the practitioners themselves (Hiebert, Gallimore & Stigler, 2002). The "practitioner knowledge", according to Hiebert et al. (2002), is useful for practice since it tends to deal directly with specific problems. This is probably because practitioner knowledge deals with implicit theories better understood by professionals or practitioners themselves. This view is supported by Kane, Sandretto and Heath (2002) who, in discussing practitioner knowledge, refer to "theories-in-use", which exist predominantly as tacit knowledge or knowledge held but that cannot be easily articulated. Hence there is a tendency by some researchers to emphasise the existence and value attached to tacit knowledge. Schőn (1983) argues that implicit knowledge relates to "knowing-in-action", which in his view refers to the sorts of "know-how" that is revealed in observable actions. He claims that this kind of knowing tends to be more in action and is revealed spontaneously; yet characteristically one is unable to make it verbally explicit.

## 3.4.2.1 Values Attached to Practical Knowledge

There are values attached to practical knowledge, though literature suggests that, since it tends to remain implicit, it should be made explicit and so available to other researchers or practitioners. Shulman, (1987), Schőn, (1983), Van den Berg (2002) and Eraut (1994) suggest that implicit knowledge can be made explicit by using cases. In making practical knowledge explicit, practitioners in the context of teacher education should borrow from other professions and use a case as a unit of analysis.

Schőn (1983) illustrates the use of "cases" by referring readers of his work to two professions, namely medicine and law. He points out that a physician who, upon encountering many different cases of measles or a lawyer who may encounter many different cases of libel, tend to be informed by many variations within cases of their respective professions. In this regard small variations of cases would enable professionals to develop a repertoire of expectations, images and techniques, and to learn what to look for and how to respond to what they find. To this view Shulman (1988) adds that a 'case' is not just a well-written anecdote, but rather it extends opportunities

for reflection precisely because a practitioner could go beyond the limits of individual experiences and reflect on the experience of others.

Language appears to be one of the major contributors for ensuring that implicit knowledge becomes explicit. Munby and Russel (2001) found language to be a powerful tool in communicating one's world and how that world is constructed. It would seem that tied to the teachers' actions is the language they use that seems to clarify thoughts, especially as they apply their knowledge and to a large extent as they are interviewed about their actions.

The issue of language seems to imply that tacit or implicit knowledge needs to be made explicit if teacher education knowledge is to become public knowledge. Munby and Russel's (2001) work suggests that observing teacher educators in practice in undertaking research on professional knowledge may be critical; it is through their actions and the language they use that professional knowledge in this field could be communicated in public fora.

Revealing what practical knowledge entails through language and engaging in case studies supports the work of Clandinin and Connelly (1995). The works of these researchers stipulates that knowledge is acquired as professionals engage in using it over an extended time and through application to new situations. The authors indicate that teachers' knowledge "is that body of convictions and meanings, conscious or unconscious, that have arisen from experience … and that are expressed in a person's practices" (p.7). Therefore, knowledge may be acquired through experience and through deliberate reflection about inquiry into experience (Cochran-Smith and Lytle, 1999; Kennedy, 2002; Zanting, Verloop, and Vermunt, 2003).

## 3.4.2.2 Learning as a Consequence of Experience

Discussing learning as a consequence of experience, Stuart (1998) argues that professional learning is part of the process of human growth and development and that in the end everyone has to do his/her own learning. This view is supported by Eraut (1994), who posits that professionals continually learn on the job, because their work entails engagement in a succession of cases, problems or projects which they have to learn about and make sense of in their practice. However, Eraut (1994) concludes that there is little research evidence to indicate the overall level of work-based learning in any profession.

In the context of practical or experiential based knowledge, Cochran-Smith and Lytle (1999) refer to two conceptions of teacher learning, that is *knowledge-in-practise* and *knowledge-of-practise*. The concept *knowledge-in-practice* entails practical knowledge, including reflection on practice. The assumption here is that teachers learn when they demonstrate their expertise, especially in situations where they are capable of making intelligent judgements. Additionally, teachers demonstrate expertise when they are designers of rich learning interactions in a classroom context.

*Knowledge-of-practice* is knowledge that teachers need if they are to teach well. It is knowledge that is generated when they treat their own classrooms and schools as sites for intentional investigation. At the same time they treat the knowledge and theory produced by others as generative material for interrogation and interpretation. In Cochran-Smith and Lytle's (1999) view, "teachers learn when they generate local knowledge of practice by working within the context of inquiry communities to theorize and construct their work and to connect to larger social, cultural and political issues" (p.250). Cochran-Smith and Lytle's (1999) study is directly linked to the current study because it highlights the different conceptions for categorising sources of professional knowledge. Nonetheless, the findings of this review highlight that teachers' sources of professional knowledge are diverse.

While knowledge-in-practice and knowledge-of-practice convictions imply that practice could contribute to confidence based on what may accrue from practice, this does not downplay the fact that professionals can also benefit from other forms of professional development activities. Empirical research has shown that professional development initiatives that focus on certain aspects of education tend to help educators understand the content they teach and the ways in which students learn that content (Guskey, 2003). Professional development is therefore viewed as a cornerstone of systematic reform efforts designed to increase educators' capacity to teach (Disimore, Porter, Garet, Suk Yoon and Bierman 2002).

Smith (2003) shares his experiences as chair of a department of teacher education for secondary school teachers in Israel. He advances three possible reasons that justify the provision of professional development of teacher educators. To improve the profession, Smith suggests continuing professional development for teacher educators. Ensuring that they are constantly receiving education has consequences for the education of teachers and the education system as a whole. In practice, the quality of teacher

education programmes is dependent on well-grounded teacher educators. He provides as the second reason for continuing professional development the need to advance the profession. In this regard Smith (2003) proposes constant addition to the teacher educators' professional knowledge. He argues that they also need to work and look for other options for offering teacher education, a situation which requires them to find ways of accessing new knowledge and being prepared to try out new ideas in their own context. The third reason is with regard to promotion and tenure. The challenge here is to undertake research that will enhance the recognition of their own institutions' reputation and that of themselves as professionals.

Smith (2003) is of the view that opportunities for learning include attaining higher academic credentials, participating in continuing professional development programmes, using case studies and discussions on specific issues addressed in own institution. He advises that teacher educators should take advantage of feedback provided by supervisors of instruction and own students within own institutions. In this regard they would gain from feedback provided by mentors and voluntary support. Smith argues that there is value in teamwork where a group of teacher educators may share problems with the intention of finding solutions as a group of educators teaching the same or different course. Doyle (1990) and Paavola, and Lipponen and Hakkarainen (2004) agree with Smith's findings and indicate that learning to teach in the context of teacher education is about translating and transferring knowledge from one form to another, for example, from practical to propositional and procedural to perceptual knowledge.

These views may be related to some researchers' observations 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. Therefore, besides learning in formal institutions, there are prospects for learning on the job (Korthagen, Loughran and Lunenbeg, 2005). These researchers make reference to research on mid-career and early-career professional learning in the business, engineering and healthcare sectors, in which a typology of trajectories for classifying what was being learned was developed. The typology of learning trajectories includes task performance, awareness and understanding, personal development, working with others, role performance, knowledge of the field, decision-making, problem-solving and judgement.

It is evident that teacher educators are under pressure not only to study their own practice but to explore how experience in studying their work might impact on their

academic learning. This is more so where opportunities for professional training for higher education teachers are scarce, as reported in a study by Donnelly (2006) conducted in the Republic of Ireland. Here integrating learning technologies with experiential learning in a postgraduate teacher education course involved academic staff. Donnelly's study benefited from using a self-study approach. Critical issues were raised in his study, with scholars developing as reflective practitioners by distinguishing their own work and offering their personal accounts for public criticism. He asserted that his professional practice was transformed to the extent that his role in tutoring using learning technology improved.

Although Donnelly's (2006) study was concerned with integrating learning technologies with experiential learning in a postgraduate teacher education course in a developed country, it has revealed experiences of a teacher educator researching his work and learning from that experience. The study points to the concern that teacher educators have regarding what characterises them as they deliver the content. The study further illustrates that the teacher educator who participated in the study came out of it with different views, and that, most importantly, he had transformed his own practice. In essence, Donnelly (2006) illustrates that learning becomes significant if one is conscious of the process in which one engages. This view is shared by Clarke and Mitchell (2007) who also engaged in a similar study.

### 3.4.2.3 Learning Facilitated by Practice in other Contexts

In the real world of practice, teacher education is not only embedded in teacher education institutions but it is played out in school systems, in places where student teachers practise with their educators supervising them. The tendency for teacher educators to engage in research that takes them to schools is therefore evident. The literature has revealed that some researchers have studied the extent to which schools in which student teachers do their teaching practice could serve as sources of professional knowledge for teacher educators. Alexander (2004), Clarke, Erickson, Collins and Phelan (2005), Zanting, Verloop and Vermunt (2003) researched work in schools in which student teachers practice are cases in point. Clarke (2007), a teacher educator today also reflects on his work as a mentor in a secondary school context.

Alexander (2004) decided to spend time teaching children instead of observing, and undertaking research on student teachers engaged in teaching young learners. There

were a number of reasons for doing so. Teaching children gave him an opportunity to test new ideas and methodologies and find answers to the questions he was keen to find answers to. The questions were, What do we know about learning styles, multiple intelligences, how to teach higher-order thinking skills or guided reading? These are concepts and ideas that teacher educators talk about in their teacher education classrooms. A further reason was a realisation that working directly with students in the schools provides an opportunity to forge connections between schools and colleges or faculties of education. His other reason was that working directly with students helps teacher educators gain credibility with one's pre-service teachers. In both instances he was developing his expertise as a teacher educator.

However, although the two studies by Alexander (2004) and Clarke et al. (2005) were undertaken in a school context and provided a learning environment for the university-based teacher educators, they differ. Alexander (2004) was keen to teach school children while Clarke et al. (2005) to a large extent collaborated as colleagues and with their own student teachers. Despite these differences, the two cases illustrate that schools are a relevant context to improve one's professional knowledge. Furthermore, the two case studies provided the teacher educators opportunities to reflect on the impact of their teacher education programmes on their own student teachers. This is an experience that Clarke et al. (2005) felt constituted knowledge that could be used in working with another cohort of student teachers.

While the work of Alexander (2004) and Clarke et al. (2005) focuses on schools as they relate to either children or student teachers that of Zanting, Verloop and Vermunt (2003) looks at a different aspect. The later researchers looked into how student teachers elicit mentor teachers' practical knowledge. The study illustrates that university-based teacher educators learn about their programmes and how they are received through working very closely with school-based teachers and their own student teachers.

There are several other studies in which teacher educators involved their own students that have provided learning opportunities for teacher educators. Boote (2001), Parsons and Stephenson (2005), Pereira (2005) and Nicol (2006) conducted studies in which they involved student teachers. Nicol (2006) investigated "the pedagogy of teacher talk" with the "pedagogy of what teachers talk is about." Given that the study involved a teacher educator and 14 student teachers, it appears to illustrate collaborative inquiry and how that collaboration facilitates learning.

Nicol (2006) used a reflective approach that employed various data collection strategies, including journal writing by both the teacher educators and student teachers, analysis of course-work, audio tape-recordings of the instructors' collaborative planning sessions and related email messages. Nicol (2006) videotaped recordings of the method course class sessions in both landscapes, namely a university and school classrooms. The study provided a detailed learning experience both for the teacher educators and student teachers. It showed the different approaches of undertaking research and indicated that teacher educators and student teachers can participate in parallel yet related studies, even though the situations were different. The researchers who undertook the studies referred to here allude to the complexity of studying their own practice and at the same time helping student teachers do the same.

While researching their own practice the teacher educators realised that they had to help student teachers research their own practice too. According to Nicol (2006) this approach necessitated not only experience in teaching at the school or university level but also theoretical knowledge as foundational to the work of teacher educators. Additionally, engagement in a study in which the researcher helps her own students indicates modelling thinking about teaching and, therefore, for student teachers, being challenged by people responsible for teacher education programmes (Schulte, 2005).

These studies whose unit of analysis ranged from student teachers in schools or at the teacher education institutions, secondary school students and teachers, helped the researchers to reflect. They reflected on the relevance of the teacher education programmes that were being offered in their institutions. The studies seem to have served as a learning experience for the teacher educators who were involved in the different studies.

## 3.4.2.4 Teacher Educators Learning from Colleagues

Besides schools serving as places for teacher educators to undertake research and learn from this experience, learning from colleagues is another avenue for teacher educators. This conclusion is based on the premise that there are prospects for learning through involving colleagues as critical friends. Regardless of the fact that Schuck and Russel (2005) were teaching in universities in two different countries, these education professors wanted to study and improve their teaching. They involved a colleague who served as a critical friend, set conditions for the involvement of the colleague and kept a

journal for documenting the experiences. The involvement of a critical friend provided the teacher educators with an opportunity to learn that there were parallel lessons between them and their student teachers. On the part of the teacher educators learning was facilitated through collaboration, whereby the two colleagues worked on a study that compelled them to improve their own practice. Furthermore, their research revealed that new knowledge was generated.

Additionally, preparing a paper for a conference based on the research that tested the involvement of a critical friend presented yet another learning opportunity. However, constraints were experienced in the adopted strategy of involving a critical friend, including the process itself, the duration of the project and failure to engage in dialogue about the process prior to the beginning of the project. Schuck and Russel's (2005) study points to the role that other professionals can play in helping teacher educators learn or gain professional knowledge. The study has also confirmed that colleagues preparing papers for presentation in conferences can assist teacher educators in numerous ways, in particular learning from such experiences.

Therefore there are prospects for learning from collaborating with colleagues. Orland-Barak and Tillema (2006), Griffiths and Poursanidou (2005), Clarke et al. (2005), Bain, Mills, Ballantyne and Packer (2002) are some of the researchers who looked into collaboration in studies that they engaged in. Griffiths and Poursanidou (2005) undertook a study in which they explored collaboration with two colleagues who were responsible for teaching social justice to student teachers. One collaborated with three other tutors who co-taught a module. Student teachers participated in the study through focus group discussion and individual interviews.

Although other teacher educators could not fully collaborate in the study undertaken by Griffiths and Poursanidou (2005), there were lessons that emanated from it. Collaboration in a self-study can be very challenging, especially if those who are required to collaborate do not fully understand their roles. However, preparing and presenting papers in conferences resulted in participants learning more about reflection on the process and on the involvement of colleagues in such endeavours. They also learned about group dynamics within an institutional context, where individuals may have different views regarding collaborating with colleagues. This study illustrates that while collaborating with colleagues might provide learning opportunities, it cannot be

assumed that the results would be positive. However, negative results provide a guide for future research.

It is therefore clear that schools, students and colleagues provide opportunities for teacher educators to engage in research learn, from such experiences and share those experiences. Sharing of experience is possible through, among other outlets, presenting papers in conferences and getting feedback and publishing. However, the context in which teacher educators work is another avenue for research, as was the case in a study undertaken by Samaras, Kayler, Rigsby, Weller and Wilcox (2006). Their study explored the extent to which engagement in the craft of faculty teaching would add to the faculty building a successful collaboration culture with schools. It involved the faculty and tenure-track assistant professors and a school-based master's programme for practising elementary and secondary school teachers.

The research by Samaras et al. (2006) revealed that university-based teacher educators had, through participating in the study, gained a deeper understanding of their collaboration with schools. They had acquired a vocabulary to describe their work and had refined their understanding of learner-centred theory and critical pedagogy in practice, and were convinced that the nature and quality of their collaborative efforts continued to develop. Samaras et al. (2006) confirm earlier assertions that university-based teacher educators have an opportunity to learn from engaging in work that brings them to schools or work that connects them with teachers in the service.

Therefore the research experiences shared in this section of the chapter presents information on research undertaken in the real world of teacher educators. There is no doubt that the experiences shared illustrate the link between knowledge acquired in practice and learning from that practice.

### 3.4.2.5 Linking Professional Knowledge to Learning from Practice

Linking teachers' professional knowledge to learning from experience showed some inconsistencies. In a study which involved an analysis of 45 teachers' lessons, Kennedy (2002) contrasted craft knowledge with systematic and prescriptive types of knowledge. She found that although teachers made more reference to learning from experience than to any other source of craft knowledge, when asked to be concrete about their lessons there were times when the responses were vague. Kennedy (2002) further established that teachers in the service learn from continuing professional education programmes,

some of which may be facilitated by university-based teacher educators. Such programmes, regardless of their diverse nature, were found to provide learning opportunities for teachers. Additionally, she found that all types of knowledge were valuable in the context of teaching.

In essence Kennedy's (2002) findings indicate that polarisation of types of knowledge is not so important, and that it may present difficulties in the real world of work. However, there is evidence that teachers were confident in responding to questions in the areas of curricular guidelines. They were able to interpret them with more latitude than they could use to respond to questions on other sources of professional knowledge. The relevance of Kennedy's (2002) study to the current one is the finding that experience is a source of knowledge for teacher educators and the extent to which they articulate what they have learned from their experience.

This section on practical knowledge clearly illustrates that what teachers are actually using in practice is not their abstract theoretical knowledge, but phronesis, which entails situation-specific principles. It is context-dependent and helps teachers to arrive at decisions to solve practical problems rapidly. What is important is that it helps teachers in practical situations to perceive what is relevant in the situation and then to base their actions on their perceptions. Thus, what student teachers need to acquire is "knowledge of a different kind, not abstract and theoretical [disciplinary knowledge], but its very opposite: knowledge of concrete particulars" (Korthagen, 2001, p.25).

### 3.4.2.6 Pedagogical Content Knowledge

Teaching in ways that illustrate the accomplishment of pedagogical content knowledge is the nucleus of the work of teachers and teacher educators. Research that looked into pedagogical content knowledge points to Shulman's (1987) work, which describes pedagogical content knowledge as an amalgam of content and pedagogy. This means what teachers know about their subject matter and how they translate that knowledge into classroom curricular events.

The work of Whewell and Thurston (2010) discusses the design of new primary concurrent degree programmes in one teacher education institution, a programme which aims at maximising the impact on initial teacher education in terms of leading to more effective learning and teaching which would ensure that student teachers develop both

content and pedagogic knowledge and skills. In the 1999 publication, Shulman expounded on his 1987 work as follows:

- content knowledge (C)
- general pedagogic content knowledge (GPK)
- Curriculum knowledge (CK)
- Pedagogic content knowledge (PCK)
- Knowledge of learners and their characteristics (KL)
- Knowledge of educational contexts (KEC)
- Knowledge of educational ends, purposes, and values and their philosophical and historical backgrounds (KPhil).

The elaboration touches on various aspects of the horizon of teacher education and teaching in general. For example, GPK embraces reference to broad principles and strategies of classroom management and organisation that appear to transcend subject matter, while KEC touches on issues of contexts ranging from the working of the group of classroom, the governance and financing of school districts, to the character of communities and cultures. Therefore, instead of looking at the work of teachers as mainly on pedagogy and content, Shulman's expansion on his earlier work illustrates the breadth of teachers' work of which teacher educators have to be cognisant.

The literature on pedagogical content knowledge relates to the enactment of pedagogical content knowledge among expert or experienced teachers and inexperienced or novice teachers (McCaughtry, 2005 & Doyle, 1990). Doyle (1990) cites Carter's study which shows how the two differ. Experts in Carter's study were found to organise and manage instruction in a rich manner, especially when compared with novices.

Doyle (1990) concludes that the studies she reviewed indicate that experts in teacher education, in contrast with the novices, draw on richly elaborated knowledge structures derived from classroom experience. Drawing from rich knowledge helps experts understand teaching tasks and interpret classroom events which in practice shed further light on pedagogical content knowledge. The dimension of expert compared to novice as alluded to by Doyle suggests that experts are more knowledgeable and skilled in the application of pedagogical content knowledge than their novice counterparts.

There are other researchers who, using various research approaches, have studied pedagogical content knowledge (McCaughtry, 2005; Hashweh, 2005). McCaughtry (2005) inspired by the literature on how teachers know subject matter, pedagogy, curriculum and students' learning, used a case study approach to analyse the knowing in instruction of one secondary physical education teacher. Hashweh's (2005) work on pedagogical content knowledge is based on a review of the history of pedagogical content knowledge. It established that there are seven assertions that comprise the new conceptualisation of pedagogical content knowledge. His articulation of pedagogical content knowledge stems from an analysis of research undertaken in this area and he suggests that it be re-conceptualised to embrace "a collection of teacher professional constructions, as a form of knowledge that preserves the planning and wisdom of practice that the teacher acquires when repeatedly teaching a certain topic" (Hashweh 2005, p.273). He further argues that viewing professional content knowledge provides various ways of researching pedagogical content knowledge. These include a precise way of defining it, clarifying its relations to other forms of knowledge and beliefs. Therefore, speculating about its development should facilitate future research in this area.

The findings of these studies (Hashweh, 2005; McCaughtry, 2005), suggest that researching pedagogic content knowledge has been in the context of school-based teachers for some time. Pedagogic content knowledge in departments of faculties of education that offer subject content such as science or English is probably clear too. However, the challenge remains with what pedagogical content knowledge would mean in the context of teacher educators who are based in educational foundations departments in faculties of education. This is an issue worth pursuing with colleagues in the educational foundation departments. These departments teach disciplines such as psychology for students to apply and not necessarily to teach.

The review of literature on sources of professional knowledge illustrates that teacher educators draw their professional knowledge from a variety of sources. Thus, their sources of professional knowledge include propositional knowledge, research in which they may collaborate with colleagues, their own students, serving teachers as well as from engaging in a variety of professional activities. These include documenting their experiences, reflecting on those activities and presenting research-based papers in

conference settings. Teacher educators' sources of professional knowledge are underpinned by practice through which they learn from various experiences.

## 3.5  Learning as a Construct/Paradigm

Some researchers expound on arguments related to a paradigm shift in teacher education. They point out that a paradigm shift in teacher education requires a deep analysis of the place of episteme and phronesis as theories that underpin knowledge (Slabbert et al., (2009). These researchers write about "learning to know", which entails a realisation that the world is not static. Therefore, students can no longer depend entirely on someone like a teacher to know it all. By implication, learning to know, as was perceived in the past, is fraught with difficulties. Therefore, no one should depend on another for the knowledge that such an individual might need to learn. As these authors argue, learning is constructive in nature. Based on their analysis of the way in which education was perceived in the past they therefore advocate distinctive shifts in the way student teachers are educated, to the extent to which they too will educate their learners at the school level.

Therefore, Slabbert et al. (2009), in advocating a radical change of the aim of education, make reference to several critical issues. Firstly, since learning is radically constructive in nature, in that "radical constructivism starts from the assumption that knowledge, no matter how it is defined, is in the heads of persons, and that the thinking subject has no alternative but to construct what he or she knows on the basis of his or her own experience" (p.54), education systems have to value various experiences with which students enter the schooling system.

Secondly, these researchers make reference to lifelong learning, which in their view would facilitate students' achieving their potential through teachers mainly facilitating that process. They therefore conclude their arguments by pointing out that kindling the potential in every student is crucial and that in doing so teachers have to acknowledge that "potential is personal, located inside the learner and can ultimately only be accessed by the learner him- or herself. No one can maximise potential for or on behalf of the learner …" (Slabbert et al., 2009, p.49).

Therefore educators, according to Claxton, (1999) and Holdstock (1987), regardless of the fact that they teach, can, for purposes of maximising human potential, merely facilitate the necessary, appropriate and sufficient lifelong learning. It therefore follows,

to adopt the argument of Slabbert et al (2009) that learning is a journey of self-discovery and development to reach the highest possible level of quality of life. Teacher education programme designers should rethink their current programmes, especially if they do not yet embrace lifelong learning as a construct that calls for change.

The work of Slabbert and Gouws (2006) takes the point on learning further. In their research they use an introduction to an accounting education course as a case in point: *The quest for powerful learning environments in higher education*. They indicate that long experience in institutions of higher learning has revealed that major epistemological features of introduction to accounting education as experienced in practice point to three major problems, namely that it is content driven, prescriptive and that it produces technicians. These authors argue for the creation of powerful learning environments which in themselves facilitate the creation of knowledge by the students. In a situation in which learners construct conceptual knowledge there is an assurance that they can be in complete control of that knowledge that they have constructed, and there are high possibilities that they can manipulate it in any way and to their advantage. Slabbert and Gouws (2006) conclude that such learning environments allow learners' intuition to use the knowledge

> to do something creatively new, and, in effect a continuous process of constructing knowledge ensues. But of crucial importance is that the knowledge constructed by the individual learner should now be shared with peers through a process of interaction by which the constructed knowledge is assessed and through cooperative learning the learners collaboratively refine the conceptual knowledge with the aid of a facilitator of learning (an expert) to eventually achieve the highest quality of learning (constructed knowledge) (p.345).

Nonetheless, while these authors have proved in their research that engaging students in creating or constructing knowledge is worthwhile, knowledge that gets created has to be authentic and must therefore be validated. Newmann, Marks and Gamoran (1995) instead argue for authentic pedagogy. There is justification for this argument:

> Educators and reformers often worry that today's students spend too much of their time simply absorbing and then reproducing information transmitted to them. They fear that students aren't learning how to make sense of what they are told. Also, reformers often see little connection between activities in the classroom and the world beyond school; students can earn credits, good grades and high test scores, they say, demonstrating a kind of mastery that frequently seems trivial, contrived or meaningless outside the school (p.1).

In order to contextualise the issue of authentic pedagogy and authenticating knowledge constructed by students, Slabbert et al. (2009) have made reference to a variety of authors who addressed the issue of achieving authentic learning. In this context these authors indicate, for example, that the learning process has to be initiated by an "incessant challenge to the learner's living of real life as a whole, so much so that uncertainty is provoked and anxiety not necessarily excluded" (Barnett, 2007, p.257).

In their view, students have to realise that existing knowledge and skills cannot provide a resolution to new challenges. In the real world challenges arise in different ways and/or forms, with some being on problems that already exist while others could be based on a desire to improve life. In such a case a student would be creating a problem where one did not exist. Such cases would require teacher educators to utilise similar practice for their student teachers if they too are to endorse such learning for the learners in the school system.

These arguments by researchers who studied learning are helping contextualise knowledge in teacher education. A visionary teacher education programme therefore has to be realistic to the extent that student teachers are made cognizant of new developments in education and the world of work they would be moving into. Therefore, as articulated in Nuffied's review (2010), since teaching quality and the relationship between teachers and students are central to successful education, such situations require "a respect for the profession of teaching, for the role of teachers as the custodians of what we value and as the experts in communicating that to the learners" (p.14).

However, advocating radical change in the education of student teachers without justifying the call would make it difficult to convince those who are being challenged to consider changing their familiar positions. The emphasis should instead be on the provision of quality learning as the major reason for proposing change in education systems. Advocates of quality learning argue for the quality of students' learning processes (Vermunt, 2003). Rethinking the entire purpose of education is justified for some researchers. For example, Slabbert et al. (2009) who, looking at the various facets of life, propose a constructed aim of education for creating the future, see the new aim of education being for "learners to maximise their human potential through facilitating lifelong learning to create a safe, sustainable and prosperous future for all" (p.49).

Presumably, the proposed aim of education would cater for new developments advocated in international fora, such as the world declaration on Education for All (EFA).

## 3.6 Constructing Professional Knowledge

In the context of teacher education and on the basis of the work of researchers such as Eraut (1994), Calderhead (1988) and Stuart (2002) acquiring and developing different kinds of knowledge and skills happens in the process of learning how to teach. Teachers are in this regard active constructors of their own knowledge. They should also aim for authentic student performance by, for example, calling students to construct knowledge through disciplined inquiry, which would enable them to address problems that have some meaning beyond schooling (Newmann, 1995). In an effort to make sense of the complex situation in which teaching occurs, teachers draw on many sources, which may include formal study and experience in the situated knowledge of the classroom (Stuart, 2002).

However, some level of competency is a prerequisite to constructing professional knowledge. Hence, as argued by Erickson (1988), not all professional knowledge must be constructed by each practitioner. The interpretation further suggests that an experienced teacher educator or indeed an expert might have better ways of constructing professional knowledge. Kremer-Hayon and Zuzouskys' (1995) understanding is that trial-and-error experienced in the process of learning to teach constitutes one aspect of knowledge construction. They refer to their experience as novice teacher educators and at the time not having the necessary knowledge regarding teacher education, indicating that in being a novice there is a need to develop knowledge urgently. It would seem that the construction of professional knowledge can begin as early as at the novice level for some professionals.

It is in the work of Schőn (1983) and that of Bereiter (2000 as cited in Paavola et al., 2004) that emphasis is placed on professionals having the ability to construct professional knowledge. In discussing the construction of professional knowledge, Schőn (1983) makes reference to Technical Rationality, which entails knowledge in and on action. He argues that technical rationality is one way to think about professional knowledge. In contrast he suggests that Technical Rationality provides only a very limited view of professional knowledge, suggesting that knowledge in action might better describe the knowledge that professionals construct, make sense of and enact.

Schőn (1988) indicates further that engaging in activities that enable one to reflect on one's own actions provides a learning experience and an opportunity to design interventions or gain new insights into the phenomenon of practice. These views are consistent with those articulated by some researchers. There are researchers who have looked into using reflective practice theory in their teaching, and in the process have transformed their operational activities after establishing the applicability of research undertaken by practitioners (Tripp, 1993; Whitehead, 1995).

However, while Schőn's extensive work on the construction of professional knowledge is widely quoted in education, a number of researchers critique his work. Green (1994) critiques Schőn's distinction and argues that if experts or proponents of professional expertise were to be relied upon to fill the gap between the scientific basis and professional knowledge and the demands of the real-world, practice in such a way might serve the model of technical rationality but not disturb teachers' or teacher educators' practical knowledge. This view would be applicable to those practising teachers who know that their teaching is situation-specific and could not be understood in terms of generalisation to other circumstances.

Paavola et al. (2004), basing their arguments on other researchers argue that knowledge can be systematically produced and shared among members of a community. These authors' interpretation implies that once knowledge has been created it has to be made accessible to users. Eraut (1994) cautions that practical knowledge is mainly created in practice in solving individual cases or problems and that in the process professionals contribute "to their personal store of experience and possibly that of their colleagues … such practical personal knowledge is never codified, published or widely disseminated" (p.54). Eraut's view is being tested by researchers who have undertaken research on practical knowledge and published or disseminated it. Teacher educators who have used self-study as a point of departure from other ways of engaging in research as already alluded to in the preceding sections of this chapter are disseminating findings in this area.

Some of these researchers have a different understanding of the construction of professional knowledge. A study undertaken by Berry (2004), who was aiming to improve her teacher education practice, indicates that the process of developing knowledge of practice requires more than simply sharing personal stories as teacher educators. She acknowledges that she learnt a great deal about her pedagogy through a

careful investigation of her practice. She concluded that investigating her practice meant analysing and challenging the basic assumptions of her work as a teacher educator, and trying to understand, name and frame her experiences.

Most significant about creating knowledge in this regard seems to be adopting a systematic examination of practice that includes sharing research efforts. In order for one to know the extent to which one has contributed to knowledge creation, one needs to do so by systematically sharing findings and getting professional feedback from those who participate in fora in which findings are shared.

Clarke (2001), in a review of teacher education, looked at critical points on the landscape of teacher education and pointed to a number of issues as evidence that teacher educators are creators of knowledge. In particular Clarke (2001) makes reference to the emergence of journals that have teacher education as their principal focus and argues that these reflect a growing development of outlets that regard teacher education and scholarship as one and the same, and regard the practice of each as self-supporting. As noted above, he also makes reference to texts in teacher education, indicating that reference books serve as a resource for students and perhaps teacher educators. Clarke (2001) further argues that value is likely to accrue from professional teacher educators' meetings as fora that serve as an opportunity for sharing knowledge generated by others. Finally, Clarke (2001) writes of research trends in teacher education, confirming that engaging in research facilitates the creation of knowledge.

Underpinning Clarke's (2001) analysis is a long history of work by teacher educators and scholars in teacher education. He extrapolates on issues dealt with in a given period and implies that the construction of knowledge in teacher education has been in teacher education scholarship since it emerged as a field of study. It is the documentation of these experiences and their implication that are of critical importance in his analytic work. Clarke's (2001) call for recognition of "teacher educators" as "scholars" in teacher education institutional homes, faculties or schools of education is grounded in an understanding that it is time to support teacher educators. Teacher educators can be supported through involvement in outlets such as journals, reference books and meetings of professionals.

Clarke's (2001) critical analysis helps one to value how teacher educators and scholars construct professional knowledge in a discipline (teacher education) that is not fully supported. His analysis also strengthens the basis for understanding teacher educators'

and scholars' standing in relation to how the knowledge they construct advances the status of the profession. However, his work falls short of linking their work to the application of created knowledge, particularly in the context of classroom situations.

According to Cochran-Smith and Lytle (2005), across their professional lives teachers play a significant and critical role in generating knowledge on practice. They use their own contexts, including classrooms and schools, as suitable sites for inquiry and therefore as an opportunity to create knowledge. Other avenues for constructing knowledge include the tendency for teachers to work as teams in conducting inquiry, participating in the design and review of curricula and holding leadership positions. It is in the context of challenging and addressing their own assumptions about practice and related issues, in identifying and studying practice-related problems that in the process teachers are viewed as constructing knowledge.

The relevance of the study by Orland-Barak (2006) lies in the framework used to analyse knowledge construction in professional conversations. Although the context and objectives of Orland-Barak's study differs greatly from the context in which the current study was undertaken, the analysis of the conversations presents some interesting findings on professional knowledge. The study: *Convergent, divergent and parallel dialogues, knowledge construction in professional conversations* suggests that participation in professional conversations does provide learning opportunities for those who get involved in such activities. He found that the three forms of dialogue appear to provide valuable opportunities for co-constructing different kinds of understanding about practice.

In his study Orland-Barak (2006) established that divergent and parallel dialogue can constitute important opportunities for constructing knowledge. This may be more so because they prompt a discourse in which professionals expose, scrutinise and contest deeply ingrained assumptions about their practice. However, as he argues, this process requires a 'mentor of mentors' to ensure that a relationship between facilitating professional conversations and learning from that facilitation is attained. Professional conversations tend to extend to teacher educators who supervise student teachers' research.

In practice teacher educators engage in the supervision of research undertaken at postgraduate level. There are writings that indicate that work in this area, while fulfilling to those who play the role of supervising, has numerous challenges for both the students

and their supervisors (Jansen, Herman & Pillay, 2004, Fataar, 2005). For Jansen et al. (2004), students' individual research journeys, due to among other things unclear steps to be followed in producing a research proposal, experience a number of problems, some of which are emotional to the extent that students sometimes "break down". Fataar (2005) engaged in a study that specifically looked into the supervision of research of doctoral students, basing his research on personal observations and reflective notes made throughout the proposal supervision process and two hour interviews with her two doctoral students. She concluded that the supervision of doctoral proposals was largely successful because of the students' ability to incorporate elements of a scholarly identity in their work. Incorporating these elements enabled PhD researchers to ask appropriate academic questions. Fataar (2005) was of the view that her role in the supervision process was to facilitate a shift from just thinking at the level of a student to an immersion into the required academic and intellectual repertoires required for proposal writing.

Fataar's (2005) admission to having developed her own personal professional reflexivity through the supervision process points to creating personal knowledge through reflecting intensively on the process, entering into dialogue with the PhD students, and reflecting on her role as research supervisor. Therefore, with hindsight, Fataar's supervision of doctoral students was in many respects an application of professional knowledge in her capacity as a teacher educator.

## 3.7  Application of Professional Knowledge

The application of professional knowledge involves knowing how to enact professional knowledge in relevant contexts or in practice. It requires the ability among teacher educators to enact the pedagogy of teacher education and also model what they expect of their prospective teachers. The literature points to the need on the part of teacher educators to enact professional knowledge. Alexander (2004) argues that, "observing student teachers and telling them what they should do or what they (teacher educators) would do is hardly the same thing as actually doing it" (p.624). Studying prospective teachers' activities at the expense of researching one's own work could be regarded as distancing teacher educators from investigating their own teaching and documenting their professional experiences.

There is evidence that teacher educators have been studied by other researchers and that they have also researched their own practice. The Multi-Site Teacher Education Research (MUSTER) project reported in Chapter 1 had as one of its sub-studies curriculum as delivered. The MUSTER sub-study followed an observation approach in collecting data on curriculum as enacted. This sub-study found that in all the countries that participated in the sub-study, most teaching followed a transmission mode, with lecturing and question-and-answer sessions being the most common (Lewin & Stuart, 2003).

In general, the use of observation, although the analysis took into consideration the documented curriculum, appears to have been restrictive. Interviews of all the research participants would potentially have revealed their views on why they acted in the way they did. The MUSTER Project, while it did not focus on the application of professional knowledge per se, demonstrates a case where teacher educators were being studied in practice. Contemporary literature as referred to above, however, suggests that researching one's own field of study necessarily impacts on teacher educators themselves in ways that could help improve their practice. This is one of the reasons for concluding that research by teacher educators themselves especially in their teacher education context is a worthwhile endeavour. The currently advocated approach of research for teacher educators is self-study.

The emergence of "self-study" research therefore calls on teacher educators to research their professional activities in ways that could contribute to transforming their field of study. There are claims that systematically inquiring into learning through self-study research (Loughran and Berry, 2005; Smith, 2003, Korthagen, Loughran and Lunenberg, 2005, Hamilton, 2005, and Clarke and Erickson, 2004 as articulated by Loughran and Berry, 2005) enhances the possibilities for teacher educators to see the relationship between received knowledge and the actual use of that knowledge in practice. However, Samaras et al. (2006) propose that an interest in self-study research "must come from the teacher educator who is willing to utilize the knowledge gained through examining the self to reframe and better understand practice and provide meaningful learning experience for students" (p.54).

Nevertheless, there are claims that teacher educators who study how they are learning, how they generate knowledge and how they enact teacher education curriculum tend to improve their work. This view is confirmed by Tom and Valli (1990) who maintain that

research findings are a source of professional knowledge for they provide teacher educators with information needed for reviewing teacher education programmes.

Some teacher educators have actually ventured into researching classroom practices and in a sense researching enactment of professional knowledge. In a study undertaken by two instructors in which they, as course instructors, explored two pedagogical moments that occurred within a diversity-focused secondary teacher education course, Freedman, Bullock and Duque (2005) found that their teaching faced numerous challenges. Reflective moments provided for the instructors were facilitated by problematising their teaching stances.

Hug and Moller (2005), tenured assistant professors, engaged in a study similar to that of Freedman et al., (2005). The latter researchers examined themselves as educators, their organisation of instruction and the possibility of collaborative work in pre-service teacher education across two disciplines namely; Science and Language Arts. To Hug and Moller (2005) their experience provided a learning opportunity, with the study helping them to improve as they acknowledged that they felt they had grown as university-based educators. In the analysis of the data they identified key areas that contributed to enhanced learning. Their research participants, namely student teachers and teacher educators, learned from reflecting on classroom experience. The teacher educators learned from their own students' experiences. One of these researchers was able to make sense of how s/he "enacted the curriculum in critical ways yet they (were) not able to use their dominant culture lenses to support the student's understanding of the critical issues" (Hug and Moller, 2005, p.600). It is reflection on the findings of the researched topics that brings value to the work of teacher educators who study their own practice and subsequently have an impact on their own practice.

## 3.8 Modelling Professional knowledge

The application of professional knowledge has implications for modelling teaching. Loughran and Berry (2005) engaged in a study in which they deliberately wanted to model the practice of teaching. In their work on modelling by teacher educators, they discuss their understanding of it. The discussion is based on a self-study which was longitudinal in nature in which they were both involved in Developing Pedagogy. They describe explicit modelling as

operating concurrently at two levels. At one level, explicit modelling is about us "doing" in our practice that which we expect our students to do in their teaching. This means we must model the use of engaging and innovative teaching procedures for our students rather than "deliver" information about such practice through the traditional (and often expected) transmissive approach. At another level, there is also a need to offer our students access to the pedagogical reasoning, feelings, thoughts and actions that accompany our practice across a range of teaching and learning experiences. We make such access through 'thinking aloud' …, journaling, discussions during and after class with groups and individual student teachers… (p.194).

The study illustrates a desire by these researchers to model what they believe their own students should be able to replicate once they are teachers themselves. They chose to engage in the study fully cognizant that the articulation of knowledge of practice is a difficult and a complex task. It demands considerable awareness of oneself, pedagogy and students. Employing a self-study methodology in which they engaged their own student teachers, Loughran and Berry's (2005) study reveals that opportunities for teacher educators to learn from a demanding process are fraught with tensions. Most significantly, they conclude that the exposure they went through facilitated metalearning or learning beyond the immediate, and uncovering learning about learning and teaching as experience.

Modelling can be deliberately played out in a manner that those for whom it is being played out are able to observe it. However, modelling can happen without a person who is being modelled being aware of the modelling. Two studies undertaken by different researchers, namely Brandenburg (2004) and Hug and Moller (2005) involved student teachers. In a study in which using negotiations as a strategy to involve his students, Brandenburg (2004) explored "roundtable reflection" as an innovative approach to learning and teaching Mathematics. He pointed out that "underpinning this restructured approach to teaching and learning was the assumption that practices, frameworks, modes of operation and understandings would be challenged" (p.3). The research was informed by extensive work on self-study including the work of Russell (1995), which for Brandenburg (2004) suggested that teacher educators should advocate changes that they had achieved in their own practice.

The case of Hug and Moller (2005) illustrates modelling in which a study by teacher educators examined, among other things, how they modelled teaching, listening and learning. The two teacher educators who were involved in the study taught different courses, namely Science and Literacy. Specifically the two teacher educators' intention

was to illustrate best practices of teaching by demonstrating how subjects can be integrated and made relevant to students' lives. They had assumed that seeing collaborative teaching and learning modelled by two new tenure-track assistant professors could make it easier for their student teachers to practise this way of teaching when they themselves began working as teachers. They were participants in the self-study research in which their students became part of the context of their teaching.

While the findings of the study extend beyond modelling, the two authors argue that their research contributes immensely to their professional development as university teacher educators. Hug and Moller (2005) concluded with a hope that "their stories will serve as a model for other educators engaging in their own collaborative teaching and self-study" (p.138). While it involved student teachers in such a manner that they were conscious of the activities involved in the study, the study pointed to modelling in the context of teacher education as grounded in the actual teaching itself. The use of the term *hope* by these researchers implies that even though they deliberately modelled a particular aspect of their teaching, there was no guarantee that student teachers were going to emulate the modelled aspect of teaching.

Other educational researchers make reference to research work (Cole, 1999) that focuses on modelling. Hamilton (2005) analysed modelling as demonstrated by a professor in her institution. Lessons that were modelled focused on the work of teachers and the value of research. Through exploring the complexities of teaching and the contradictions inherent in the learning-to-teach process, and in the development of educational theory, she saw the need to learn through experience. In learning through experience she was able to bring trustworthiness and respect to the work of teachers and teacher educators. Successful modelling relies on teacher educators being knowledgeable about their own practices as educators.

Failure to model what is expected in a programme has some disadvantages. Student teachers who may not be aware of programme goals and objectives may leave a teacher education institution without having learned about the expected outcome of the programme as it would not have been modelled for them. Ntoi and Lefoka (2002) made reference to modelling of good practice and that teacher educators' failure to observe the demands of a programme which was intended to integrate theory and practice implied that student teachers could not observe that good practice that was theorised about in the actual teaching. These authors concluded that in a situation where theory is

considered more important than practice as was the case in the research they undertook, the message conveyed is that "it is impossible to follow the fundamental precepts of good teaching" (p.282).

Modelling is yet another complex theory which is not tangible. However, research alluded to in this section of the chapter has revealed that there are prospects for modelling in the context of teacher education. Student teachers have opportunities to learn through observing their educators in practice.

## 3.9  Conclusion

In reviewing the literature regarding the sources and application of professional knowledge among teacher educators, a number of profound issues were revealed: some of them well known but important to revisit, and others that pose serious challenges. The first is that the sources and application of teacher educator professional knowledge is inextricably linked with the education practice in the classrooms. In fact, education practice in the classrooms determines the nature and structure of *teacher* professional knowledge and practice, and the latter determines *teacher educator* professional knowledge and practice. The sources and application of teacher educator professional knowledge can therefore not be considered without education practice in classrooms and the required teacher professional knowledge.

Secondly, however, as we know, there is always some kind of discrepancy between education policy and practice in the classrooms. Teacher educators' professional knowledge should have the latter as its primary concern because it is education in practice that eventually counts. In this sense, teacher professional knowledge and subsequently teacher educator professional knowledge need to include the importance of assuring a policy-practice match.

Thirdly is the issue of contemporary education discourse recognising the challenging demands for education within a super-complex world with an unknown future. The subsequent qualitatively different demands *on* young people result in equally compelling and qualitatively different demands *of* young people on the education that they need. Traditional education that was concerned with an epistemological task has to be replaced with an education pursuing an ontological challenge as primary aim. No doubt education in general has not been prepared to take on such a challenge. Subsequently,

traditional teacher and teacher educator professional knowledge and practice are inadequate to fulfil the demands of young people on education.

Fourthly and lastly, a culture of compliance with policy as *perceived* quality is obscuring our vision of actual, authentic quality in education being the only thing that really matters.

There are many and varied sources available for teacher educator professional knowledge and there are many and varied ways that the teacher educator professional knowledge originating from these sources could be applied. However, all sources and applications of teacher educator professional knowledge are in jeopardy unless they are benchmarked by the identification of actual, authentic and quality education. That is why contemporary educational discourse requires that student teachers should be challenged to construct their own professional knowledge. They can do so through inquiry-based concrete experiences of education in practice as an unadulterated measure of the level of the actual education quality they have provided – not an easy task if it was a failure. This is even truer when they need to take the responsibility to improve on it through a continual process of informal and formal inquiry – which may fail again in future.

The idea of taking responsibility for their own learning and their own construction of their own professional knowledge is a daunting endeavour for student teachers, even though they are appropriately facilitated during the process because they are confronted not with what they know, but their sense of self and who they are becoming. This constitutes personal transformation. The argument posed by Palmer (1998) with reference to schooling is equally valid for teacher education and subsequently teacher educators: He says that students may leave the institution deeply dissatisfied even though they were served by good teachers. This statement has intrigued and at the same time empowered me to strive for good teaching which challenges students. But Palmer was referring to dissatisfaction of a different kind, whereby students who have been well served by good teachers may walk away angry, angry that their prejudices have been challenged and their sense of self shaken. That sort of dissatisfaction may be a sign that real education has happened.

The challenge for teacher educators is that they also have to construct their own professional knowledge through enquiry based authentic experiences. This would be to ensure that their utilisation thereof will have the desired result of how to design, implement and evaluate the most powerful learning environments for student teachers

within which they have to find the best possible sources. The purpose would be to help them to construct and use their own professional knowledge in new creative ways to enhance their professional development.

# CHAPTER 4

# 4 PRESENTATION OF THE FINDINGS, ANALYSIS AND INTERPRETATION

People are meaning-finders; they can very quickly make sense of the most chaotic events. Our equilibrium depends on such skills: We keep the world consistent and predictable by organising and interpreting it. The critical question is whether the meanings you find in qualitative data are valid, repeatable, and right (Miles and Huberman, 1994, p.245)

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## 4.1 Introduction

There were huge challenges in undertaking this study and in analysing the data but it was guided by the specific questions that the study was addressing and separated into sections: sources, enactment, construction and modelling of professional knowledge. These were the same challenges that illustrated the thin line between the four concepts. The analysis of the two types of document, curriculum and assessment, used by teacher educators typifies the difficulty experienced in categorising the data into sections.

The analysis could easily be classified as a source of professional knowledge, enactment, construction or modelling. In discussing documents under sources of professional knowledge the analysis would be on where the research participants drew their knowledge from. As an enactment issue, the analysis would focus on how they in practice apply their knowledge using the documents in the learning and teaching context. In constructing professional knowledge, the focus would be on how they come up with the said documents, and finally, in modelling the analysis would be on how they act out how the documents are used in the context of teaching and assessing.

The chapter draws content mainly from data collected through research participants' narratives, observation of their teaching practice and document analysis.

## 4.2   Biographical Information

The analysis of biographical data embraces characteristics of the research participants that include their gender, credentials and areas of specialisation, teaching experience at various levels of the education system, including secondary and tertiary levels, and reasons for becoming teacher educators. Biographical data was provided during the narrative data collection process.

### 4.2.1  Gender

The teacher educators who participated in this study were predominantly women; of the eight research participants only two were males. The fact that there are more female than male teacher educators is not by design, as even at national level the population of women in the education sector is generally higher than that of males. The observed gender imbalance in the Faculty of Education where the study was carried out is therefore not unique to this faculty even if I had used other strategies other than purposive sampling for selecting the research participants

### 4.2.2  Highest Qualification and Areas of Specialisation

Table 4.1 presents participants' areas of specialisation, highest qualification held and the department in which they were at the time of undertaking this study. The Table further illustrates the diversity of the research participants' areas of specialisation, with most being unique, except for two who had majored in the same area of specialisation; educational management. There were four who taught curriculum or subject content,

three of whom were in the educational foundations area, although one of them had initially majored in Science Education, and a fourth who had no teacher education background but had studied English Literature at undergraduate level and Instructional Systems Technology as her major in a Master's of Science programme (MSc).

The data revealed that four research participants held a PhD and four a master's degree. Three of the master's degrees were in Education, and one was an MSc. The research participants were specialists at postgraduate level, based in relevant departments and therefore teaching the subjects in which they had majored. It can be assumed that they were conversant with the content they were teaching since they had been placed in relevant departments. It can further be assumed that the institution hires and places employees according to their areas of specialisation.

**TABLE 4.1: Participants' Areas of Specialisation by Placement in Department**

| Areas of specialisation | Qualification | Placement in Department |
|---|---|---|
| Educational Organisation and Management | PhD | Department of Educational Foundations (EDF) |
| Teacher Education major and Psychology in Education and Counselling | Master's | Department of Educational Foundations (EDF) |
| Instructional Systems Technology | Master's | Department of Educational Foundations (EDF) |
| Instructional Supervision and Educational Management and Administration | PhD | Department of Educational Foundations (EDF) |
| English Education: The Teaching of English Language and Literature | Master's | Language and Social Education (LASED) |
| Geography Education | Master's | Language and Social Education (LASED) |
| Mathematics Education | PhD | Department of Science Education |
| Science Education, Biology Education and Environmental Education | PhD | Department of Science Education |

### 4.2.3  Teaching Experience

A number of factors are relevant to teaching experience, in particular the level reached. The most significant of these are discussed below.

### 4.2.3.1 Teaching Experience at other Levels of the Education System

All the research participants, with the exception of one, had taught at secondary school level, most for one year or less. Exceptions included one who had taught for four years and another for eight years, with another having taught at all levels of the education system, excluding pre-primary school. However, the majority had planned to teach in secondary school, that being the level for which they had received formal training. Two indicated that teaching at secondary school had made little impact on their teaching at the level of a teacher education institution.

However, the rest linked it to their current work as teacher educators. Teaching at secondary school level had socialised them for a teaching career and taught them to teach as they would like their student teachers to teach. It is an experience from which, according to one of the research participants namely, Fusi, one draws from even when supervising student teachers' instructional practices. However, the message that it has taught them a few skills appears to be more espoused than actually practised. Very little was revealed which could be regarded as a pointer to lessons accruing from teaching at secondary schools prior to joining the university.

## 4.2.3.2 Teaching Experience in Teacher Education Institutions

The experience of the research participants as teacher educators ranged from 11 to 35 years, with only two below 20 years, three above 20 and three above 30. For these research participants the teaching experience has been gathered from teacher education institutions, including college and university.

While experience is sometimes linked to the level at which one is with regard to work experience, classification such as being a novice, advanced beginner, competent, proficient or expert was not conducted;  this study does not set out to analyse these levels, as doing so would have required a different approach in which a Dreyfus Model referred to in the literature review, or a similar one used for analysing experience, would have to be used to measure the different levels of the research participants.

I therefore conclude that teacher educators teaching in this institution have varying but considerable teaching experience. This is particularly so with regard to teaching in teacher education institutions compared to other levels of the education system.

### *4.2.4  Becoming a Teacher Educator*

A number of factors are involved in becoming a teacher educator. These range from how each of the participants was appointed to the position to reasons for becoming a teacher educator. Each of these is dealt with in turn below.

## 4.2.4.1 Appointment to a Position of Teacher Educator

A number of the research participants became teacher educators by accident while others applied for an advertised post. Even among some of those who applied for an advertised post there were those who did not believe this career was what they initially

thought they would follow. Two who thought they had become teacher educators by accident had been identified as potential university lecturers on the basis of an extremely good performance during their studies as student teachers. 'Masethabathaba reported: "I just remember that before the end of the academic year at the time that I was to leave the university my lecturers called me and said, 'What would you do if you were offered a position as Teaching Assistant?" and Zinzi said, "I was just lucky, one of the lecturers said to me you are doing so well, maybe we would like you to be a Teaching Assistant". These two were therefore appointed as Teaching Assistants on the basis of their performance at undergraduate level. What is not clear though, is whether performance that was considered in inviting them was in the context of teacher education subjects or their areas of specialisation — English Education or Mathematics Education.

Six became teacher educators through applying for an advertised post, some having applied on the basis that they had majored in a subject for which a lecturer was needed and others feeling they had a skill that was required.

It can be concluded that the teacher education institution in which the research participants are employed recruits teacher educators mainly through advertising vacant positions or identifying potential among their student teachers.

## 4.2.4.2 Other Reasons for Becoming a Teacher Educator

There were varying reasons for taking up a teacher educator's position, some personal and professional, others monetary. Five highlighted the prestige associated with being an employee of an institution of higher learning. For those who applied on both professional grounds and those who were invited, the major reason was that such an institution was regarded as holding a higher status and that it had better earning potential. Regardless of reasons given, both finance and status reasons were implied.

## 4.3  Conceptualisation of Critical Concepts

It appeared important to establish the research participants' understanding of the various and therefore significant terminology pertinent to teacher education. A knowledge base, as alluded to in both the introduction and the literature chapters, distinguishes professions.

### 4.3.1 The Meaning of the Concept 'Professional knowledge'

There is a shared understanding of the concept of 'professional knowledge' among the research participants, generally believed to embrace knowledge gained through studying and practice. According to them, studying in a relevant field is foundational to a profession with specific courses considered key to the teaching profession, in particular those taken in teacher education institutions at undergraduate level, and to some extent postgraduate level. However, while formal education is understood to provide an opportunity to act in ways that demonstrate ability to apply knowledge, it became apparent that the research participants considered experience to be central; it is through being exposed to the world of work that knowledge is tested and decisions made regarding the suitability of specific knowledge for use in various contexts.

In this regard they saw professional knowledge as a combination of formal education in one's area of specialisation and experience within it. According to Peditta, professional knowledge is a combination of what one has learned and the ability to apply that knowledge and in so doing change as a result of the experience. While educational foundations courses lay the foundation for professional knowledge, in trying to apply it professionals may find that theoretical knowledge does not yield the expected results. There is an understanding therefore that testing ideas may give professionals a solution for a particular problem, but that since situations are rarely the same what appears applicable to one may not be transferred and applied wholesale to others. To some participants, professional knowledge pertains to a particular profession and goes beyond a classroom setting to social contexts. The contexts in which professionals practise require them to behave in certain and acceptable ways, and to act and dress in ways that are deemed professional.

It would seem that the participants value the fact that knowledge can be drawn from various sources mainly the academic and the workplace. With regard to dress, presumably the participants were making reference to professions such as law, medicine and nursing. Members in such professions dress in ways that distinguish them from any other individual or group of people, especially at the workplace.

Actual teaching at any level of the education system in itself provides ample learning opportunities for teacher educators, with each year providing opportunities to learn something new. In this regard experience is considered an enabling factor to enhance one's professional knowledge; hence the conclusion that professional knowledge can

never be complete.  The experience that one has gathered facilitates change due to developments that occur in the actual context of teaching. Therefore, the fact that professional knowledge is not "tangible" as was pointed out by one of the research participants implies that experience provides ample opportunities for accumulation of professional knowledge and for professionals to develop their practice continually.

Different situations present new challenges, which in turn promote professional growth. One of the participants, Peditta, articulated professional growth and challenges in experiencing professional knowledge with an episode: "It's like a ball that keeps on moving and as it moves it gets bigger and what makes it bigger are your experiences gained by applying this ball to the situation. [However] … the fact that one grows cannot guarantee the ability to deal with other problems that keep emerging in one's profession". This supports the assertion that professional knowledge is not tangible and that accumulation of professional knowledge can therefore be compared to a snowball being rolled over surfaces with and without snow, with moments when nothing is accumulated due to different situations that present themselves.

The argument here is that challenges and professional growth are facilitated by contexts. In the context of teacher education there are colleagues, one's own students and an individual's ability to experiment with new ideas. Gaining professional knowledge is therefore not only complex but there is a high level of dynamism. It therefore can be informed by professionals making an effort to read more, and broadly, and to be cognizant of developments in ones' area of specialisation through taking advantage of various situations, including interacting with colleagues in the context.

### 4.3.2 The Meaning of the Concept 'Teacher Educator'

Information on the participants' understanding of who they are revealed two interpretations. To some the term 'teacher educator' refers to someone who educates others through providing them with appropriate knowledge and skills for the teaching profession. To others a teacher educator is someone who helps student teachers to develop their own knowledge so that they too develop as professionals. Such an individual has the ability to: (a) equip others with skills required for a teaching profession; (b) intervene in peoples' lives in order to promote change; and (c) unleash the potential in a person in a manner that demonstrates worthiness in what is being done, and therefore attract others to the profession. To ensure that these attributes are instilled in

student teachers, a teacher educator has to establish good rapport with student teachers and at the same time maintain a teacher-learner relationship. It is very clear that there are different conceptions of what a teacher educator's job is. It is mainly about teaching someone to become a teacher and helping that future teacher to become independent and constructive.

Additional attributes of a teacher educator came from those participants based in the departments that offer curriculum studies. They went on to indicate that teacher educators also have to ensure that student teachers are knowledgeable about and skilled in the subject content areas they are being educated to teach. The implication therefore is that teacher educators who are in the educational foundations area would be expected to emphasise pedagogic knowledge, while those in curriculum departments would be more inclined to emphasis pedagogic content knowledge.

Moreover, teacher educators are professionals who have to be cognizant of a national education policy and a country's educational philosophy to the extent that they can infuse both the national policy and the philosophy in the teaching of subjects in which they have specialised and that they introduce to their students. The expectation is that, if properly indoctrinated in these national aspects of an education system, student teachers will also be mindful of national policies and educational philosophy once they join an education system.

## 4.4  Sources of Professional Knowledge

The response to the question on sources of professional knowledge among teacher educators pointed to the availability of numerous sources. There was reference to academic programmes at undergraduate and postgraduate levels. Academic programmes are a foundational source that grounds professionals in the discipline and upon which other sources, particularly experientially-based sources build on the furtherance of the profession, or are built upon. Therefore, to the group of participants in this current study, propositional or received knowledge is gained at both undergraduate and postgraduate programme levels. However, the overwhelming response was that those sources were not accessible, and could not be easily provided for or attained in seminar rooms or lecture halls. These are sources that are facilitated by experiences in relevant fields or areas of specialisation, and include the following:

- practising in teacher education institutions and therefore being in a specialised context in which one practises;

- research undertaken at postgraduate level and at work;

- supervision of either or both instruction and research;

- encounters with colleagues and own students;

- development and use of instructional media;

- assessing students;

- participation in national developments in which one provides professional services in a number of endeavours;

- holding an administrative position, such as being a dean of a faculty;

- participation in professional development endeavours, including receiving training in continuing professional development programmes; attending conferences or participating in academic links that involve other institutions of similar status, and in conferences in which individuals present professionally produced papers; and membership of professional organisations.

The research participants made reference to production of instructional media in the form of books or modules with the former being published. However, none of the participants made reference to production of journal articles or research-based book publications as some of the sources of professional knowledge. This failure relates to their apparently not being involved in undertaking research in their areas of specialisation or in teacher education in general.

### *4.4.1 Sources of Propositional Knowledge*

Several sources of propositional knowledge are relevant to the teacher education process. They are mainly based on formal education provided in institutions of higher learning.

#### 4.4.1.1 Undergraduate Teacher Education Programme

All the participants, with the exception of one who did not take courses in teacher education at this level, agreed that academic programmes provide a foundation for professional knowledge. Being taught by seasoned professors was considered

advantageous in that they were considered to have better strategies for teaching student teachers. Academic programmes at the undergraduate level are regarded as having helped pass on concepts that are the major source of teaching practice. It is at the undergraduate level that the teacher educators felt they acquired knowledge and attained skills on how to handle teaching in a real classroom, regardless of the level. In particular, some saw educational foundations programmes that included courses such as psychology, assessment, educational management, supervision of instruction and teaching and instructional techniques, as having laid the foundation for their current assignment of teaching teachers. To this end, they indicated that they were being educated as teachers in the subject content in which they had majored. They learned about how to teach the content and about planning to teach in their area of specialisation.

In contrast, there were some who revealed that their experience at undergraduate level could not be regarded as having provided them with knowledge of teaching their subject content. In sharing her undergraduate experience, Zinzi felt the professors who taught her had not modelled how to teach content at secondary school level, or at any other level:

> *My undergraduate courses did not serve as a source of professional knowledge for me. Actually my experience was with somebody who didn't seem to understand what teacher education is about. He taught us how to add, subtract and multiply for the entire semester. We also had a lecturer who had just completed his PhD studies and came with all these high level theories that really did not have examples that relate to Maths teaching. These were way above our heads and didn't help us know what we were going to teach. So basically what we learned as students here was not very useful in our teaching; so each time I reflect on my university days I say to myself that when I left university I wasn't sure what and how I was going to teach.*

Therefore opinions differed with some indicating that there were benefits that accrue from having enrolled in certain programmes while others could not see the relevance.

## 4.4.1.2 The Focus of a Postgraduate Programme

All but one of the participants had enrolled in a postgraduate programme that required them to undertake research. However, one of those who also undertook research indicated that the postgraduate degree was not preparing her for the work beyond the programme. Therefore it can be argued that experiences vary to a large extent.

Documentation of these experiences shared by teacher educators could be valued by others, including those who enter a teacher education field with or without experience.

To most participants however, research undertaken at the postgraduate level was relevant to their fields of specialisation. It was an enriching experience in that the theses were informative, especially depending on the relevance of the area of research to the course being taught. In one of the cases the participant indicated that as a result of engaging in research which was a requirement at the postgraduate level, she had "lived that piece of work throughout her teacher education career", and it enabled her to look at curriculum not in isolation but in relation to a child, and therefore holistically. Others shared the same sentiments and pointed out that postgraduate theses had transformed their teaching of subject content in their areas of specialisation. The research work constantly informed the way they worked with student teachers and had therefore significantly deepened their understanding of theories such as reflective practice, their applicability and relevance to professional development of student teachers.

To some, the findings of research undertaken at postgraduate level in their different areas of specialisation had been brought to bear in real classroom situations. Therefore, and to a large extent, research-based postgraduate courses contributed to the knowledge needed for the teaching of student teachers. In this regard, postgraduate programmes serve as a source of propositional knowledge, since almost all the participants had taken an educational research methodology course at that level. Postgraduate programmes therefore provided an opportunity to construct new knowledge specifically through engaging in research.

However, the assertion that professional knowledge is not tangible is revealed in practice. Those who specialised in administrative management had found that research undertaken at PhD level was helpful in managing student teachers' behaviour. They used the theories learned in the courses either to handle classroom experiences or help student teachers acquire classroom management and administrative skills. Therefore there can be immediate benefits accruing from a postgraduate course to the actual teaching. Supervision of teaching practice, to be discussed below, benefits greatly from the content learned in courses such as administrative management.

### 4.4.1.3 Experience in Supervising Students' Theses

Responses indicate that experience in supervising research was mainly drawn either from the actual courses undertaken at postgraduate level or in workshops offered at work. Alternatively, this kind of experience is gained through practice and working jointly with colleagues, and without being guided. As revealed by 'Masethabathaba, "as a lecturer you are expected to supervise but nobody cares to know either how you do it or whether you are capable of providing such a service".

Others' experiences were of lessons learned from being supervised by different professors. Hoanghoang's experience at master's and PhD levels is a case in point. His preference was for professors, who let students have their own space, allow them to use their own language and freely express their views. He stated that he did not like professors who were prescriptive and directive, as was the case with his Master's Degree professor. His PhD experience exposed him to an individual who raised questions that made him think deeply. Being given some space to express ideas in his own words was a preferred approach, which for him was "*much more pronounced and helpful when doing PhD and almost non-existent in Master's degree supervision*".

It can be concluded that people sometimes still recall their professors' ways of supervision and may emulate what they considered to be good practice. It can further be concluded that being allowed to work on one's own, but with appropriate guidance, is an opportunity to become independent in constructing new knowledge.

However, it became apparent that to the majority of the participants the opportunity to supervise student teachers' research was minimal. Perhaps this was due to the Faculty of Education offering more undergraduate than postgraduate courses. This does not mean that people teaching in this faculty cannot ask students to undertake research, even as a mini-project. Structuring courses in which students do research would be instilling in them a level of independence in the way they acquire or construct knowledge.

## 4.4.2  Sources of Practical Knowledge

The sources of practical knowledge are varied and include acquaintance with colleagues and the holding of administrative positions, as well as working in different contexts.

## 4.4.2.1 Acquaintances with Colleagues, Teachers and Students

Acquaintance with colleagues, teachers and students can be a valuable source of practical knowledge to the teacher educator, each in its particular way. Such acquaintances are regarded as valuable since they serve as a source of practical knowledge.

*Acquaintance with Colleagues*

Views varied on support provided by colleagues, with some indicating that it was difficult either to receive it or provide it. However, a few participants who indicated that they did receive professional support from colleagues expressed satisfaction with the practice. Much can be learnt from colleagues, more so if both experienced and novice educators are open to it. In such situations colleagues freely remark about one another's knowledge, observe one another's teaching practice and provide feedback. Individuals reflect and are able to address the points in which challenges have been identified. Most significant, though, was a situation in which a colleague received feedback and constantly reflected on her own professional actions. Although very few participants claimed they practised collegiality, there were some who were aware of the benefits of professional support that can be provided by colleagues. Therefore, those who were aware did make efforts to take advantage of the existence of such opportunities.

A matter referred to as a particular strength in having a good relationship with colleagues was sharing professional challenges with experienced teacher educators. This was particularly facilitated by situations in which there were professionals who had been mandated by the faculty to serve as mentors of newly employed and inexperienced teacher educators. Some of the participants alluded to the time during which they joined the faculty and received extensive support from well-read professors. The mentorship practice provided an opportunity to reflect on teaching while receiving unconditional support from professionals who were delegated to help them.

While some acknowledged the support provided by the designated mentors, others observed that it was lacking in some aspects. Mentoring tended to focus on practical elements of teaching and the use of appropriate materials for teaching certain topics, rather than looking deeper into issues pertaining to theories of teaching and learning and epistemology. An introspective view by the participants suggests that while the mentoring of newly employed educators was a good idea it was lacking in some areas.

The challenge in receiving inputs from colleagues and reflecting on them goes a step further and interprets meanings that colleagues give to one's pedagogical behaviour. Some of the participants regarded this form of learning as one that is not always explicit, yet most of the learning in the field of teacher education actually takes place in settings in which one is often unaware of how others view them.

*Acquaintance with School Teachers*

In references made to working with experienced teachers there was an understanding that serving teachers could provide technical know-how. They were experts in their own fields in terms of context and often knew what was required in the real context of teaching, compared to university-based teacher educators who were not constantly working in the school system. There is therefore an appreciation that serving teachers have knowledge and skills that are unique to the context of teaching, so establishing links with these is regarded to be worthwhile. Working with teachers during practice provides opportunities to establish links which is reported to have an impact on teacher educators who would then use lessons learned to inform their teaching of another cohort of student teachers.

*Acquaintance with Students*

Acquiring professional knowledge was said to happen even as teacher educators intermingled with their own students. Learning through working with students was said to be facilitated by student teachers who entered teacher education programmes with some teaching experience and at the same time held a professional qualification. Such students provided comments that helped teacher educators who worked with them gain an opportunity to reflect on their own teaching. The experiences shared by 'Masethabathaba and Zinzi illustrate the point regarding experiences with own students facilitating professional advancement.

'Masethabathaba:
> *I learned from working with experienced teachers initially and learning from them even if you were not aware that you were learning from them. Sometimes you come back from postgraduate studies you are big headed and think these people don't have masters' degrees. However, circumstances force you to learn from them. The foundations of my professional decisions came from having initially worked with people who were experienced, far more experienced than I was, but who were seeking just a higher qualification. These were people who would say: "No, no, out there, for some students that we taught that's not how it goes". Although initially I didn't think I could learn anything from them,*

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*working with that caliber of students, I became better although it took me three years to realise that.*

Zinzi:

*There were many times when I gave my students readings although I didn't even know what was in that reading. I would come to class for the next lecture and ask: "What have you read? Can you please tell us what was going on in that paper? I would say, "You got to tell me". It was very funny because I did not know what to say. I knew that the reading had something that was useful, but I had not read it myself. Then of course when I read the article afterwards I found that even though it was very relevant, it was a very difficult and even the abstract was very difficult to comprehend. In the process I learned that one doesn't give a reading before thoroughly reading and making own notes.*

Reference was also made to acquaintance with former student teachers. For a few participants meeting former students who willingly shared what they had learned from the courses undertaken at the undergraduate level provided feedback for those concerned. It is either during or after student teachers had been exposed to teaching practice that the reports they prepared were revealing, and where they freely shared their experiences as students. These were regarded by the participants as always informative, showing the realities of authentic classrooms, how the curriculum was enacted and indirectly informing teacher educators about how they should teach student teachers and/or how they should prepare them for their career.

However, there were a few who did not share the view that much can be learned from the student teachers. The comments by these few were based on university classrooms in which student teachers did not participate much during class deliberations. Therefore encounters with student teachers benefited some and not others.

## 4.4.2.2 Holding Administrative Positions

All the research participants had held an administrative position since joining the teacher education institution as employees. These ranged from being a deputy dean of a faculty, head of department (HoD), or a tutor of, for example, first-year students to being a representative of the faculty in the University's committees, such as the Academic Planning Committee (APC). Holding such administrative positions required those responsible to participate in high-powered institutional meetings, and in this regard gave them an opportunity to contribute to critical decisions made in such meetings. Most significantly, the participants used those opportunities to gather knowledge and skills necessary for teaching, management of departmental and/or faculty matters and

managing the teaching itself. Listening to other colleagues present their programmes in bodies such as the university senate, the highest body responsible for academic programmes, also provided an opportunity to learn how to structure own programme/s or courses especially to meet the demands or requirements of university committees.

Besides participating and learning from formal meetings, the participants indicated that administrative positions exposed them to students' challenging problems. Episodes were shared which indicated that students, whenever they encountered difficulties with a lecturer whose teaching was not satisfactory, tended to report directly to the dean or deputy dean of the faculty. In a case in which student teachers expressed concern about a certain lecturer, to avoid the embarrassment of students deregistering from the course the deputy dean then held a discussion with the students. The incident helped the lecturer reflect on her own experiences as a lecturer, and she discovered that student teachers' concerns were similar to those she had been expressing: *"… these were things that I used to say in a very casual manner, not thinking that they could be annoying students and I assumed they understood them to be jokes. So some of the things that we assume are correct may not be taken positively by the students. In actual fact I learned not to do such things myself after the encounter*".

Students' reactions are inevitable and teacher educators learn from them as to how to work with student teachers in such settings. Therefore, encountering real-life problems can impact on teacher educators as they have to address problems and consequently learn from how they were addressed.

The responses based on holding different positions indicate that serving in an administrative position as a faculty tutor provided an opportunity to learn about academic problems encountered by students and challenges they posed. The lessons learned by faculty tutors were used in the actual teaching, where students were informed about the consequences of encountering similar problems. The teacher education institution experiences tended to benefit the concerned teacher educators and student teachers in subsequent years.

Serving on high-powered university committees, in which some of the participants represented their departments or the faculty, provided learning experiences. They indicated that they had learned from either being a member of such committees and participating in the deliberations, or actually presenting new courses or programmes in meetings and getting feedback. To some, deliberations in such committees gave them

an opportunity to see how best to observe the extent to which there are synergies between the courses students were taking in other faculties and those offered in their own.

Therefore, serving on such committees provided a holistic picture of programmes offered in an institution, instead of being seen as isolated entities. For Peditta, sitting on the Academic Planning Committee was an opportunity "*to be presented with a bird's eye view of the University programmes*". Presenting newly developed programmes or courses on behalf of their own departments or faculty not only provided an opportunity to learn from presenting a poorly conceived programme or course and being critiqued, but also added to changing the way Zinzi and 'Masethabathaba conceived the whole idea of teaching and taking professional breaks in order to develop other professional activities, such as working on publications.

An episode shared by 'Masethabathaba was on learning to manage a classroom in such a manner that lectures, through well-structured classroom management strategies, could create time for undertaking research and preparing papers for publication. In one of the senate meetings, in which one of the university committees that discussed the promotions criteria presented a paper on the matter, lecturers were concerned about the non-availability of time for publication. The meeting made it clear that failure to publish relates to management of teaching time. The discussion in that meeting revealed that lecturers needed to consider that giving students a period to conduct a library search and return to class to present their findings could be equated to a double period of actual teaching time.

Most importantly, it became apparent that students' research adds value to a lecturer's teaching since students tend to discover more things than could be discovered by a single lecturer. For 'Masethabathaba, that particular senate meeting she attended provided a strategy for creating time to research and for preparing papers for publication, which is something that she had never thought about before. Her experience is indicative of various learning opportunities presented by the context in which one practises.

To some, serving as Head of Department (HoD) exposed them to knowing the strengths and weaknesses of other colleagues. In one episode, Lintle, who served as HoD found that teaching in her department was dominated by transmission methods, a situation with which she felt uncomfortable. In practice, and as an effort to reduce falling into the

same trap, she invited a colleague to observe and comment on her teaching, and did so in return for the same colleague. The feedback provided to each other after observations provided her with an opportunity to involve her students in evaluating her teaching freely at the end of an academic year. Inputs from students and colleagues contributed to constant learning about her teaching practice and to a determination to improve on her teaching.

Despite numerous challenges associated with administration, the participants seem to have benefited in many tangible ways from holding administrative positions. These included gaining a broader view of university programmes and therefore linking them to a course one offered; being attentive to student teachers' views in order to address them; and gathering information about the common pedagogy employed in a department. It is the encounters in the real life of a teacher educator that provide experience, most of which impacts on how one would teach in the future. However, it is also apparent that there are some who indicated that they preferred certain instructional strategies as will be revealed in the sections in which they were observed in their teaching practice. It was very clear that some research participants aspire to use certain instructional strategies but in practice fail to do so.

## 4.4.2.3 Professional Activities in other Contexts

Other contexts that influence professional development are now discussed. They include institutional support, participation in conferences and participation in Continuing Professional Development endeavours. There is a perspective that in principle the University supports the professional development of its employees. The most common avenue for professional development other than formal education is attending conferences and participating in Continuing Professional Development (CPD) programmes.

*Participation in Conferences*

Overall, the research participants had received opportunities to participate in relevant conferences, present papers, and as a consequence had met professionals from other teacher education institutions. Participation in conferences is regarded as providing numerous opportunities, including for teacher educators to recognise gaps in the area in which they teach, and listen to views different from their own or confirm perceptions held

from conversations with other professionals. They can share challenges and take advantage of circumstances to improve in their areas of specialisation.

Additionally, participation in conferences facilitates learning about developments in research and is a direct opportunity to form networks with other professionals in one's area of specialisation. The only Geography educator, Fusi, confirmed that there were opportunities to form links and learning from colleagues from other institutions, especially since his own had no professionals in his area of specialisation. Fusi's case indicates the value attached to internal professional support, and is evidence of how support provided by colleagues from other institutions can help to bridge the identified gaps.

Most significant about participation in conferences is an occasion for professionals to move from a familiar setting to a different one. It may be a setting where broad education issues and not just teacher education issues are discussed, a situation which calls for professionals to view education from a different perspective. In this regard, as argued by Peditta, attending education conferences "*allows one to be broad. You are able to empathise with situations as you write the paper, as you give presentations, as you engage in those professional development activities and when you get back to your students you are a different person and it's something that develops over time*". There was an understanding among the research participants that preparing to present a paper compels professionals to read more and in the process become acquainted with new developments in an area in which they are preparing a paper. In a nutshell teacher educators get professional exposures through conferences.

However, there were views opposing the idea of conferences impacting on professional development, including one that while they may contribute to new knowledge they do not help in sharpening teacher educators' teaching skills, despite the major role of their work being teaching. The implication of the expressed concern is that teacher educators could benefit from conferences that ensure they are equipped with teaching skills, presumably with consequences for becoming better in their core business of teaching. This comment further confirms the need for education in the area of the pedagogy of teacher educators.

*Participation in Continuing Professional Development Endeavours*

Although some of the participants indicated that they had had very little experience facilitating in workshops, others considered participation in continuing professional development either as a facilitator or participant to be beneficial. Such practices helped participants attain or improve their professional knowledge. Mention was made by some that participation in staff development workshops that focused on assessment techniques for example was a major contributory factor to the skill most needed. A consensus view for receiving education on assessment techniques implies that the participants regard this area as critical in their work.

There was an observation that, while the University's practice of engaging external examiners contributed mainly to education standards at this level of the system, teacher educators also benefit from the practice. The external examiners' comments play a major role in assisting the teacher educators to reflect and refine their assessment skills. Mafukuthoane shared her more than 30 years experience of working with external examiners. Acknowledging there are benefits from working with external examiners who seemed to care about the quality of examination papers, she had this to say: "*Those were the type of external examiners who were very helpful to us in that other than studying our work they would spare half a day to be with us to address us individually and as a group. Having discussed problems experienced in constructing questions they would accord us an opportunity to individually meet them*". The external examiners' inputs seemed to benefit both the institution's programme as far as quality standards and the teacher educators' knowledge of assessment are concerned.

Based on the comments shared by the research participants, it is apparent that external examiners' comments, especially in situations where the former reflect on them, contribute to professional development in the area of assessment.

## 4.4.2.4 Professional Avenues

There are several professional avenues available to teacher educators. Teacher educators who participated in this study regarded the availability of professional avenues as beneficial.

*Participation in Academic Links with Other Institutions*

One of the institutional practices alluded to was the establishment of academic links with similar institutions, which positively impacted on professional development. The stated benefits included their facilitation of joint projects with similar institutions across the

world. Reference was made to one such academic link with an institution in London, in which the project participants were provided an opportunity to observe a programme implemented at school level. The event was attended by Zinzi, a Mathematics educator, and 'Masethabathaba, an English educator, with Zinzi relating their visit to a primary school in England. She said:

> *I was surprised at how much I learned. There were simple little things such as how students give positive reinforcement to each other. I came out of the visit saying I don't remember ever having other students give positive reinforcement to their peers and you would see the students really beaming up because the others were recognising that they got the answer right. It's always me as the teacher educator who always reinforces students. What we witnessed in the school we visited was the use of all sorts of very interesting and encouraging ways of reinforcing students*".

This experience indicates that academic links are helpful in providing experience in programme development. It also illustrates how academic links can be built between schools and teacher education institutions in one's own country and institution.

Reflecting on academic connections or links, some felt they were able to negotiate with their institutions to arrange visits from lecturers in areas in which they were deficient. In one case teacher educators who went on a visit negotiated for a lecturer to visit their institution for purposes of assisting with designing a new programme and mentoring a local professional to help with its implementation. There are numerous prospects for improving one's own programmes through academic connections, including acquiring skills to supervise students' research projects through collaborating with professionals in institutions in which academic links have been established and are working. The practices in which teacher educators participate in academic links seem to benefit both individual professionals and their home institutions.

*Membership of Professional Associations*

Almost all the participants indicated that they held membership in professional associations, the majority holding membership of the local research associations and some of international associations or networks. It was more the benefits that accrue from such membership that they discussed. Hoanghoang made reference to membership of a UNESCO-run teacher educators' network which expanded its membership knowledge

base through such events as international debates, and consequently deepened its members' conceptualisation and teaching of their own subjects or disciplines. This is evidence of the significance in participating in professional associations, especially in the context of knowledge sharing and advancement of scholarship.

Professional associations are regarded as an avenue for learning and widening one's horizon of knowledge. Interacting with other scholars facilitates knowing more about one's area of specialisation, in this case teacher education. Professional associations stipulate requirements and expectations for joining, and tend to impact on professionals, given that they interact with other professionals in meetings. As Peditta commented, it is in professional fora where professionals' ideas are tested: "*The ideas that one knows get crystallised as professionals engage in sharing ideas and are provided with feedback a professional's response to the feedback, especially in the contexts in which one meets a new group of professionals facilitating learning*". Here, it would seem, experience in professional organisations served as an extension of content received from teacher education institutions and learning became expansive.

## 4.4.2.5 Supervision

All but one participant indicated that they had received no formal training on supervision of instruction. Therefore, for the majority, the responsibility for supervising students' teaching practice had been directly informed by involvement in the supervision activity itself.

*Supervision of Instruction*

It was indicated that working with colleagues in the field provides prospects of learning from others, especially from those with extensive experience, and to a lesser extent from the only member who is a specialist. Supervising students' teaching practice is in itself an opportunity to learn from the students themselves as they practise what they learned in their seminar rooms or lecture halls. To some, learning from one's own students and colleagues indicates that supervision of instruction is not an individual undertaking. Therefore, as summarised by one, there is  "*a lot of prospect in learning during supervision because there is a lot of change that has to happen to one as one understands how other people do things and how young teachers have to be adapting what they have  learned to fit the situations*".

Approaches to supervision of students' teaching practice are linked to an individual teacher educator's area of specialisation. Some participants indicated that in undertaking the supervision of student teachers' instructional tasks they drew knowledge from their discipline. On the one hand, an individual who has specialised in English Education or any other curriculum studies course would be inclined to look for certain behaviours as students apply knowledge gained. On the other hand, an individual who has specialised in a particular discipline such as Administrative Management would tend to focus on a student teacher's ability to manage learning and teaching. Mafukuthoane, an administrative specialist, pointed out that "*one has to advise students to try various methods and different managerial skills and see what works for them*". It was the feedback obtained from her students that confirmed that advising students on how to manage learning and teaching that substantiated that administrative management is fundamental to teaching across all levels of the education system. There are therefore prospects for learning how to undertake supervision from the student teachers themselves, especially if teacher educators not only reflect on the experience but use the lessons for improving future instructional supervision activities.

*Supervision of Research*

Some of the participants reported having had an opportunity to supervise research, but cautioned that it was not extensive. In practice this was an area in which they felt they tended to be "thrown in at the deep end" and were expected to help students undertake research in ways that would enable them to  produce reports of quality standard. Students were allocated to lecturers, especially those who had reached the seniority level and held a PhD. Co-supervision was alluded to as a great learning opportunity.

Additionally, an opportunity to engage in research at national level and being expected to produce quality work served as an enabling environment to transfer the research skill to supervising their own students. This knowledge, which is received through involvement in research and supervising students, is valued as knowledge that tends to remain with professionals. To one of the research participants, observing difficulties students experienced in undertaking research presented an opportunity to learn what it means to supervise a student undertaking research for the first time.

There are ample opportunities to gain knowledge on supervision of research in the field. These include the following:

- Knowledge gained in workshops and seminars;
- basic knowledge gained from teaching through an ability to provide structure to an argument;
- how to follow up an argument and ensuring that there is a logical sequence in providing information;
- type of training obtained from courses of research methodology and trying to apply it to others as one guides and helps students at work;
- knowledge gained as one works with colleagues;
- jointly supervising students and reflecting on comments provided by external examiners; and
- extensive reading in the relevant field which enhances one's research knowledge and skills.

Most significantly, reading facilitates supervision of research in general and actual engagement in undertaking research. The Internet facilitates getting up-to-date research information. Those who had undertaken research courses in their postgraduate programmes pointed out that they still drew from the experience of the work undertaken at this level of their studies in supervising research. In one case one of the participants said that his PhD work followed an action research approach and his thesis required him to supervise teachers who participated in his study. At work he referred to this experience whenever he had to supervise research undertaken by his own students as an example of professional learning.

Reviewing academic papers, research proposals for associations and institutions to which one is affiliated, and knowing about research undertaken by colleagues, were considered by the participants as serving as a fountain of knowledge. Different orientations of postgraduate research supervisors provided different perspectives on the supervision of research, pointing to various lessons that accrue from supervising own students and using that experience and one's own discretion as to how one would like to supervise own students.

It can be concluded that individuals reflect on various experiences and select those experiences that would be helpful in their work. However, instead of merely reflecting on the experiences, some seem to think about those that seem to present persistent challenges. Perhaps it is the challenges that might facilitate learning from own experiences in an own context.

## 4.4.2.6 Teacher Educators' Teaching Practice

Teaching practice may take place at several levels, each of which offers a particular benefit to the teacher educator. The most valued teaching practice is experience teaching in a teacher education institution.

*Teaching at University Level*

Teaching at university level was described as one profound source of professional knowledge. As alluded to in the section on characteristics of the research participants, most participants did not, at least at postgraduate level, enrol in programmes or take courses that prepared them for becoming teacher educators. They had, however, learned to teach teachers through practice in teacher education institutions, an experience similar for all the participants. All participants with the exception of one admitted that it was something they did without prior knowledge or specific preparation. The teaching of student teachers has therefore been facilitated by the context, which in itself was different from teaching at secondary school level. Despite the apparent similarity of the actual teaching to delivery of content, it was indicated that teaching student teachers was very challenging, given that teacher educators had to ensure that they merged theory and practice.

The context of teacher educators with a responsibility of teaching curriculum studies is one in which the major challenge is practising and modelling pedagogic content knowledge. In essence, teacher educators are faced with a range of dilemmas, between giving a student teacher theory intended to enrich their content base and at the same time providing them with skills through which they will convey the content in a classroom setting. Therefore, the actual teaching in teacher education institutions in itself serves as a major source of practical knowledge.

That teaching in teacher education institutions as a source of knowledge is exemplified by an admission by the participants that it is in the context of teaching from which they learned the most. It is in this context where, as 'Masethabathaba puts it,  one "*learns from blunders, correcting and reflecting and coming up with answers, identifying limitations, correcting till you say, "This is what it takes to educate a teacher. Being open-minded, letting a situation in which you are operating present itself to you and learning from it*".

The teacher education context is therefore valued as one in which teacher educators experiment with their professional knowledge continuously, and one that provides the best experience of testing new teaching ideas and addressing new teaching challenges This include activities such as modifying the style of teaching or the way a course outline is constructed in preparation for a new group of students. It is in this context that educational research and interaction with other colleagues and professionals in one's area of specialisation tends to contribute to perfecting the skill of teaching the discipline, content or field of study.

*Experience in Being Attached to a Mentor*

The research participants alluded to their experience whereby they were attached to a mentor while others were not. For 'Masethabathaba there were many benefits attached to a mentorship programme, even if it was not formal: "*I think I was lucky that when I joined the University as a teaching assistant, people like Professor MJM who was my mentor were so meticulous and very responsible. So probably I got that from him in the sense that he taught me at undergraduate level, he mentored me when I became a teacher educator and I was trying the best I could to emulate him*".

However, some of the research participants were not so fortunate, even though they too had mentors. Much was not attained from such an attachment. Zinzi, a newly employed lecturer who had recently joined a teacher education unit of the University, had to understudy a lecturer she was about to replace. In such cases individuals have to find ways of surviving. Zinzi's episode puts the issue into perspective. She went to class, observed and took notes, which she indicated she held close to herself. Her hope was that the notes would make her a good teacher educator. While observing she also tried to copy what Dr. GM did, coupled with what she had learned from her undergraduate teacher education programme. She reported that she was then given a course to teach after Dr. GM's term of service had expired with the University, and she started teaching by going to class with his notes. Reflecting on her experience Zinzi indicated that her problem was timing her lessons.

> *I would teach what he taught in an hour in fifteen minutes and I would run out of class. I did that a couple of times; then I had to have a good reason for leaving. I remember I used to carry a file and told students that my lessons seemed to have been scheduled/time tabled at the time when I had to be at meetings. I carried the file and visited my friends up the Faculty head office and would stay with them for two hours just to make up for using very little time. I would come to class late and I would leave a*

*message that I would come late because I was in a meeting because it was very difficult for me to make up a lesson that fitted into one hour. **The greatest problem was at that time we had a lot of very elderly and very mature students and they asked quite a lot of challenging questions and I was running away from that.** It wasn't easy but I got through that semester with no big problem.* [Emphasis mine].

In response to my question, "So what have you learned from this experience? Zinzi responded as follows:

*I learnt a lot from this because now I have weekly plans that I prepare at the beginning of a semester. It is now easier to put them together because I have some basic ones that I use to build on new material. I even have more and I end up giving more home assignments that I had initially planned. Planning is now no headache at all.*

These episodes point to the varying experiences that the different teacher educators go through as they learn to teach teachers. In both cases teacher educators identified with the experiences and seem to have learned from them. The episodes clearly portray a situation in which some research participants were presented with real-life problems and had to find solutions themselves. Most importantly, especially for Zinzi, she had to learn on her own from the real-life encounters. Documenting and sharing these experiences in teacher education would go a long way towards educating both newly employed teacher educators and experienced ones.

*Teaching at Other Levels of the Education System*

It has been indicated above that some of the participants had no experience of teaching at other levels of the education system. Others had taught at the secondary school level and others still had taught at both the secondary and at a college of education levels. Anecdotes about teaching at secondary school level indicate varying experiences. To some the experience laid a foundation for classroom teaching in which one was forced to address a large group of people. It is an experience that assisted in helping individuals understands the needs of teachers at that level. Constant reflection on the experience, although not systematised, helps them prepare their student teachers for that world of work. It is an experience from which some got mentored by experienced teacher educators who brought that experience to teaching student teachers on social and professional issues.

Teaching at secondary school level therefore has not impacted on the education of student teachers and the way in which they teach at university level. As almost all the participants had so little teaching experience at the school level, they did not attach their

experience of teaching at secondary school to teacher education. It had very little impact other than giving individuals some context as a novice teacher or teacher educator. There were minimal opportunities for professional development at this level.

*Assessment in Practice*

The participants shared varying experiences regarding their assessment knowledge and skills, some gaining knowledge on assessment at postgraduate level due to assessment being part of a discipline they were studying or a system that practised a particular type of assessment. Peditta revealed that she had been exposed to assessment through being a Psychology and Counselling student, and through studying in a country that commonly used multiple choice questions for assessing students. She argued that even though she was a student she was well versed in being able to, for example, "*identify distracters in a multiple choice question, and identify a question that would be more plausible as an answer*".

In another case Hoanghoang reported that he had been introduced to assessment skills both at undergraduate and postgraduate levels. During a course on assessment it was illuminated that examination or test instruments could fail to measure what they purport to measure, therefore becoming apparent that formulation of test items and formulating objective tests are complex activities. These experiences confirm the view that at either undergraduate or postgraduate level there are lessons to be drawn from the styles of teaching demonstrated by professors.

Given the above scenarios in which only two of the research participants had taken courses in assessment, it is apparent that assessment in teacher education for the majority of the participants was learned on the job. For some the teacher education institution in which they were working engaged a Measurement and Testing specialist to run training on assessment for its staff. However, for all but one of the participants, assessing student teachers during their teaching practice had been more a hands-on experience. For some this is an area in which they confessed to still needing extensive help, as Zinzi admitted: "*It was after my PhD that I realised that this is one of those areas … I think I need more help with*". There was a view held by all those who did not receive formal education on assessment at either undergraduate or postgraduate levels that this was an area where there is need for training on assessment area.

However, those participants who had identified training on assessment as a critical area indicated that they had found ways of surviving. They read relevant materials and participated in continuing professional development programmes that focused on how to assess students' knowledge. Studying previous examination question papers, particularly those used to examine students at the end of secondary education, also served as a source of knowledge on assessment. The purpose of studying such question papers has always been to familiarise student teachers with the way in which secondary school students are examined. Additionally, having to assess students continuously, complemented by the University practice of having external examiners, are some of the activities that have helped the participants to learn on the job to assess student teachers.

*Knowledge of Instructional Media*

All but one of the participants had not received any professional education on developing instructional media. Some identified the undergraduate teacher education programmes as the ones that could have exposed them to the development of instructional materials but that failed to do so. The knowledge had rather been gained through exposure to various situations that required them to develop instructional materials. Some participants reported that they were required to develop various types of instructional media, including video or cassette tapes, while others developed reading materials for their students.

Developing instructional media for some has been facilitated by participating in regionally organised workshops, while for others it is a matter of observing students' abilities displayed through responses to questions or having different perspectives in class. Only one research participant indicated that her PhD research work provided her with an opportunity to develop instructional materials. The skill for developing materials is used to encourage student teachers to develop their own. However, other participants indicated that with the modern technology in place they relied more on the Internet as opposed to developing own materials for teaching. This view, while showing the value attached to modern technology, implies that there are some participants who had not considered developing instructional materials as an aid to their construction of new knowledge. Additionally, it means that teaching student teachers to develop their instructional materials is not considered a relevant instructional technique.

Three participants had been involved in producing reading materials at different levels of the education system. One had been commissioned to develop teaching modules for serving primary school teachers, based on research in which she was involved. The second had participated in a project in which she and colleagues developed learning materials for an adult education programme. The third had accumulated the experience to develop instructional materials throughout her career, having started developing materials when teaching at the then National Teacher Training College (NTTC). She participated in the production of science books for secondary school students and developed modules for distance education students both locally and regionally.

All these research participants indicated that the fulfilment of their experience of developing instructional materials was seeing something they learned to produce "on the job" used successfully. They regarded this development as part of their professional knowledge. The research participants' various experience is demonstrated at work, with only three having developed modules or games for teaching and the rest having not done so.

This implies that an experience in developing instructional media is beneficial, and that lack of knowledge means that production of instructional materials is minimised in this institution. Almost all those who had no experience of developing instructional materials had not developed any in their field of work. It can be concluded that student teachers cannot in such situations be expected to learn how to develop instructional media without seeing any produced by their own educators. This reality is likely to impact negatively when they join the teaching field.

*Participation in National Education Developments*

All the participants reported that national development activities facilitate attainment of knowledge that can be transferred to the contexts in which they work. Amongst national institutions located in government ministries or departments, mention was made of national institutions such as the Ministry of Education and Training, the National Curriculum Development Centre (NCDC), which is a department of this Ministry, and the Examinations Council of Lesotho (ECOL). NCDC facilitates the activities of the National Curriculum Committee (NCC). All the participants indicated that they served on curriculum development and assessment initiatives, the most significant being participation in the development of curriculum or syllabuses. They further admitted that this is not only an informative and enriching experience but that information drawn from it

is directly useful in the teaching of course content as student teachers are prepared for the system in which they will serve.

It was pointed out that working with government departments as they developed new policies is a process whereby professionals get opportunities to be directly immersed in the process that forced them to read and engage in dialogue with relevant stakeholders in teacher education. Contributing to policy development allows professionals to relate to contexts different from their own, and in turn their outlook and, most importantly, the new knowledge, is transmitted to their own classroom situations.

*Participation in Research Activities*

Working at institutions that require one to undertake research, and having an opportunity to be a member of a team that conducts research served as a learning experience which is transferable to the actual opportunity to supervise students' research work. Mention was also made of undertaking commissioned work for a variety of clients. In practice, some teacher educators tend to transfer the research undertaken on behalf of clients such as the Ministry of Education and Training to the classroom level. One of the participants explained how commissioned research had impacted on her teaching. Carrying the findings of the study to her classroom situation and focusing specifically on visually impaired students in the course that she teaches persuaded her to change her outlook. 'Masethabathaba reported that she had held a meeting with her visually impaired students and inquired about their needs. Their input pointed to the need to combine writing on the board with talking, to enable them to capture the content into their tape recorders. They further expressed the need to be called upon to respond to questions as often they did not put up their hands, not always knowing that they were expected to do so.

Some of the research participants raised a point regarding undertaking commissioned research related to one's area of teaching. It is more helpful in situations where a teacher educator is commissioned to undertake research in an area in which one teaches, especially if such research involves teachers in the school system as participants. It is an opportunity to contact former students, an encounter reported to be revealing. On the one hand research findings illustrate that the graduates are still getting wrong what they were taught, to the extent that the teacher educator would decide to approach the teaching of concepts to current student teachers differently.

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Presumably problems of teaching that are experienced by graduates are then brought to bear in the actual teaching of student teachers. Research also provides an opportunity to learn from graduates' creativity in their work. Zinzi's commissioned research experience is a case in point:

> *There is a lot that we learned in undertaking research. We learned very, very exciting things because much as we had taught them certain approaches to teaching, when we went out to schools to see what they were doing we found that they have their own very, very interesting ways of going around teaching in the real classroom. I have actually brought some of these to class for my teaching. So we have also learned from that as well even though our graduates do not use practical approaches which we encourage. They do have their own ways of dealing with the problems, but in most cases we have to ask them to change them in certain ways so that it is more useful.*

Engaging in research outside one's institution has positive impacts; the scenarios shared in this section of the thesis clearly indicate that research provides ample learning opportunities which tend to impact on the teacher educators' own teaching. However, undertaking research on their own teaching appeared to be a major gap among the participants, given that none made reference to research undertaken in their own context or on their teaching practice. Another gap is the failure to engage in joint research with teachers in the service and to have that research feed in the training.

## 4.4.2.7 Research Participants' Professional Challenges

Almost all the participants indicated that the context in which they worked posed a number of professional challenges and required a refining and revision of their professional knowledge. The challenges ranged from classroom contexts, teaching and learning materials, assistance provided to teacher educators and a variety of academic challenges, such as teaching large classes. Concern was expressed over the latter challenge; large class sizes affect the extent to which they can use interactive methods of teaching. They indicated that they taught in a context in which there were inadequate facilities or personnel, such as not having a technical person to assist with the use of technical equipment such as ensuring that an overhead projector was not only available but that it was in working condition. For some lack of collegiality stifled working collaboratively and learning from one another; for others the context in which they practised was highly individualised. Hoanghoang, in wishing for a context in which there was collegiality, pointed out that "*… lecturers are often busy with their own things. If*

*there could be opportunities, deliberate opportunities to work more as a team I think there could be useful collaborative work in a number of aspects including teaching*".

It is a context in which the major challenge is being able to balance theory with practice for their students, given the dilemmas facing teacher educators. According to Peditta they have to decide between giving student teachers theory which will enrich their content and providing skills they need in order to convey the content. Her major challenge to teaching at a teacher education institution level was ensuring that the students visualise themselves as teachers and therefore understand theory from that perspective.

Based on the overwhelming response to the question on sources of professional knowledge, it can be concluded that while the knowledge attained from the degree programmes served as a foundation, it was more in practice that teacher educators acquired practically-based professional knowledge. In practice there is exposure to numerous challenges, most of which have to be attended to by the teacher educators themselves, hence practice-based or experiential-based professional knowledge.

## 4.5   Application of Professional Knowledge

The previous section has addressed the question on the sources of professional knowledge. In this section, the intention is to present and analyse data addressing questions on construction, enactment or application and modelling professional knowledge. It draws its content mainly from the research participants' teaching practice; *construction of professional knowledge* section is based on data generated from two sources: the teacher educators' narratives and their classroom activities; and the section on modelling of professional knowledge by teacher educators is informed by both the narrative and the observation data.

### *4.5.1  Enacting Professional knowledge*

The participants were asked to share their own understanding of the concept: enactment of professional knowledge. In their view this refers to working towards maximising the knowledge of students so that they are fully prepared in both the content and the methods they will use once qualified to teach. In the process of acting out they claimed that they assigned student teachers tasks that resembled possible teaching and learning activities typical of a secondary school classroom. The intention would be to help student

teachers appreciate the importance of relating the teaching of subject content to the secondary school students' contexts.

Acting out professional knowledge is influenced by a number of factors, including the type of prospective teachers one teaches, the subject content being taught and the philosophy that underpins a faculty's programmes. There was a view that some members of staff might be inclined to focus on practice more than theory, while others might prefer that students be philosophically grounded in a subject in which they are specialising and being prepared to go out and teach. To other teacher educators, enacting professional knowledge is about involving students in various ways, using strategies that emulate a teacher educator's confidence and experience in teaching.

In the context of educating student teachers in such a manner that they would be able to teach their own students, enactment of professional knowledge was considered to be a complex ability to relate theoretical understanding to practice in a given context. That complex ability would imply that professionals are constantly challenged to present the content to student teachers to ensure that they think beyond themselves and about their own students. Peditta summed up the complex nature of educating student teachers as involving and challenging: students have to be challenged "*to think beyond the context and in doing so help them to move in terms of their intellectual level from that level of simplicity to some level of sophistication of thought and in the process hope that they too will challenge the learners they will be working with to move from a certain cognitive level to the next leve*l".

In this regard, enactment of professional knowledge is understood to mean moving beyond simply acting out and assuming that student teachers are observing how teaching is done, to addressing cognitive developments on the part of student teachers who in turn would be expected to emulate the teacher educator who models this level of thinking. Peditta concludes that moving learners from simple to the complex level can be compared to moving them from the "*profane to the sacred*".

The participants concluded that enactment is informed by extended experience, exposure to different settings in which one finds oneself, gaining confidence and being committed to the profession. It became apparent that confidence was understood to afford professionals courage, given that they would be knowledgeable about the content they taught and would therefore be authorities in their fields of study. However, building confidence was regarded as dependent on a number of factors. Professionals would

have to read extensively and move with the times or with technological developments in their fields of study, adopt new information for application and be critical, so that in applying what had been learned they could avoid doing so mechanically but rather modified and adapted new information to own situations. Therefore, as summed up by 'Masethabathaba, "*experience, openness and open-mindedness including addressing individual students' personal or social problems, assisting students to achieve their objectives of studying enhance enactment of professional knowledge*" are imperative.

## 4.5.1.1 Instructional Techniques

Although the methods of teaching varied among teacher educators and even within curriculum subject content and/or discipline or field of study, ranging from didactic to interactive methods in both the curriculum studies and educational foundations courses, they did nevertheless follow a clear structure. In all the observed lessons teacher educators clearly demarcated these so that opening, giving a presentation and closing a lecture were distinct. On the one hand, in opening lessons the focus was highlighted, students were asked to submit assignments or marked scripts were distributed, directions were provided about the content of a lesson and revisions of the previous lessons were made, either through a summary or through asking questions. There were times when students were asked to keep quiet so that teaching could start.

On the other hand, lessons were either formally or informally brought to a close, and in so doing lesson points were given on what the next one would cover, directions provided to students to prepare for the next lesson, changes of time scheduled for tests discussed, and at times students were instructed to prepare for the next lesson by pointing to a topic in their readers or textbooks. Occasionally, closure of lessons was informal, especially in situations where another group of students would be waiting to use the same lecture hall. In essence, a form of framework was promoted even if it was not mentioned, but since this was taught in drawing up of lesson plans it can be concluded that students observed it as it was implemented.

In practice the predominantly used method of teaching used by participants was of a didactic nature. This varied from giving a very short explanation of concepts to giving extensive lectures in which theories or concepts and processes were explained and supported with examples. Depending on an individual's expository style, there were situations in which teacher educators took an entire hour of lecturing with very little or no

contribution from the student teachers. These long lectures were common in the Language and Social Education courses and some Educational Foundation courses, but not so common in Science and Mathematics Education courses. The following excerpt is a small proportion of a lecture in which the Language Education teacher educator had a one hour uninterrupted lecture in which she lectured on a number of issues. These included technical documents such as a syllabus used in secondary schools, related policies, her expectations, and relating the philosophy of education to the topic to be taught. Although these issues were interrelated, giving an uninterrupted lecture could have worked against internalisation of each of the concepts or issues being taught.

*Didactic Teaching Methods*

First set of Excerpts:

| | |
|---|---|
| Name of Lecturer: | 'Masethabathaba |
| Number of Students: | 160 |
| Course: | English Education |
| Year of study: | 4th year |
| Time scheduled for the lecture: | 14.10 – 15.00 |
| Date: | 22 October 2007 |
| Venue: | Science Lecture Theatre |

Lecturer: Your knowledge of the philosophy of your government; your knowledge and thorough understanding of the English language syllabus are very critical in the effectiveness of your teaching in your becoming an enthusiastic English language teacher. I will definitely assume that you know your English language syllabus even when I set assignments and examinations. We have said the philosophy for English language teaching in Lesotho is education for national development. I'm not going to tell you about the documents in which that statement is found; but I will expect that you will make that statement and provide the source for that so that it is part of your planning. It starts as broadly as that so that by the time you decide you are teaching a noun you have to be able to explain why you are teaching them the noun and you have to say it is the syllabus that says a noun is part of the syllabus …

The following excerpt illustrates yet another almost uninterrupted lecture in an educational foundations course in which only one student asked a question and all that the rest of the other students did was to respond in chorus to the questions using the word "yes" and take notes.

| | |
|---|---|
| Name of Lecturer: | Mafukuthoane |
| Number of Students: | 200 |
| Course: | Introduction to Educational Foundations |
| Year of study: | 1st year |
| Time scheduled for the lecture: | 11.00– 12.00 |
| Date: | 14 October 2007 |
| Venue: | DTF Lecture Hall |

Lecturer: Gender socialisation refers to what we talked about at the beginning when we were discussing the concept gender; it is a socially constructed concept, it is socially determined. We talked about gender socialisation and what it refers to. Do you remember in our course outline when we first met and I was helping you recap of what you did with the other two lecturers, we did address the concept *socialisation*?

Students: There is a perception that boys are better at Mathematics and the sciences than girls. Why is it that boys are more inclined to perform better in Mathematics and the sciences than girls?

Lecturer: Exactly, that is what I am asking; already there is perception that boys are good and that girls are not good enough with figures; why is it so? Have you made a similar observation?

Students in chorus: Yes

*Interactive Teaching Methods*

Second Set of Excerpts:

Interactive teaching methods also featured as the most commonly used methods of teaching. Teacher educators posed verbal questions to which students were expected to give answers. Sometimes students too asked questions.

Question and Answer Method

One of the interactive methods of teaching that was common was questioning. Questions were commonly used by the teacher educators and to a lesser extent by students themselves. The verbal questions that were predominantly used during the actual teaching were of various types.

- They included exposition, which required prospective teachers to explain.
- Some were thought-provoking for which research participants used words such as *why, how* and *what*.
- Rhetorical questions were asked and some questions required a respondent's opinion.
- It was also common to ask questions having prefaced a question with a statement that appeared to be aimed at setting the scene.
- Almost all the participants asked several questions or a cluster of questions at a time.
- The second most commonly asked type of verbal questions were those which tended to persuade student teachers to answer in chorus. Therefore those types of questions persuaded students to give an affirmative or a negative response or a one-word response.

The following excerpt helps to illustrate the points raised about verbal questions of various types. All the participants asked these questions.

a) Prefacing a Question with a Statement

Hoanghoang: There are some San paintings; what do you learn about the animals that existed in the past? The assumption here is that the paintings that the San made were based on the observations at the time and there were these animals that you observed that you saw. What are they? Can you name those that appeared in the painting that you saw during our field trip?

Peditta: Think of an example of classical conditioning in a class situation or how you learned something from classical conditioning or through classical conditioning. Are you able to relate classical conditioning to your own learning of some things sometime, somewhere in your life?

Mafukuthoane - If it is like that, think about your male teachers and your female teachers from primary or secondary school. What can you say about them? You are reflecting; reflect on those teachers and also imagine if you were to be the head of a school, would you prefer to be head of an all boys' school or of an all female school or a mixed sex school?

Fusi: Think about external factors or societal needs. How can you make sure that your teaching addresses these?

Zinzi: Now let's assume that you didn't have one horse, you had two horses that were tied in the fields; what would you see? This time you don't have one horse you have two horses; what would you see?

Lintle: You did not interact much; instead you only asked questions and after that you summarised their points. Why did you do that?

*b) Expository Question - Single Focus*

Hoanghoang: Can you explain all those concepts about floating and actually point to Us? Does the water have to assume any level on the board for it to float? Explain those concepts to us.

Peditta: What do teachers do to link old knowledge with new knowledge? Explain that to us.

Thabang: Why do we scheme on quarterly basis? What is the importance of planning?

Mafukuthoane: What is the difference between a community school and a private school?

Fusi: How else can we teach about environmental education?

'Masethabathaba: What is the difference between pre-writing and brainstorming?

Lintle: In what way does the world celebration of teachers' day challenge you? Are there any comments on that?

*c) Expository Questions — Multiple Focus*

Hoanghoang: How has technology such as airplanes improved our lives? What are the problems? What are benefits? What are some of the current problems that we said can be associated with the current possibility of moving across the world in jets?

Peditta: Why are psychologists interested in these two things? What do they say about them? Which forms the basis of behavioural theory? They say that psychology is a science; we must be interested in that response. Why? Why must we be interested in these two aspects of behaviour? What do they say about them?

Mafukuthoane: What kind of services can those be? What kind of services come to mind?

Fusi:    What does it mean to analyse the syllabus or analyse something? Can you reflect on that question before I can tell you whether you have or have not analysed the syllabus? What does critical analysis mean? If I give you geography textbook and say critically analyse this book, what does it mean?

'Masethabathaba: Do group members want to add anything? What has she left out? Any other observations? What do others want to say? What did you learn from the presentation?

Lintle: Are there people who did not understand anything? Let's go back to the planning conference. Did the supervisor apply those skills?

*d)  Lower order questions*

Hoanghoang:  What was the video that we watched essentially about?

Peditta: What do you think those debates will be revolving around?

Thabang: Do you remember the components of a lesson plan?

'Masethabathaba: What do we mean by *free writes*?

*e) Eliciting Opinions*

Peditta : Do you see the relationship between Vygotsky's and Piaget?

Thabang: Do you think that adults need to be motivated?

'Masethabathaba: What do you think was unique about their presentation?

*f) Eliciting Students' Questions*

Lintle: Do people have questions on what has been presented?

Hoanghoang: Anybody with a burning question or comment?

Peditta: Are there any questions?

'Masethabathaba: Do people have comments or questions?

*g) Thought-provoking Questions and Opinion*

Hoanghoang: Could there be the case where you think that the knowledge of science can conflict with students' conceptions of how things were brought to them if they come to class with a belief or an understanding that traditional medicine works?

Thabang: Why do you think intrinsic motivation is superior to extrinsic motivation?

Fusi: How would you teach Geography to illustrate the holistic view of the subject?

'Masethabathaba: So what have we learned from these presentations?

*h) Group Work Methods*

Secondly, interactive or participatory teaching methods included students working in large groups of up to ten students in a group and paired groups of two students in a group. Both large and small groups were common in both small and large class sizes. Instructions in a psychology class and in a science lesson illustrate the point regarding a paired group assignment:

| | |
|---|---|
| Name of Lecturer: | Peditta |
| Number of students: | 300 |
| Course: | Educational Psychology |
| Year of Study: | 2nd Year |
| Time scheduled for the Lecture: | 7.00 -8.00 |
| Date: | 13 September 2007 |
| Venue: | BTM 105 Lecture Hall |

Lecturer: We are starting on one of the most important topics in educational psychology which is learning. Learning is something that you have been doing since you were born. You have been reading for the topic that we are to do over next two months. We are going to be looking at learning from a number of different perspectives.

*Instruction*: So I want you to chat with your neighbour just to clarify what learning is; what do you understand by learning? Can you discuss with the person sitting next to you what you understand by learning.

| | |
|---|---|
| Name of lecturer: | Hoanghoang |
| Course: | Science Education |
| Number of students: | 40 |
| Year of study: | 4th year |
| Time scheduled for the lecture: | 13.00-15.00 |
| Date: | 21 August 2007 |
| Venue: | Boitjaro Seminar Room |

Lecturer: Remember there is a difference between weak gases which include carbon dioxide when we talk of transport but the depletion of the ozone layer is caused by something else. … under what conditions do we say transport is not energy conserving? What kind of transport system would you say is not energy conserving? Or what is your assessment of our transport system here in Lesotho? Is it energy conserving?

*Instruction*: I would like you to think about this one right now, for a few minutes in the small groups with the person sitting next to you, just spend a few minutes thinking of our transport system. Think about our transport system in its current state of energy conservation.

Students: They discuss among themselves

*i) Demonstration*

There were other methods that were rarely used. Demonstration was one of them. Demonstrations were not used extensively. A demonstration of "instructional supervision" in which the teacher educator played the role of a supervisor while a student acted as a teacher and the rest of the three hundred students gave comments on the demonstration is a case in point.

| | |
|---|---|
| Name of Lecturer: | Lintle |
| Number of Students: | 300 |
| Subject: | Supervision of Instruction |
| Year of study: | 4th year |
| Time | 08.00 – 09.00 |
| Date: | 12 September 2007 |
| Venue: | Science Lecture Theatre |

Lecturer: Today we are applying the skills that we said we acknowledge and so on. You sit and watch what we said we will do at the same time jot down points like the supervisor and also jot down skills that are being used by the teacher in the presentation and then go into the conference phase and continue jotting down the points because yours is to analyse all that is going to be demonstrated here.

Lecturer and students
They are now seated in the form of a circle;

Lecturer (Acts as supervisor)
How do you plan to deliver your lesson?

Teacher (student teacher acts as teacher)
I have the following objective for my lesson (and reads it out)

Supervisor:
It seems those are the aims and not the objectives. So what are the objectives?
Teacher
They will be able to develop …

Supervisor:
Since these are student teachers what do you want me to observe?

Teacher:
I want you to observe whether I will be able to interact and ask good questions.

Supervisor;
So you want me to observe whether you will be able to ask students questions?

j) Project Method

The project method of teaching was used in the Science and Geography courses. Students were assigned projects to research and present. It was in these courses that students were given the opportunity to visit project areas and to come back and discuss their observations in class.

| | |
|---|---|
| Name of Lecturer: | Fusi |
| Number of Students: | 50 |
| Subject: | Geography Education |
| Year of study: | 4th year |
| Time | 09.10 |
| Date: | 19 September 2007 |
| Venue: | CMP Seminar room |

09.21:04

Lecturer: *Distributes more papers on the audit* and explains*:*
What I distributed there is an environmental audit checklist; it's an instrument that you should use to conduct an environmental audit; remember here we are looking at the impact of conducting an environmental assessment but we are assessing the quality of the environment; we are just getting information on the state of environment on the university campus; so I developed this checklist to guide our audit; to guide means the list is not exhaustive, you can also add other areas to investigate, so let us look at part one. What can you say about the social or activity areas of the university campus; what are those activity areas; we have lecture rooms, we have library, we have rest places; play grounds, students' residences and refectory? That area around Mzalas, I don't know if you have other student complexes on campus; that is very important if you patronise that place during your lecture time, it means students' complex even though it's not on campus. You might want to look at that also. What can you say about the quality of lecture rooms? What is the purpose of lecture rooms? Would you say the environment about lecture rooms is conducive to learning and teaching?

So write descriptive statements about the quality of lecture rooms. Resting places, what can you say about the quality of the environment there? Play grounds.

Students:
Talk with dissatisfaction about the rest places and laugh; a student asks a question: What are resting places?

Lecturer:
Describe the resting place as a place where you go and rest when you are tired, you want to be alone. Do we have such places?

k) Illustrations

Other than these methods all the research participants used illustrations to clarify concepts or to illustrate the use of a technical document such as scheme and record of work. The following excerpt illustrates how Thabang went about illustrating the use of some technical documents.

Name of lecturer:      Thabang

| | |
|---|---|
| Course: | Teaching Methods and Instructional Technology |
| Number of Students: | 431 |
| Year or Study: | 2nd year |
| Time scheduled for the lecture: | 17.00 – 18.00 |
| Date: | 10 October 2007 |
| Venue: | BTM 105 Lecture hall |

Lecturer: I have a transparency to show that scheme and record book has two sides; on the left hand side that's where you scheme. You plan for one quarter at a time and then on the right hand side that's where you report what has been taught. At the end of every week you report showing exactly what was covered during that week. It gives teachers something to aim at.

### 4.5.2  Other Dimensions of Teaching Practice

A number of dimensions of teaching practice were a common feature in the lecture halls and seminar rooms.

## 4.5.2.1 Technical Language

The use of technical language included referring or recognising content that ought to have been covered in other courses or in secondary school. In the majority of cases student teachers were referred to courses that they would have covered either in the previous year of study or that would be running simultaneously. In a situation where a research participant taught the same group of students in the previous academic year reference would also be made to similar content that had been covered in that year of study.

In essence the research participants were directly challenging the students to view the teacher education courses as contributing to a programme, and that separating them was for purposes of ensuring that they adequately learned more content in various courses. The following are examples that illustrate reference to technical language by all research participants:

Hoanghoang: Those who do Biology may be aware of the topic ecology as usually taught in school in our setting. To what extent is that knowledge often related to the ecological degradation or environmental degradation that is going on in our context?

Peditta: These schedules of reinforcement are the tools that teachers use in classroom management. I am not sure if you have done classroom management already in EDF222.

Thabang: This is the stage in which you are going to apply all those things that you have learned or you are learning in your psychology class at the time that you will be bringing that psychology to a classroom setting.

Fusi: Do you know philosophers like John Dewey? You know him of course. Oh no! You don't seem to know such a great philosopher. What happened in EDF 111? What about science education?

'Masethabathaba: I realise I have to refrain from teaching students how to write and talk to you about how they must write. I assumed that this was done in E100 and I know it was done in E100 but people cannot transfer their learning into other learning situations.

Zinzi: I am sure you did assessment in EDF 222 or EDF 223. This topic should be easy for you.

Lintle: What I know is that you were introduced to E100. You were introduced to academic writing, how organising writing an assignment is concerned, academic freedom and about giving your assignment to somebody to edit it for you.

Use of technical language included reference to secondary school students and to the appropriate techniques for teaching in a secondary school context. Reference to secondary school students included how they should be taught, suitable activities for teaching particular concepts and what would best facilitate their learning. An excerpt from Peditta as she addressed students in her Psychology class helps illustrate the point: "*So it's very important that we understand our learners holistically; we do so by knowing where that learner comes from, the families and the difficulties that might be posed by that family, setting or opportunities for that child's development in that family*", and in another lesson in which she taught classical conditioning she made reference to secondary school teachers: "*Hopefully next time you will be able to understand how our students become classically conditioned by what we do as teachers. Something that is neutral, something that is supposed to be enjoyed starts generating feelings that are uncomfortable in children*".

Furthermore, in the use of technical language, reference was made to possible use of instructional techniques such as expository methods, field trips and questioning. After a Science Education lesson in which Hoanghoang taught about technology, he referred to students and teaching techniques: "*I think for learners to explore, both advantages and disadvantages with such technology, as a teacher you have to outline the disadvantages*

*of the technology in society"*. He went on to say, "*This approach that was used by our imaginary teacher, Mr. Mponyane, is what we could refer to as an inculcation approach, an approach that incorporates lecture and persuasion or persuasion of learners*".

The participants provided justification for using a particular method referred to and how problems experienced in classroom situations could be rectified. Suggestions included rectifying problems through giving remedial lessons and through collaborating with colleagues. Advice was given on how previously experienced challenges could be used to tackle new problems in helping learners. In the actual teaching process some participants occasionally made reference to research findings on commissioned studies in which they had participated. Those who did so did it in the context in which they were giving an example. Infusing the research experiences in the course outline did not feature, hence the sporadic examples that were given to illustrate a point.

## 4.5.2.2 Styles of Communication: From Simple to Complex Reinforcement

In observing the participants' teaching practice various styles of communication were apparent. They tended to instruct students to present an assignment, respond to questions, discuss and in some situations to watch and comment on a video, to give some illustrations using a white board, submit assignments, ask questions, collaborate in tackling a problem, do an Internet search, search for books and journal articles in libraries, search for technical documents in relevant institutions such as searching for curriculum documents at the National Curriculum Development Centre, engage in a number of activities, including choosing a group that would be responsible for organising group activities such as a field trip and, in almost all the lessons that were observed, to listen.

This shows that teacher educators use a multitude of approaches to engage prospective teachers with the purpose of ensuring their involvement. Some, such as asking students to collaborate when they tackle problems, are socially grounded. Students learn to collaborate with colleagues. This is a strategy that could be preparing student teachers to emulate such practice in their own teaching practice.

Reinforcement was another style of communication. Typically, most research participants reinforced students using single words and phrases such as "*excellent; very good; he is correct; that's correct; that was a brilliant presentation; up to this point the*

*presentations have been very good; I think that you did well;* and *he is bringing up a very good point*".

However, while some research participants preferred using single words, and to some extent phrases, there were some who used a whole sentence or paragraph in reinforcing learning. These were common in the language education course. The excerpt from 'Masethabathaba illustrates her style of reinforcement which was more in the form of an explanatory statement than a single word of reinforcement.

> *What was unique about this presentation was the citations. We have been presenting as if everything came out of our heads which is fine if it all came out of our heads but at the same time acknowledging that some people have written about these things is very important and it helps us when we share who the sources are that we have referred to so that our colleagues can also refer to those.*

> *I personally liked what they said in their presentation. That is the use of group members and activities. What I liked most about this particular group that was on stage is the involvement of other learners.*

Styles of communication were also observed as the participants responded to students' questions, some on subject content and others related to pedagogy. They elaborated on a point made by a student who had responded to a question, appreciated a wrong point and considered that as an indirect way of ensuring that issues were clarified, the type of response commented on, students' responses repeated and students guided on how to respond to questions. Sometimes they expounded on a response given by a student.

It was also very common for all participants to answer their own questions. An excerpt from Fusi illustrates how he did this, while the ones from Lintle and Thabang illustrate how they responded to students' questions.

| | |
|---|---|
| Fusi's students: | How would you employ the model of curriculum development? You are to review the process model of curriculum development, discuss aspects of the process model; this model is supposed to be your analytical tool and you have to understand this model before you analyse the syllabus. You have to look into its main aspects and the general view of curriculum from the perspective of this model. How do you define it? |
| Lintle's student: | I want to know whether the supervisor will come to my class without telling me before coming to my class. |
| Lintle: | I am the supervisor and I will come because you will be on teaching practice; when I come to your classroom and you started some 5 minutes ago I will just come into your class; |
| Thabang's student: | Am I correct to think that you cannot force students to learn if they lack motivation? |

Thabang: Yes, she is correct; you cannot force students to learn if they lack motivation. In an instructional setting we normally speak of two types of motivation. The first one is intrinsic motivation and under intrinsic motivation that's where we are talking about the motivation that comes from within the learner himself or herself …

### 4.5.3 Student Teachers' Activities

Student activities took place in seminar rooms and lecture halls that could accommodate large numbers of students. The smallest class size was 15 and 40, in Mathematics Education and Science Education respectively. These were followed by those in Language and Social Education, which were below 160. All the Educational Foundation student populations were very large, with the largest being 400 or more. It was in this context that students engaged in numerous activities, either as instructed by lecturers or self-initiated.

Student teachers engaged in numerous learning-related activities. They asked various questions for which they sought clarity regarding either subject content or pedagogy-related issues. Student teachers interacted amongst themselves, especially during group work and in situations where some presented papers based on group assignments or in some cases new initiatives. Student teachers were observed responding to questions by answering in chorus, depending on the type of question posed. The questions to which they responded in chorus were those that required a recall type of answer. They also responded to questions individually.

At individual level the responses varied from a simple "yes", that would be supported by a very sound argument, through relating content to their own situations, giving own interpretations of a concept or through clarifying or arguing a point in response to a question raised by another student or the teacher educator. They asked questions in situations in which concepts were not clear and they therefore sought clarity. The following excerpts illustrate the points raised:

Course: Curriculum and Teaching of Geography

Student argues a point: "*the assignment was difficult because of the way in which the questions were structured. It was too packed and I got the idea that it was confusing in that out of that one question we could have had two or three assignments*".

There were times when as students, student teachers remained silent and would not respond to a question. This happened in cases where they appeared not to have an

answer to a question or were focusing on taking notes. Taking notes was peculiar in lecture halls where teacher educators used didactic methods of teaching.

### 4.5.4  Managing Teaching and Learning

Managing teaching and learning required participants to discipline students by asking them to keep quiet so that teaching could take place or so that presentations by group representatives could be done in an environment that was conducive to learning. Disciplining students also meant requiring them to act in responsible ways while still at University. Zinzi, in her efforts to know her students by name at the beginning of the academic year, practised calling a register. On one of those days in which she discovered that there was one student whose absenteeism was worrisome she took advantage of this situation to comment on her principles, "*what is important while we are still around this place is being responsible; don't just disappear, I will also do the same if I am not coming to class. For example, I have just arrived from town but I called the office to tell them that I am likely to be late; this is something for you to practise*". Teaching management and discipline are carried out by addressing the issue on the spot and by setting a good example with reference to own encounters.

Discipline was enforced in a number of ways. There were times when gentle approaches were employed and other times when decisive actions were taken to ensure learning was not interrupted. This was done through reprimanding those who made teaching unmanageable. Disciplining student teachers also meant assuming a parental role. The following is an episode in a large Psychology class in which Peditta reprimanded students and at the same time, given the words she used, assumed a parental role. Typically, in the Basotho cultural context, children are disciplined strongly if the best behaviour is to be inculcated.

Peditta: There is a lot of disturbance; there is moving in and out. From now on we are starting with the class and I don't want to see any movement. If you plan to leave, leave now because you are causing a lot of disturbance.

Students: About 10 student teachers walk out and others continue talking aloud and laughing as the 10 leave. Other students are still entering the lecture hall. They are late for class.

Peditta: It's not a joke; I am taking these things very, very seriously because I am dealing with a class of second year university students. I am really, really concerned. If we don't take things seriously and if we don't take our studies seriously, I mean you are here to study, you and many others are taking this particular course; and if you don't do it well why else are you here. I just don't

understand the mentality behind some of the attitudes. I look behind some of our students who do not really take life seriously because I don't  think it is this course only that you are not taking seriously, it is life generally, and I am raising this in the context of what happened today; its not something that I have heard from somebody; its something that I have observed right here and now; and I hope that you are going to reflect on yourself, you are going to reflect on where you come from, you are going to reflect on where you want to go to in life and you are going to make an effort; you are going to make an effort to change this behaviour**. I am talking to you as a parent.**

The other form of classroom management involved managing procedures. This is a common form of management which featured in seminar rooms and lecture halls and involved requiring student teachers to respect colleagues to the extent of giving each other time to argue a point or respond to a question without interruptions. It also involved encouraging student teachers to raise their hands and avoiding responding to a question in chorus. Indicating by hand that one wanted to answer a question was emphasised, even if the lecturer encouraged chorus response through the type of questions  posed.

Therefore classroom management also meant respecting colleagues, warning students that when they raised questions on a group's presentation it should be directed to the entire group. Other management of classroom procedure activities included asking students to keep quiet, perhaps to ensure that the environment would be conducive to learning. At other times student teachers were required to prepare for the next lesson or to prepare for a test or to prepare for procedures that were to be followed in forming groups. It also involved organisational management, such as asking student teachers to organise themselves into groups. The following excerpts from some of the research participants illustrate the point:

Hoanghoang:  Cautions students about respecting others: "Usually the procedure is that if you have anything that is triggered by the presentation you write it down, you don't say it until after the presentation. So when you are provoked by some statements scribble them down and ask at the end of the presentation. I note that you are provoked by a number of points raised so you can respond by scribbling them down".


Mafukuthoane: Prepares students for the next lesson: "on Thursday we are going to talk about the education policy".


'Masethabathaba:     Guides students about the choice of group members: "The fewer the group members the better and do not choose friends because if you choose friends you tend not to be serious".

Another aspect of classroom management was the provision of a supportive environment during the teaching and learning processes. They tended to do so particularly in situations where students were working in large groups. The tendency was to monitor group discussions by visiting each group and ensuring that guidelines were followed in undertaking an assignment. In monitoring group activities, student teachers were provided with detailed and elaborate explanations on how they should tackle an assignment which may seem to be creating some difficulty.

Providing a supportive environment took place even beyond the four walls of seminar rooms and lecture halls. Some lecturers called group leaders to their offices to elaborate on a group assignment. Others were flexible and provided student teachers additional time to complete an assignment. They were guided on how to respond or tackle an assessment such as a test, and on very rare occasions were provided with booklets to help them undertake an assignment.

Fusi: Guides students on how to tackle the assignment: "The assignment reads: Write the critical analysis of 2004 JC geography syllabus. You are expected to critique the syllabus. **I am going to guide you through questions that you could ask yourselves as you critique the syllabus.** What are the general principles embedded in the syllabus? What power relations exist between the teacher and the learners? Who controls the syllabus? Is the practice learner-centred as would be encouraged? If not, how do you describe it and if it is learner-centred what evidence from the syllabus is there to support this argument?"


Peditta: Cautions students about how to go about analysing a test question: "Simply looking for lead words or something that will help you without understanding exactly what the question requires is not that helpful because that is what a person who sets a multiple choice exam capitalises on: the mistakes that students might make and those students who don't understand by and large will make mistakes".


Zinzi: Refers students to teaching and learning materials to be used: "What I have done is that I have actually brought some books with a couple of problems in them. All you have to do is to look into books and do the assignment. I only have four of these. I think what we can do is that we can divide the sixteen people in this class and have four people to one book."


Peditta: Comforts students: "Remember, we are all learning, you don't have to be perfect. We want to see if you have understood what we have been saying all along".

In practice classroom management was illustrative of what teaching in an environment that is conducive to learning meant. It can be assumed that student teachers would model after their teacher educators how to ensure that the teaching context supports learning.

### 4.5.5 Instructional Media

Instructional media comprised electronic and non-electronic materials, including books, journal articles and technical documents, such as curriculum documents. An overhead projector was the only electronic medium used by some teacher educators. Commonly used was the whiteboard to present concepts or display students' contributions. Student teachers were often referred to the library and to prescribed text books, or, in situations where the participants had designed readers or modules, they were also referred to these. In using reference materials, student teachers were required to read ahead, for example, a specific theory, either in preparation for the lessons to follow or to revise what had already been discussed in class. Technical documents were used, including curriculum documents in the form of course outlines as key reference material, secondary school curriculum and syllabuses. Only one participant had developed a class schedule which detailed dates and topics including dates for tests. This particular participant who had developed a class schedule encouraged student teachers to refer to the class schedule alongside a course outline as a document that would guide them on what had been and/or would be covered.

Almost all the teacher educators who participated in this study did not provide student teachers with a class schedule, a document which communicates a clear plan for both the teacher educator and student teachers. They were not proactive in developing other teaching materials, including modules or readers. Most importantly, failure to demonstrate to student teachers the need to develop own materials means the latter will not be motivated to do so themselves.

### 4.5.6 Assessment and Feedback

A variety of assessment procedures were used in a number of ways. Student teachers were given tests and assignments, were verbally asked questions during the actual teaching and were given feedback on work done. The tests were mostly announced well ahead of time. In very rare cases, for example the case of the only teacher educator who

had a class schedule, the dates for the tests would have been included in the class schedule at the beginning of an academic year.

The practice observed was that student teachers were given assignments to work on either as individuals or as groups. The excerpts are illustrative of the assignments that were given to students:

Hoanghoang: [Group Assignment] There is your assignment for those of you in Physics. Your task is to go and establish some Physics concepts associated with flight, airplane. In the next lesson tell us who exactly invented the first airplane, in which year, and how it differs from the modern airplane or the recent model of airplanes that we use.

Peditta: [Group Assignment]: The first part of the theory Erickson and Piaget were part of and that is what the volume of the work is. We have looked at the case of Sharifa and actually tried to apply theories to a case study. We have also looked at the case of Nomza to enable us to apply the ecosystem perspective on a case study. So those two sections of the assignment should not be difficult because we actually did it in class. The group leaders will actually guide you because they have the guidelines.

'Masethabathaba: [Group assignment]: In your groups discuss giving a remedial

lesson and be prepared to present it in the next class.

Zinzi: [Individual assignment]: What I would like you to do tomorrow is to develop an activity sheet that you would use together with a shape.

Lintle: [Individual assignment] I would like you to engage in a reading assignment. Tomorrow we are discussing the Johari window and I would like you to read about it in preparation for discussion.

Therefore there were opportunities for student teachers to work on individual tasks and perhaps test their potential on a given assignment. There were also opportunities to illustrate to students that some tasks can be shared among students and in that regard build a community of learners.

Another aspect of assessment which participants consistently used was giving student feedback, most of which was constructive, after a test had been marked and scripts distributed. Feedback was also given after students had presented an assignment that involved more than one or a group in class. It was also provided on an assignment that

had been submitted and an individual would be given feedback on the marked script. The following excerpts illustrate what transpired when feedback was given:

Fusi:            you had to look at the structure here, who does what in curriculum development and how is that process of curriculum development undertaken. **You could do that in half a page because there wasn't much to write about.**

'Masethabathaba:      Read my comments, I have underlined where there are more topic sentences in a paragraph. A lot of your paragraphs are made up of several topic sentences; that's why in the marking you'll find where I have come across them I have said that you would have had ten paragraphs out of this paragraph because there are ten topic sentences in that paragraph; none of them has been elaborated. **This problem has recurred so often that I thought I had to spend time talking about that.**

Peditta:         I am just pointing out some of the glaring mistakes that I found; and all those are caused by the fact that you don't read the question; each time you get a multiple choice question it is not an easy question and there is no way that you can randomly select the correct answer; you have to show your understanding; that is what is important.

## 4.6  Curriculum and Assessment Documents

In practice the participants indicated that common documents they used were curriculum and assessment ones . However, as alluded to earlier, there were very few participants who had developed reading materials. These were used by both the teacher educator and students.

### 4.6.1  Analysis of Curriculum Documents

Curriculum and assessment documents were in the form of course outlines and external examination papers respectively. However, other participants used modules or readers and games they had developed. There is therefore a discrepancy in that all the participants used curriculum and assessment documents and only three used other forms of documents with two having developed either a module or a reader and one having developed games. It can be concluded that while they were all required to use course outlines and examination papers, there was no policy that bound them to use other documents in their teaching, an experience which would benefit both the student teachers and the teacher educators. Student teachers would, on their part, use a wide range of materials for learning purposes while teacher educators would be learning from

constructing teaching and learning materials. Most importantly, having materials developed internally could serve as a quality support mechanism for student teachers.

### 4.6.1.1 Goals and Objectives of the Course

There was a distinction between the goals for educational foundations and those for curriculum or subject content. On the one hand, the goals for educational foundations courses included introduction to the field of study and/or equipping students with content, in some cases skills being included. One of the courses highlighted a model that constituted the framework for teaching methods under the goals. On the other hand, the goals for a curriculum subject such as Mathematics mainly focused on content and pedagogy. There was, however, consistency between the goals and objectives of a course. The course outlines stipulated objectives on application of the knowledge and skills to be attained in the course and some required student teachers to demonstrate an understanding of the field of study.

Some participants had not spelt out the objectives for their courses, a discrepancy that made it difficult for one to know what principles guided such a course or the actual teaching itself.

### 4.6.1.2 Content and Pedagogy

The content was articulated as including curriculum for the subject content, pedagogy for the delivery of the content, teaching and learning materials as well as assessment strategies. A few of the curriculum documents spelt out the reference materials to be used. Reference materials mainly pointed to library books and to some extent the modules prepared by the research participants themselves. A few of the curriculum documents indicated that issues such as classroom management, lesson planning and instructional media would also be taught.

All but three of the participants spelt out the pedagogy to be employed in the teaching of the content. Most prominently mentioned was the lecture method, followed by interactive methods and to some extent some demonstration, observation and field work. The pedagogy mentioned in the course outlines seems to be consistent with the teaching practice.

The major gap observed in analysing the curriculum is the inconsistency among the different curricula. While autonomy and the theory that underpins a particular course can

be regarded as guiding principles for individual lecturers, some consistency with documents such as curricular would portray the faculty's philosophy and could enhance collegiality which was considered to be lacking.

### 4.6.2 Analysis of Assessment Documents

An analysis of the assessment section of the curriculum revealed that assessment was included in all the course outlines, with two categories, namely *continuous assessment and examinations* or *end of course examinations*. All the participants included continuous assessment in the form of tests and assignments. Most course outlines indicated that there would be at least two tests and an assignment. There was only one case where the coursework would be made up of three assignments and no tests. The ratio was 50% course work or continuous assessment and 50% final examination. In almost all the cases group assignments were indicated.

Examination papers were studied too. I established that examinations were written at either the end of a first semester or at the end of an academic year, depending on credit hours; some are semester courses and others year courses. The smallest number of questions on an examination paper was six, and the largest 12. In all cases examinees were given the opportunity to choose a question to answer and there were compulsory questions. Some questions were on subject content while others required students to apply knowledge gained. Additionally, some questions required students to recall content, others either to analyse or evaluate. One course presented students with cases to analyse and challenged them to discuss, analyse or evaluate. The educational psychology course was the only course whose assessment was structured completely differently from the other courses; the examination questions were structured in such a manner that student teachers were required to apply knowledge. For example, some of the examination questions required student teachers to analyse a case using the knowledge gained during the course.

Development of a course outline and a curriculum, as well as tests and examination question papers, is based mainly on experience. Teacher educators are probably required to have these as the devices necessary for their own practice.

## 4.7 Constructing Professional Knowledge

Construction of professional knowledge is facilitated by activities undertaken formally in practice. In some instances construction of professional knowledge is facilitated in informal settings. However, regardless of the setting, the research participants had opportunities to construct professional knowledge.

### 4.7.1 Construction Originates from Professional Practice

The research participants, in describing the construction of professional knowledge, made reference to experimentation, indicating that constructing professional knowledge is grounded in formal education. It also has to do with a professional's experimentation with his or her students. They indicated that the value of experimentation of ideas lies in the outcome. A new idea is put into practice and, depending on the outcome, may be accepted or rejected. The reasons for trying something new may be prompted by students' responses to questions posed in class, examination results, curriculum change and many other teacher education-related aspects. Therefore, in discovering that an idea does not work, the tendency is to change and try something new. Hence the emphasis on experimentation.

Consequently, construction of professional knowledge comes about because of situations that professionals encounter. They may have to, given a particular condition within a situation, adapt acquired theories for purposes of addressing challenges they are confronted with. Conditions within a given situation may require conversations with others, including own students and colleagues. They also require implementation of new ideas, establishing and making meaning about what works and what does not in the profession, and dialoguing with others in the field. The outcome of establishing what works and what does not provides professionals with opportunities to gain some experience. Most significantly, new knowledge that a professional constructs becomes an invention in a particular field of study, as it would be based on that professional's understanding and interpretation of situations.

In responding to the question on construction of professional knowledge, there were some who indicated that it was informed by interaction with other people. The idea is that once a professional comes across a new reading, interprets it and presents the new knowledge the way in which he or she understands it to others, there is an opportunity to get inputs from those who become involved. There seems to be an assumption that

interaction with other professionals provides an opportunity for one's new ideas to be tested and to gain feedback. Therefore, in practice, professionals crystallise what they know by sharing ideas with other people and may, depending on consultation, change ideas before actually moving into something else. The idea of constantly changing as one meets a new group of professionals provides an opportunity to adapt and improve what one has constructed and to eventually get fulfilled. There was consensus that, fulfilment becomes more significant in situations in which professionals hear knowledge that they have constructed presented by others in seminars or read papers in which their work is referred to or referenced.

There are situations that facilitate the creation of professional knowledge. Initially it is through being taught how to construct certain documents. Therefore, creating lesson plans, setting examination or test papers and strategising on how to mark test scripts are a manifestation of having received knowledge from a formal institution. Nonetheless, facilitation can be through interaction with students themselves. In practice, as professionals deal with individuals who engage in discussions and come up with new ideas, in the process they contribute towards those professionals' understanding of situations.

There are other opportunities for constructing professional knowledge that were referred to. Visiting student teachers in teaching practice in real classroom situations and playing the role of an advisor who guides them on how they should handle teaching facilitates the creation of professional knowledge. Giving a student teacher advice on the basis of what occurred in such a student's classroom is something that a professional comes up with in action. Working with student teachers is a context that facilitates the construction of knowledge, as teacher educators meet different student teachers in different situations and use various strategies to assist them in handling their own challenges.

Engaging in research and gaining experience facilitates construction of knowledge. In undertaking research independent of the supervision of a professor at the work level presented challenges to the majority of the participants. There was acknowledgement that mistakes had been made in the process of undertaking studies alone or jointly with colleagues. However, the very task of engaging in research and coming up with new information, being able to analyse that information, is in itself a process that the participants considered as an opportunity to construct new knowledge.

There seems to be an understanding that there are various possibilities for constructing professional knowledge by teacher educators. These range from engaging in activities that require them to use their competencies in responding to situations such as that of helping student teachers or in engaging in tasks such as research and in the end coming up with new knowledge.

### 4.7.2 Construction Originates from Other Settings

Some of the research participants indicated that in the real life of helping student teachers undertake research they felt they too had opportunities to create knowledge. Research experience, especially as professionals engaged in supervision of students' research and observing the experience that supervisees went through, provided some of the participants with an opportunity to change the style of asking questions in examinations. For others the understanding was that an ability to actually challenge students to the extent of observing them as they moved from one cognitive level to another, and in which they appeared to be very comfortable with their own work, was also a manifestation of the creation of professional knowledge.

In practice, some participants tested the applicability of the knowledge they had constructed. Those who reported having developed models based on research undertaken or designed materials for new programmes indicated that they tested the applicability of the knowledge they had created in practice. One, in an effort to implement a research-based model, tested it through transforming her teaching approaches, observing the outcome and settling for those approaches that appeared effective. 'Masethabathaba revealed that she had developed teaching and learning materials and actually presented these to teachers in service. She claimed that she learned from the teachers' actual interpretation of the newly developed materials. Lintle and 'Masethabathaba reported that their curricula were not static. Students are challenged to comment on course outlines before these can be distributed for consumption. Involvement of students seems to be understood as providing an opportunity to refine a tentative course outline and consequently an improvement of such curricula.

A number of lessons emerged from different experiences, one such being said to be based on construction of materials. Therefore, one's own professional knowledge for these participants was that teacher education institutions charged with the responsibility

of producing curriculum and teaching and learning materials have to be cognizant that they cannot provide a fixed curriculum. A perception was expressed that professionals must be aware that the content they have designed remains tentative, and they on their part have to practise the principle of flexibility if they are to improve their own creation.

Furthermore, the type of students that the research participants engaged with provided an opportunity to meet students with unique experiences. It was reported that meeting dynamic students, particularly in the process of introducing new ideas, presented new challenges. Dynamic students challenge professionals to think deeply, beyond familiar contexts. They are required to come up with strategies for challenging learners, thus, according to Peditta, "*move from a comfortable and simplistic intellectual context or level of thinking to one that requires them to engage in sophisticated thinking about such strategies. They have to be critical of the knowledge they have constructed*". Presumably such teacher educators also challenge themselves to experiment with what they require of their own students; they probably are not satisfied with the simplistic ways of teaching but consistently reflect on their own teaching with the intention of ensuring dynamism in their teaching.

Construction of professional knowledge for some of the participants meant the ability to identify a niche area through reflection on practice. Such ability allows professionals to be more focused, sharpen an area of specialisation and in the process develop, to the extent of becoming expert in their field of study. It is at this level that professionals view themselves as individuals and think at that level, as opposed to thinking at the level of an institution. Therefore there was an understanding that the type of students one comes across facilitates change in professional movement and looks at life from various perspectives. It is at the level of considering oneself as an expert that 'Masethabathaba indicated having come up with own philosophy that served as guiding principle for teaching. She identified a niche area for focusing on mentoring newly employed teacher educators.

Hoanghoang reported that his work had been heavily influenced by reflection on practice facilitated by knowledge of action research. He contents that "*Action research raises one's consciousness about a number of things, one of which is the social construction nature of knowledge*". He argues that in collaboration with colleagues he realised the potential to make a difference to his own teaching. Consequently, teacher educators have opportunities to test the applicability of theories in their own contexts.

Transforming one's teaching has for some participants facilitated constant improvement for assessing prospective teachers. Zinzi illustrated that asking questions at the end of a lecture and getting correct responses did not mean that all students had understood what had been taught; merely that a few students got the opportunity to respond to a question. It was only after assigning students an individual task that she learned that the majority had not grasped what had been taught. Spreading the questions throughout the lecture is an idea that she had come up with in her experience of teaching.

Hoanghoang's experience was similar to that of Zinzi. He gave students fewer written assignments and allowed them to have more class work which they discussed in groups in class. In his view this is a strategy that allowed for immediate feedback on their work. In his view, written group assignments were problematic in that a few students would actually do their assignments on behalf of the entire group. Furthermore, he allowed students ample time to think critically and argued that this was a strategy that emanated from his research work. It was also a strategy which, when tested, revealed that taking learners slowly through a process of critical thinking facilitates better response to a given task. Therefore, to these participants a classroom is regarded as an important context or site for the construction of professional knowledge and for growth and development of knowledge and ideas.

Another context is the school system in which there are serving teachers. Ideas are therefore tested in a classroom with student teachers and in schools with serving teachers. Some of the participants reported that teaching at any of these levels had also contributed towards the development of their own philosophies.

### 4.7.3  Development of Professional Philosophies

All but three participants indicated that they had developed their own philosophies but this study has established that those professional or personal philosophies vary. Those who claimed to have professional or personal philosophies admitted they had not documented them. One of the two indicated her wish instead for a professional philosophy, a wish that seemed to be based on her experience of having taught in an institution which was biased towards theory over practice. Thabang felt strongly that the number of students she taught was too high, which in reality made providing practical opportunities even for micro-teaching almost impossible.

The philosophies were for some informed by courses undertaken at undergraduate and postgraduate levels, their own students especially experienced ones and having taught at other institutions or at secondary school level. The philosophies seemed to centre on three areas: students, the decisions that one takes and challenging their thinking capacity. The participants indicated that philosophies help guide decisions about teaching, modelling teaching and preparing student teachers for becoming professionals suitable for the community for which they are being prepared. The second and the third participants expressed their own views, in which they indicated that their philosophies were borrowed. Hoanghoang's and Fusi's views illustrate what borrowing a philosophy meant to them, while Peditta's case points to building on what one has learned:

Hoanghoang: I cannot really talk of my professional philosophy as my own philosophy about teaching and learning is informed by the work and ideas of others. I am committed to a philosophy and that would be a belief that knowledge is a social construct, open-ended and not fixed and that the teaching of any subject matter should therefore provide learners with a sense of exploration, discovery and invention.

Fusi: My philosophy is that teacher training is both professional and academic training in that teachers need a sound subject content knowledge and also pedagogic knowledge. This belief is based on the theory of pedagogic content knowledge. Theory informs practice, rather than relying on common sense alone.

Peditta: It (my professional/personal philosophy) has to do with the fact that the person who engages in teacher education is a person who has to believe in change and in others' ability to change. Such a person has to be perceptive of behaviour and attitude change. Has to model what he believes in if he is to get the benefit from that. An individual's activities are therefore informed by her philosophy. The courses which I have taken have influenced what I do, but I believe in the fact that I actually studied psychology at an undergraduate level and came back to it at a later stage actually shows the fact that even when I was teaching science education I was influenced by the concepts of psychology about behaviour change. Modelling or actually acting it out is something that has developed over years and is confirmed over the years by feedback given by former students who come back to you and tell you what they did because of you which confirms that what you have been doing is valued. Different former students come back and say, "I did this and this in my life and it is because of you," then you realise that you were modelling something to these people. So I think the philosophy that one believes in, if one believes in it so strongly, becomes who you are, so you become the statement/gist, you become the statement of that philosophy even if it is not like a written philosophy as such.

Zinzi: Understanding the needs of prospective teachers is dependent on experience teaching at the level at which people graduating from programmes would be posted, engaging in relevant research and participating in administrative positions. Having taught at that level informs the decisions I make in actual teaching. Decisions include moving away from focusing on writing essays and engaging students in designing hierarchical concept maps to assist them in planning their teaching. That experience of teaching in secondary schools is complemented by the use of researches undertaken. I believe that engaging in relevant research, having relevant books and using the Internet and sharing ideas with colleagues help to improve teaching. Central to my philosophy is allowing student teachers to communicate in ways that will allow them to use the same approach in their teaching. I strongly believe that ideas emanating from students facilitate improving the following year's teaching. I never teach the same lesson in exactly the same way and my files will reflect that I have different notes for each academic year.

'Masethabathaba: My philosophy of teaching teachers is ensuring that upon graduation they are able to fit into the professional community they get into. It has developed over the years and it is informed by student teachers who came and went through my hands, participation in national institutions such as the National Curriculum Committee and the national English panel. It develops in one because of experiences, responsibilities, exposures; even the type of student that you got admitted in the university and enrolled in your course and are upon graduation able to fit into the professional demands of his specialisation out there. Is about production of English language teachers who are able to implement English Language teaching in accordance with the national philosophy for education, namely relating the teaching of English to subject-specific, local and international needs in the competitive world of work, but not at the expense of the observance of the role of indigenous knowledge systems in acquisition of normal education. The foundations of my professional decisions came from having initially worked with prospective teachers who were experienced teachers. I respected them, tapped practical-based knowledge from them to inform my course outline which means my course outlines are tentative and that I share and discuss them with students and allow the process to inform my professional decisions.

There are varying prospects for constructing professional knowledge and the participants' views match in some instances and differ in others. Therefore, their responses on the construction of professional knowledge clearly illustrate the level of complexity of developing professional knowledge and the extent to which they were themselves conversant with the idea. That none of them had documented their

philosophies illustrates the existence of a huge gap between what they think and the documenting of their experiences.

## 4.8 Modelling Professional Knowledge

This section discusses a response to the research question: *How do teacher educators model professional knowledge*? The analysis is therefore based on their own interpretation of the concept: *modelling professional knowledge* and the kind of activities in which they were observed enacting it.

### 4.8.1 Conceptualisation of Modelling of Professional Knowledge

To these research participants modelling professional knowledge relates to giving a sound foundation to student teachers, helping them improve their personalities, modelling the expected behaviour and helping student teachers love the profession to the extent of enjoying the type of work they intend to do once qualified. However, to some, modelling is facilitated mostly by playing a parent figure, being a role that women tend to play well or are popularly known for in certain African cultures.

Providing a sound foundation was considered to be building on Educational Foundations background that student teachers would have acquired in their teacher education programmes. It is in the context of modelling teaching, of the content of the subject they would be employed to teach after completing their studies, that student teachers would be expected to do so in a dynamic and interesting manner.

Helping a person build personality that would be acceptable to the profession for which he or she is being prepared was discussed in the context in which the participants claimed they encouraged student teachers to act on their own strengths. These research participants for their part indicated that they helped student teachers to learn to become effective teachers.

There are pointers to having the potential to model the expected behaviour to the extent of helping student teachers build acceptable personality and love for the profession, with enjoyment for the type of work they intend to do once qualified. This could be achieved by preparing student teachers in teaching the content of the subject in which they have specialised, to act on their own strengths. In this context teacher educators have to be inspirational, as alluded to by one. According to Peditta, a sentiment she shares with Zinzi, teacher educators have to "*go deep into people's lives and kindle something which*

*may be flickering a little, the teacher in the individual. Moving learners from one level to the higher level which is what they will be doing to their learners – from a certain cognitive level to the next leve*l."

The challenge therefore is to nurture and mentor student teachers by playing a parent figure, by acting in ways that student teachers will learn through observation and by addressing what may not be an obvious talent in such a manner that student teachers would be bound to model themselves after that character. This view is informed by feedback some teacher educators acknowledged having obtained from teachers who went through their hands or who they taught.

### 4.8.2 Modelling Professional Knowledge in Practice

Several incidents help to illustrate how teacher educators in practice actually model professional knowledge. In educational foundations courses student teachers learn about such values as working on a clean whiteboard, the use of which, as indicated above, was found to be the most common of instructional materials. Most teacher educators modelled good practice by always cleaning the whiteboard before they started teaching. In one incident Fusi found that the whiteboard had not been cleaned by the previous lecturer, and before he could start teaching he cleaned the board and pointed out to his students that "*teachers should learn to clean chalkboards after using them*". In another incident 'Masethabathaba indicated that using a textbook with pictures and showing it from a distance is common in secondary schools, but she did not encourage them to adopt this strategy. This was discussed in the context in which she was holding and showing pictures in a book but being too far from the students. 'Masethabathaba therefore argued that she was acting in a manner similar to that of secondary school teachers, in her case due to lack of adequate textbooks. In essence she justified her action but discouraged student teachers from following it.

Developing one's own teaching materials is an activity reported to be one of the strategies used to modelling the enactment of professional knowledge by a smaller number of participants. One of the participants engaged students in the use of games, most of which she had developed herself. In class she consistently encouraged her students to develop their own. According to Zinzi developing games is a skill that could be used once a student teacher graduates from the programme. The games they were encouraged to develop included those produced from local materials as well as those

accessible through computers or the Internet. Thus, professional knowledge has a generative, not just duplicative, dimension.

Enacting good behaviour is one aspect that had been referred to as critical in teacher education. Modelling good behaviour is the entire work of teaching, which more often than not takes place at classroom level. It was in the context of a classroom that participants felt they had to demonstrate that teaching is something worth doing, and in acting out they had to model what it meant. According to Peditta, to "*walk the talk and walk it in a way that shows that you are very sure of the steps that you are taking. In that context the people for whom you are modelling could get confidence in you and they too can show it to their own students*". Therefore, modelling was seen as a form of education that appeals to students' emotions, attitudes and beliefs to the extent of preparing them for the profession they are going to be part of for the rest of their working lives.

In practice and in at least two incidents, the participants informed their students about a change of plan. Instead of teaching the topic reflected on the class schedule, they altered their plans and gave student teachers feedback. One of the two actually pointed out that what she was doing was related to the topic she would treat in the lessons to follow. She argued that since they were discussing the topic *behaviourism,* they were going to practise *reinforcement* which is part of the theory on behaviourism. She indicated that she wanted to practise what she preached by marking the test quickly so that students could get feedback on how they had performed and where they needed to make improvements. In her own words, Peditta said: "*I am demonstrating that giving feedback in time is a sign of good practice.*" Thus, modelling and articulating the reasons for one's practice is a powerful enactment of one's professional knowledge.

In some cases, acting in professional ways and modelling good behaviour were achieved through creating relaxed environments that seemed to enhance students' participation. In one incident the participant modelled a time management attribute through constantly asking students to observe lecture time and actually acting it out by being punctual for all the lessons observed.

In one instance one of the research participants modelled love for the profession. Lintle actually impressed upon students to prepare to celebrate teachers' day. It was during the celebrations that student teachers dressed formally to present poems or talk about the profession passionately.

Most of the research participants expressed the view that modelling in the classrooms was sabotaged by a context in which they taught large classes. They would like to model giving individual attention, something that is impossible to do in a large class. The context of teaching large classes, though, is a phenomenon that student teachers would have to handle once they have completed their studies, given the reform in education; the Education for All World Declaration requires that all students should access quality education. Modelling teaching large classes seems to have been a challenge that could have been addressed by the participants.

However, while modelling is considered difficult, as understood by the participants, this is an area that happens without the person modelling being aware, hence reference to Lotie's (1975) theory, commonly known as 'apprenticeship of observation'. In other words, whether modelling is deliberate or not students tend to "take in" attributes that they like without the person being modelled realising it.

### 4.8.3  Teaching Practice Replicated Inadvertently

Student teachers were observed already replicating what they had observed their teacher educators do in practice. While observing and listening to the use of language in lecture halls it became evident that, student teachers demonstrated replication of the way in which some of their lecturers taught. Although this may have not been intentional, in practice they were already implementing what they were learning and in a sense modelling after their teacher educators without either group realising it.

In practice participants reinforced student teachers in a number of ways. The sub-theme *Reinforcement* discussed in this chapter therefore emerged from observation of teaching practice. It was common for student teachers to reinforce one another in ways similar to those of their lecturers. A student in the Science, Technology and Society course reinforced a colleague using a sentence:

> *I was struck by the group that presented about the invention of a nail as a simple thing; we didn't know that a nail was invented until the group presented this information. I was interested in that and it's good to include a little history about the technology that is behind the science syllabus so we fostered interest in the topics.*

This was a form of reinforcement similar to those that emerged in the curriculum and instruction English Language course. In that course it was very common for the

language lecturer to reinforce her students using phrases, and here follows an example of 'Masethabathaba's student teacher using reinforcement similar to hers:

> *I like what she is coming up with because we always say," Make sure you know your students and make sure you call them by name". The reason why you have to call them by their name is that, they should feel that you know them, they belong to you; also I like what she is pointing out, and you are ensuring alertness on their part. They should never know when you will call on them, so everybody has to remain alert.*

It was also during presentations of papers produced by student teachers in their group activities that they reinforced learning, especially after a paper was well-presented. It was common that they encouraged one another through clapping hands and to a lesser extent by giving positive comments and/or remarks.

There were situations in which student teachers used instructional media, especially overhead projectors to give a presentation, or the whiteboard to illustrate a point. They shared information on where to obtain materials such as dissertations or theses and curriculum documents. Sharing of information is a strategy that implied they were collaborating in their learning, one that might have resulted from group work activities and one that surely builds on collegiality, even if unintentional.

In practice all the participants asked a variety of questions. Student teachers also posed questions either to the lecturers or colleagues. Incidentally, the types of questions they asked were similar in structure to those that their lecturers asked.  For example, a student in a Geography Education course asked an expository multiple focus type of question: *Does it mean the University cannot do anything about the environment situation?  You said we should not be specific about some shocking things we come across but how does that help the University*?

The research participants consistently used technical language and student teachers were observed doing so. The student teachers used technical language or concepts in which they referred to secondary school students as their own, and to issues of secondary school curriculum or syllabus. Making reference to secondary school students was commonly used by the teacher educators. These are technical comments that student teachers were also using. A student teacher in curriculum studies in Junior Certificate Mathematics walked to the chalkboard and made a similar technical comment:

*I can draw the number line and explain to **my students** that everything should have a positive and a negative. Therefore this means that we should consider this zero and all these numbers on this side are negative and all those on this other side are positive; so from there I will start by, may be giving* **my students** *something.*

In Science, Technology and Society reference was made to a teaching approach commonly used in this course, and through a student's comment it is clear that these Science Education student teachers had absorbed this concept of teacher-centred learning: "*In science we encourage what is called **discovery learning** or **student-centred approach** and the guest speaker did much of the work and didn't let the students do the work themselves*".

In almost all the lessons observed there were occasions when student teachers were required to give presentations and a student teacher in Curriculum Studies in Junior Certificate Mathematics made reference to curriculum which has featured prominently in their course:

> *Okay, in this group we have chosen measurement and accuracy. Measurements and accuracy can help students to identify objects in terms of mass and weight. I think it is very important to include this topic in our curriculum because it refers to time. The calendar designers will be able to design how we are going to look at it, basing ourselves on region and also the length of the day.*

## 4.9  Conclusion

I fully recognise in this chapter that teacher educators learn from the theories that were taught in their degree programmes, be it at undergraduate or postgraduate level. It is in their voices as they articulated their lived professional lives that it becomes very clear that while the received knowledge from their educational institutions lays the foundation for the practice, there definitely is more value to what is learned in practice.  It is in practice that they of the participants gather professional knowledge on how to teach teachers. It is in practice where they encounter numerous challenges and have to deal with them without necessarily relying on any other person. Hence the conclusion that their professional lives are about experimenting with new ideas all the time, never being sure of what will work in practice.

It is in observing the teacher educators who participated in this study that it becomes apparent that learning to teach teachers is facilitated by practice. The research participants were immersed in the actual teaching of student teachers with little guidance

for some while the others had to learn in the process. It is in this process where they learn all aspects of teacher education; they do not only teach but they have to supervise instruction during student teachers' teaching practice and have to, although minimally, supervise research. They encounter numerous challenges, including having to assess student teachers. This is a problem that was experienced by six of the eight teacher educators who participated in this study.

Other challenges include the fact that there is no research culture in this institution. In sharing their professional philosophies it became apparent that much can be shared either in research or in documenting experiences. That there is no culture of research in the institution in which the research participants were based remains a challenge for the majority of the teacher educators.

It is in Chapter 5 where, in discussing the implication of this study, I clearly indicate that the study has revealed the value of taking advantage of learning in practice. I therefore refer to episteme and phronesis.

# CHAPTER 5

## 5 DISCUSSION

Invisible Colleges*:* An invisible college is created when the boundaries of a collegium are stretched beyond the walls of a shared building or department. A serious problem for teaching as a profession has been the absence of opportunities to communicate what has been learned from experience through literature (Shulman, 2004 p. 328).

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## 5.1 Introduction

Eight teacher educators participated in the research and narrated their professionally-based stories. They opened their classrooms for the researcher to watch and document

their teaching activities. Furthermore, they shared their documented curriculum, course outlines and assessment documents.

This study has established that out of the 8 teacher educators who participated in this study only two had the opportunity to enrol in a programme that prepared them for teaching in teacher education contexts. Barmber, Walsh, Juwah and Ross (2006) have undertaken research looking into the training of academics to prepare them for the role of teaching in institutions of higher learning. They studied programmes offered for lecturer development in Scottish institutions of higher learning. These programmes known as Lecture Development Programmes (LDPs) were developed in response to the national standards for people who teach in UK Higher Education (HE) Institutions. The main modes of delivery are said to be the workshop-based model, distance learning model, enquiry-led model and hybrid model. Murray (2010) adds that in the UK, a Post Graduate Certificate (PGC) in HE programmes is offered; "a qualification that most new academics in the UK take on entering the university" (p.101) and he outlines the reason for having such programmes. Murray points out that "most of these new academics have PhDs in their subject but little experience of teaching" (p101). The PGC in Higher Education programmes is, according to Murray, designed to support the processes of learning to teach.

Although the National University of Lesotho occasionally offers training workshops for lecturers, these are neither legally binding nor do they lead to any qualification. Perhaps with the establishment of the Council on Higher Education in Lesotho, this University will acknowledge such workshops, as is the case with its counterparts in other parts of the world, (Barmber et al.,2006) and Murray (2010).

This discussion chapter focuses on three areas: sources of professional knowledge, its application and the consequences of the findings of the study. Application covers three very broad areas pertaining to professional knowledge, viz. *Enactment,* as it refers to the actual putting into practice knowledge acquired, *construction,* which refers to discovering something or generating meaning from experiences such as research, and *modelling,* or acting out professional knowledge. Although it became apparent that separating findings and subsequently the discussion into sources, application, construction and modelling of professional knowledge made it possible to analyse each area as an entity, it also became clear that in practice there is a thin line between these concepts and/or components of professional knowledge.

## 5.2 Concepts Pertinent to the Current Study

Although many educational concepts could be considered pertinent in the context of this study, the terms *teacher educator* and *professional knowledge* are more relevant to the interpretation of the findings. Other pertinent concepts are discussed in the relevant sections of this thesis. In the literature review I make reference to the two types of knowledge: *episteme* and *phronesis* (Korthagen et al., 2001) as very broad types of knowledge relevant in this chapter.

### 5.2.1 *Analysis of the Understanding of the Concept* Teacher Educator

An analysis of the teacher educators' understanding of the concept as a unit of analysis necessitated the inclusion of a section on them in this chapter. The study has revealed that the majority of teacher educators who are serving at the National University of Lesotho's Faculty of Education had not undergone training that specifically prepared them for teaching teachers. Most had trained as secondary school teachers and upon being employed as teacher educators went for further education and specialised in different academic disciplines. Therefore, all but two had not enrolled in programmes or taken courses that prepared them for the role of teacher educator. Such programmes would include courses such as the "pedagogy of teacher education".

This finding is, as fully illustrated in the introductory chapter, consistent with many studies that have been undertaken in this area. The work of Lewin and Stuart (2003) in a study undertaken in Lesotho's College of Education, illustrates the consistency referred to here. Ryan (1974) and Harris (2003), with the latter researcher having analysed teacher educators' programmes offered at PhD level, have established that some institutions have started offering such programmes. This recommendation implies that on the one hand teacher educators should attain teacher education as their educational qualification and on the other that they should also have a specialty in a particular academic discipline. Attaining appropriate educational qualifications would probably empower them to know how teachers are to be taught. McGuiness (1990), in her classic statement on thinking about thinking in which the argument is that "… teachers should be taught in the manner in which they are expected to teach" (p.305) is a crucial and powerful statement. McGuiness (1990) argues for the education of teacher educators.

As has already been alluded to, two of the participants had taken courses that the literature recommends should be taken by prospective teacher educators. Some had

specialised in what Harris (2003) recommends as fields of study or academic disciplines for teacher educators, including educational psychology and counselling, management and administration, and supervision of instruction. The teacher educators who had taken academic discipline courses were mostly in the Department of Educational Foundations. The rest of the teacher educators were those whose areas of specialisation were in the subject content areas, namely, Language Education, Mathematics Education, Science Education and Geography Education. They seemed to be well grounded in their areas of specialisation. Therefore there are two categories of teacher educators, namely those in Educational Foundations having taken courses classified as relevant to the education of teachers and those in subject content having specialised in a specific content area.

This study further established, as was the case in a study undertaken by Lewin and Stuart, (2003) that teacher educators had no clear career path. They either joined the University through applying for an advertised post or were recruited to a position because they performed well in their undergraduate degree programmes. All the teacher educators who participated in this study, with the exception of two, were identified as secondary school teachers. This finding is similar to that found in a study undertaken by Murray and Male (2005). It can be concluded that secondary teacher education programmes, although unintentionally, contribute substantially towards the production of people who end up being teacher educators. This view is based on the extent to which most of the research participants referred to their undergraduate courses more than their postgraduate courses in sharing their stories about their sources of professional knowledge.

There were other attributes about teacher educators that the current study established, including the high proportion of female teacher educators in the entire faculty from which the research participants were drawn. This might explain why even among the research participants there were only two male participants. However, although the study did not set out to establish the extent to which gender would be a factor, it did not find any differences that could be associated with gender.

Another attribute about teacher educators was teaching experience, especially in a teacher education institution. Even on this issue the study did not set out to measure the differences that could be linked to the number of years in a teacher education institution and/or teaching experience. However, only teacher educators who had been in the

service for at least 20 years had developed their philosophies. What they articulated as their professional philosophies reflected their experiences.

For example, Peditta's philosophy centres on change and she actually makes reference to time: *Modelling or actually acting it out is something that has developed* **over time**. *It has developed over years and is confirmed by feedback given by former students who come back to you and tell you what they did because of you which confirms that what you have been doing is valued*.

Zinzi too makes reference to time and indicates that time spent teaching in secondary schools has impacted on her philosophy. *Understanding the needs of student teachers is dependent on experience teaching at the level at which people graduating from programmes would be posted*. 'Masethabathaba too confirms that her philosophy of teaching teachers has developed over the time and that *it is informed by student teachers who came and went through my hands over the years* …

Conceptualisations of the term *teacher educator* by the participants focus on equipping student teachers with knowledge and skills that prepare them for the task of teaching so that they can intervene in students' lives. It is also understood to be about helping student teachers realise their potential. While their understanding of the concept *teacher educator* may be to a large extent similar to established descriptions of this concept, their interpretation was particularly lacking in key areas, such as viewing them as researchers or as professionals of a certain calibre. This is in spite of the extensive research on teacher educators that has revealed that over and above being instructors of learning, they are researchers and professionals and/or scholars (Fisher, 2005; Smith, 2003).

Failure to make reference to research in particular suggests that the participants did not view it as a priority or an important dimension in their work. Perhaps if their descriptions of the concept *teacher educator* featured research they would do more research in their own areas and use research-based information to inform or improve their practice. It is apparent that the participants viewed their status as that of teaching teachers mainly and therefore making an impact on those who have gone through their hands.

*Professional Knowledge*

The current research has revealed that to the teacher educators who participated in the study, *professional knowledge* refers to knowledge of subject matter and that being

conversant with such content is vital to teaching. The dimension of professional knowledge that the participants were referring to is the episteme which is propositional knowledge or knowledge that has been scientifically derived. According to the literature, the concept *episteme* embraces issues such as knowledge of the subject, classroom organisation, teaching techniques and curriculum content (Hiebert et al,. 2002, Korthagen et al., 2001, Stuart, 2002 and Eraut, 1994). However, a point that these research participants missed is the other dimension of professional knowledge underscored in the literature. The second is *phronesis* or the epistemology of practice (Korthagen et al., 2001; Schőn, 1983) which is practical wisdom derived from understanding specific situations and cases. Failure to make reference to practical knowledge implies less recognition of practice as a source of professional knowledge.

However, as already illuminated in the published work (Stuart et al., 2009) formally derived professional knowledge, while it may serve as a basis upon which to build other forms of knowledge, has not been found to help teachers to immediately address their teaching practice problems. It would therefore seem that gathering knowledge through experience contributes more to the professional work of teachers and teacher educators than the scholarly study or studying scientifically proven material in teacher education programmes.

Consequently the latter type of knowledge (phronesis/practical) is developed and/or acquired through experience and tends to be appropriate in given situations (Loughran, 2006; Korthagen et al., 2001)). However, since none of the teacher educators who participated in this study had researched or documented their own practice or their practice of teaching experience, an analysis of their practice-based knowledge could not be undertaken. Therefore the information that these teacher educators shared as they participated in the current study could have remained tacit, never to be shared with other teacher educators or with teacher education students.

A further analysis of the teacher educators' understanding of professional knowledge has revealed a collective view. Apart from professional knowledge being received from formal education and accumulated through practice, it is regarded as complex, especially for teacher educators. Teacher educators have a dual role to play in that they have to think and act beyond themselves as providers of such knowledge to student teachers and at the same time ensure that their students are taught in a manner that will prepare them for teaching their own students in future.

Its complexity is acknowledged by education researchers such as Goodnough (2001). The complexity of teacher educators' professional knowledge is compounded by the context in which they practise. It is a context wherein experimentation of ideas features highly. This means that in practice, due to the nature of their work which requires them to act in certain ways and the fact that the context in which they operate is highly unpredictable and therefore challenging, teacher educators have to experiment with ideas all the time.

However, with the exception of one participant who explicitly articulated the complex nature of professional knowledge, especially as it pertains to educating student teachers, the others did not seem to acknowledge the complexity of their work.

### 5.2.2 Determining the Sources of Professional Knowledge

Determining the sources of professional knowledge for teacher educators helped address the question, "Where do teacher educators draw their professional knowledge from?" Two sources of professional knowledge were determinable with one of these being practical or experience-based knowledge, presenting a myriad of sources. The current study confirms the claims that academic education is foundational to professional knowledge. The participants consistently made reference to undergraduate and postgraduate programmes as having contributed to the knowledge and skills they use in the teaching of student teachers. Those who enrolled in a teacher education degree programme tended to point to this as core to the foundations of professional knowledge.

Acknowledging that teacher education programmes have contributed to the formal education of the research participants therefore is in line with the published work on formal education which indicates that it facilitates "knowing THAT" Eraut (1994) or acquiring propositional knowledge offered in teacher education programmes. However, in the majority of the cases studied, formal education falls into two distinct categories. The first is the undergraduate teacher education programme, which focuses on two areas, namely subject content and pedagogy content. The second is at the postgraduate level, where individuals specialised in disciplines of their choice with two actually having taken courses that prepared them for the teaching of student teachers.

While propositional knowledge is acknowledged as important, some researchers have critiqued it especially in the context of learning about teaching. Korthagen and Wubbles (2001), the Institute of Education, London (2001) and Ponte (2010) discuss learning

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about teaching. Korthagen and Wubbles (2001) point out that the technical rationality model commonly used in teacher education institutions tends to create a gap between theory and practice. They suggest a teacher education model that starts from practical experiences as a better option.

Korthagen and Wubbles (2001) suggest that "starting from practical experience can be a viable avenue in teacher education to help integrate theoretical notions into teacher actions and to help take into account both types of human information processing. Such an approach to teacher education does not necessarily, guarantee success. There are views that long student teaching periods can be a socialising factor rather than offering an opportunity for professional development for student teachers. Ponte (2010) argues that it has been proved that academic knowledge cannot simply be transferred in the expectation that teachers can apply this knowledge. Therefore views differ regarding whether student teachers should be placed in the schools and do teaching practice prior to enrolling in the pre-service programme.

Still following on Eraut's (1994) analysis of professional knowledge, "knowing HOW" is practice-based. In this study classroom practice was found to be an activity that teacher educators did more often than any other. It therefore became apparent that classroom practice is the most common source of practical knowledge for teacher educators who participated in this study. Every teacher educator teaches. However, the frequency of engaging in teaching or teaching for a certain number of years compared to other sources of professional knowledge needs to be thoroughly researched and critically analysed, using specific indicators if it is to be regarded as a significant source of professional knowledge for teacher educators.

The work of Clandinin and Connelly (1995) confirms that practice facilitates the gathering of experience and consequently experiential knowledge. These authors present practice-based knowledge metaphorically as "teachers' professional knowledge landscapes". The current study has brought to the fore a similar analogy as the use of the image of professional knowledge landscapes. Their analogy provides a picture of experiential knowledge or "Knowing how" as open and never ending.

Openness implies a never-ending situation in which there are ample opportunities to source, enact, construct or model professional knowledge. Therefore openness implies that teacher educators gain more experience as they get to know how to act in professional situations and in the process continue to source more knowledge.

Therefore the fact that teacher educators begin their career with a degree in teacher education implies that such an academic base has connotations of a novice, while expanding and broadening knowledge through practice suggests moving towards or becoming an expert. In essence therefore, epistemologically, theory and practice are, as observed by Clandinin and Connelly (1995), intricately linked.

Within the teacher educators' field of work, contexts or "landscapes" are components that are similar to those identified by Clandinin and Connelly. In the context of this study the research participants gathered practice-based knowledge in the actual teaching through formal relationships with other similar institutions, including student teachers they met in their teaching practice classrooms. They gathered practice-based knowledge through encounters with people ranging from professionals based in other institutions, mostly met during conferences or academic visits to similar institutions. They also had encounters with colleagues, student teachers and serving teachers, especially those teachers that they taught. Furthermore, opportunities to gather professional knowledge were through participation in the capacity-building workshops with other similar institutions and through working with government ministries on pertinent issues such as formulation of policies. This study has therefore established that within a teacher educators' "landscape" there is an array of sources of professional knowledge.

There are values attached to involving prospective teachers in the work that teacher educators undertake (Hug and Moller, 2005; Freedman, Bullock and Duque, 2005; Clarke and Erickson, 2004). The current study has established that supervision of student teachers' research work is a challenge to the majority of those who participated in this study. Some indicated that they had not had an opportunity to supervise research. This situation implies that there are fewer opportunities for supervision of research undertaken by student teachers, a situation which reduces the teacher educators' opportunities for gaining knowledge and skills likely to accrue from such an experience. It would seem that the participants are justified in pointing to the need for more opportunities to supervise student teachers' research work.

The work of Jansen, Herman and Pillay (2004) conveys the complex nature that gets played out as doctoral students engage in proposal writing. This is an issue which suggests that the process of supervising and observing postgraduate students engaging in research is in itself a learning avenue. This is an avenue which could add to professional enrichment of teacher educators. One of the challenges facing the

participants therefore was coming up with courses that require students to undertake research if they themselves want to learn how to supervise research.

It was not until the teacher educators revealed where they drew their professional knowledge from, that what had remained tacit became explicit both to me and the participants themselves. This view was confirmed by an admission on their part that they had not seriously reflected on their practice nor documented their experiences. One of the participants, after sharing her professional life story and having had the opportunity to validate the documented narrative, admitted that it was the first time she had deeply reflected on the relevance of her master's degree dissertation to her entire work. She admitted that it was during her reflection that she actually saw that she had lived the dissertation. This positive reflection is a clear indication that while some teacher educators act out their research work in their teaching of student teachers, they do so without being conscious of their influence or without relating their work to formerly acquired knowledge.

Nonetheless, it became apparent that the professional life of a teacher educator is mainly experimental, actually messy and/or haphazard, and therefore very challenging in many aspects. That it is haphazard is exemplified by the many incidents that were shared in this study. Talking about their experiences, which for some teacher educators appeared to be introspection into their professional lives, they suggested that there were times when they encountered problems and that sometimes they experienced positive and enriching encounters. While these experiences were not documented in detail they were regarded as worthwhile by the participants. Experiences that were classroom-based proved to be some of the many that were valued. Reflecting on these enabled those who did reflect to come up with strategies for handling problems encountered immediately or for using new knowledge to bear on what they were to teach. In practice teacher educators were in fact adhering to the domain of phronesis (Korthagen et al., 2001) as they learned how to teach teachers in practice.

However, that they never fully documented their experiences or shared them means that teachers' and teacher educators' experiential knowledge remains tacit, as alluded to by Connelly and Clandinin (1995). These argue that teachers do not tell their classroom stories out of class since they tend to regard these as secret events. Although the current study did not investigate the reasons for not documenting their experiences, it is highly likely that the benefits of sharing experiential knowledge were not explored.

Documenting professional-based experiences could be shared with relevant communities and therefore contribute to making public the teacher educators' professional knowledge.

## 5.3  The Teacher Educators' Practice

This section discusses teacher educators' enactment of professional knowledge, construction of professional knowledge and the "how" of modelling it. Teaching about teaching or enacting professional knowledge is more than just teaching as it happens at other levels of the education system; there are two layers involved. One of the layers is when teacher educators teach student teachers knowledge or impart skills that are relevant to them as students of education; the other layer is about preparing them for teaching their own students. It is my view that the nucleus of teacher education is teaching about teaching.

Therefore, enacting professional knowledge cannot be viewed simplistically as just doing teaching, since it is much more than that. In Loughran's (2007) view, teacher educators are required to make teaching in this context a site for inquiry. As has been established by various researchers, teaching about teaching has been identified as complex. Lougharn (2007) argues that it is important to understand the complex nature of teaching about teaching or enacting professional knowledge in the context of teacher education. The complexity is embedded in the very nature of teaching itself. Lougharn (2007) actually outlines what enacting professional knowledge or teaching about teaching entails. He identifies 4 aspects that include the following:

- The focus on the problematic nature of teaching;

- making the tacit explicit;

- teaching as a relationship, and

- challenging the tyranny of talk.

Therefore as Loughran (2007) argues, teacher educators have to develop the pedagogy of teacher education. The intention in developing a pedagogy of teacher education is to signify the relationship between teaching about teaching and learning about teaching. In

such a context, teaching about teaching might be purposefully examined, described, articulated and portrayed in ways that enhance an understanding of this complex interplay.

The complexity of practising the pedagogy of teacher education or in the context of this study enacting professional knowledge is described by many researchers (Ritchie and Wilson, 2000; Loughran, 2006). Loughran (2006) sees teaching about teaching as playing a complicated dual role; it requires "vigilance that is perhaps not so easily apprehended in the normal day to day expectations and experiences of teacher education programmes" (p7).

In this regard teacher educators necessarily have to engage their students in research-based activities leading to their understanding of the nature of their work. This is why the finding that teacher educators who participated in this study hardly undertake research on their own teaching came as a surprise. I agree with Loughran (2007) that it is imperative to research the practice of teaching if one wants to understand one's perspective as a teacher educator and those of the student teachers. Presumably understanding one's practice through research could impact on the practice itself. I am of the view that researching one's work would add to addressing professional challenges in constructive ways.

A number of points emerged from observing the teacher educators enact professional knowledge. Firstly, they used numerous methods of teaching. These included transmissive and interactive methods. A transmissive mode of teaching, especially in the context of teaching about teaching is criticised by some researchers. Bullock (2007) argues that the reason for not using the transmissive mode of teaching should be the tendency for extensive bias toward a technical rationality approach to teaching. Additionally in pursuance of reducing the technical rationality, teacher educators should strive to make the tacit explicit which, among others, requires them to constantly "answer questions from students of teaching" (Loughran,2007 p.4). These should be questions that actually challenge teacher educators' knowledge of practice which he argues is vital to enacting a pedagogy of teacher education. In practice teacher educators should according to Bullock (2007) and Loughran (2007) endeavour to develop ways of engaging learners in learning.

Notwithstanding that a variety of methods were used in the majority of cases, these were intended for the student teachers themselves instead of preparing them for teaching at the secondary school level, being the level at which, upon graduation, they will be

working. Therefore their conceptualisation did not seem to influence the teaching as articulated in their description of the concept *enactment of professional knowledge*

For instance, one of the interactive methods of teaching commonly used was the questioning-and-answer method. It was revealed that the types of questions asked during the use of this method did not seem to challenge the student teachers to deliberate critically on the very teaching methods that were used. Critical thinking in the context of methods of teaching was not so noticeable as only a few made reference to it. Furthermore, as research in teacher education (Loughran, 2007) indicates, student teachers should be made to explore teacher-related problems so that they appreciate or understand that teaching is complex at the very time that they are involved in their studies.

This study, except for a few incidences, did not establish the extent to which in practice teacher educators challenged student teachers to think about both the content of the course and also the methods employed in teaching. It is an idea that Loughran (2007) fully articulated as related to challenging and in the process contributing towards cognitive development of student teachers. If student teachers are not provided with opportunities to discuss consciously issues that would equip them with such skills while they are still in their teacher education programmes, the question arises as to where they will solicit such skills.

There were very few incidences where such opportunities were provided. One of the participants, Hoanghoang, constantly challenged his students to think about how they would teach their own students. More often than not he presented student teachers with hypothetical cases in which they critiqued a method of teaching that he would have explained in class. One of the hypothetical cases was whereby student teachers were to challenge the idea of using a guest speaker as a method of teaching. This was one of the moments during which student teachers had an opportunity to think deeply about and to question a particular teaching method. The questions they raised in arguing about the relevance of the method in teaching a topic that was presented in the hypothetical case indicated that, given an opportunity to critique a method of teaching, student teachers were capable of challenging the taken-for-granted situations.

Another activity that presented ample opportunities for teacher educators to challenge student teachers was in their use of a question-and-answer method of teaching. It emerged that student teachers had ample opportunities to pose questions. However,

most of the questions they asked did not illustrate an ability to ask thought-provoking questions. In a situation in which they were provided such opportunities, they probably would appreciate the complex nature of teaching and in the process develop critical thinking skills which they would in turn use with their own students.

The efforts that appeared to prepare student teachers for the work they would engage in were mainly through mentioning what is expected of them to do in practice. Therefore, the extent to which student teachers would be observing how to teach would be more on how each student interprets what he or she would have observed. They would perhaps carry that with them to their places of work once they graduated from a teacher education programme. Doing so would be propagating, consciously or unconsciously, the theory developed by Lortie, "*The apprenticeship of observation*", which has been tested by some researchers. According to Borg (2004), Lortie coined the term to point to a phenomenon "whereby student teachers arrive for their training courses having spent thousands of hours as schoolchildren observing and evaluating professional actions" (p.274). However, failure to be explicit about expectations and hoping that they are observing the teacher's actions has its own problems because, as Borg (2004) in acknowledging Lortie's (1975) work indicates, in the real practice of teaching, teachers do not invite their own students

> to watch [their]/teacher's performance from the wings: they are not privy to the teacher's intentions and personal reflections on classroom events. Students rarely participate in selecting goals, making preparations, or post-mortem analyses. Thus they are not pressed to place the teacher's actions in a pedagogically-oriented framework (p.62)

Lortie's (1975) observation could apply to student teachers who indirectly participated in this study. Teacher educators who participated in this study did not involve their student teachers in planning lessons they were to teach. The challenge for teacher educators therefore is being explicit about what is expected of student teachers and at the same time providing them with opportunities to practise what they are expected to practise once they are qualified and have taken up teaching positions.

Regarding assessment practice, the current study has established consistency in the use of a variety of assessment techniques. Assessment is a common feature that transpires mainly through assignments and tests. However, generally the types of assessment or questions that students had to address were not so challenging. This

implies that teacher educators do not challenge student teachers to realise the complexity of teaching. Therefore it can be concluded that teacher educators do not fully engage their students to challenge their own work or their teaching. Therefore, it would be advantageous not only to assess students but to get them to think critically about assessment practices.

In addition to the teaching methods that the teacher educators used in practice, there were numerous activities observed during the actual enactment of professional knowledge. These included the technical language the teacher educators used during their actual teaching, communication styles, tendencies to open and close lectures, the way the actual teaching was managed or organised and the type of activities that were presented to student teachers.

The use of technical language is intended to help student teachers think like teachers. They were referred to teachers in schools and to secondary school students who were likely to be their own students. While some of the teacher educators who participated in this study used what has been referred to as technical language, Crowe and Berry (2007) suggest more can be done towards helping student teachers think like teachers. In practice they need to be engaged in activities that require them to think more like teachers as opposed to thinking routinely, like secondary school students.

In essence, just making reference to secondary school and doing so sporadically within a teacher education programme is itself inadequate for student teachers. It has to be a concerted effort by all teacher educators. They could draw from established theories such as that of Schőn (1983) on reframing of practice situations to the extent that student teachers begin to move from "predominantly thinking about themselves" to thinking beyond their contexts. In this way, even as teacher educators make reference to secondary schools, serving teachers and students at this level, the reframing of practice would contribute to student teachers viewing teaching as "problematic" and not routine practices that they are probably much familiar with.

It is in talking about teaching as problematic and complex that Loughran (2007) maps this complexity as embedded in the "very nature of teaching itself", and more so in the context in which the teaching is about teaching itself. It is in this context that the literature challenges teacher educators to make what tends to be tacit explicit. The question that Loughran (2007) argues has not been properly addressed when

discussions of professional knowledge are held, is why the "why" actions are carried out in the way they are.

These arguments tend to suggest that referring to the schools system and its related matters such as what methods to use in teaching or how to teach are far from enacting "the pedagogy" of teacher education. Instead, they can be regarded as tips on how to teach and what the school context holds for student teachers. Relevant here is Crowe and Barry's (2007) argument that due to the complexity of teaching, young teachers should be helped to become creative through being presented with complex situations, so that they can develop strategies intended to challenge situations. The incidences in which student teachers were challenged were very few and not all the research participants practised the said skill development strategies.

Yet in a situation in which teacher educators would not only be making reference to what student teachers are likely to encounter as they enter the field of teaching, they would be encouraging them to engage in learning about teaching. In learning about teaching teacher educators would embrace what Lougharn refers to as *being a student of teaching: knowing yourself*, a point that Korthagen and Verkuyl (2007) tested in their own work as teacher educators. Teacher educators learn if they allow themselves to play the dual role of being a learner and teacher through allowing students to critique their teaching. Lougharn (2007) argues that "students of teaching are continually confronted by struggles, difficulties and dilemmas that affect their understanding of the nature of teaching as a consequence of their experience in learning about teaching" (p.8).

One of the findings is that the actual teaching followed a clear path in which lessons were introduced, the content presented and in the majority of cases lessons neatly brought to a closure. Teaching was therefore well structured and allowed student teachers to follow the pattern of teaching even in situations where they participated through giving presentations on an assigned task. However, while orderliness provides a form of structure, what was obvious was routine in the majority of cases. It was on very rare occasions, and in one particular course, that student teachers could not predict how the next lesson would be organised. In practice the majority of the teacher educators did not appear to be 'practising what they preach'. Realistically, as pointed out in this section, complicated ways of involving student teachers should be communicated if they

are expected to learn deliberately from such experiences, and there should be more such exposures.

It also emerged that student teachers participated in actual teaching. They engaged in numerous activities, including posing questions mainly aimed at seeking clarification either from the lecturer or from colleagues who would have done a presentation. Most of the questions were on content, regardless of whether it was in the area of subject content or field of study or discipline. The style of asking questions was very similar to that of the teacher educators themselves. My interpretation is that student teachers were already imitating their teacher educators and that in practice teacher educators are indirectly demonstrating certain skills unaware of the overall impact. The observed implications of teacher educators' practice confirm Lortie's (1975) *apprenticeship of observation* theory referred to in this chapter.

Other activities that were established as enactment of professional knowledge included instructional management and the use of instructional techniques. Clearly teacher educators were consistent in ensuring that teaching areas were conducive to learning, particularly in terms of the students' involvement in activities and behaviour. In practice, therefore, teacher educators supported the learning activities, especially in cases where student teachers were assigned learning tasks either as individuals or as groups. They for example provided elaborate explanations on a given task and actually supervised the activities.

Disciplinary measures were used and the purpose was to maintain a good environment for teaching and learning. It occurred to a small number of the research participants to take advantage of destructive student behaviour to help student teachers see classroom management in practice.

One of the points that emerged in the narrative data was the value of undertaking research. However, in the actual teaching, research was mentioned in passing and student teachers were not provided with opportunities to research the pedagogy of teaching. The literature encourages teacher educators in particular to engage in a self-study type of research for its benefits in the teacher education fraternity.

Self-study research has been in the field of education for close to 20 years this year (Loughran, 2005). There are reasons for engaging in self-study research. The research findings emanating from self-study have been found to be applicable to teacher

educators as they are the ones doing research. And the growth in the field is propelled by the desire on the part of scholars to understand and to bring to the surface aspects of teaching and learning about teaching. Learning from studying one's own teaching is likely to impact on the teacher educator's understanding of the complex nature of teaching and learning (Loughran, 2005, Campbell and McNamara, 2010; Clarke, 2007, Miletta, 2010). Campbell and McNamara, (2010) add that self-study is a possible response to educational policy makers' demands regarding standards and quality. In this regard teacher educators can collaborate with teachers, own students and colleagues in an endeavour to study the practice of teacher educators. However, Lingard and Renshaw, (2010) caution that since contexts differ it is important for researchers to be study their own context first.

It is important, though, to note that there were some small scale research projects requiring student teachers to research and present their findings at the classroom level. However, none of these required student teachers to research the actual teaching itself. It was in one case where one of the research participants indicated that she has established a practice which required her students to assess her teaching. Lintle used the findings emanating from the students' assessment of her practice to improve it. The extent to which the findings were shared with student teachers and/or the extent to which students had the opportunity to interrogate these were not verified. Researching teaching therefore, although highly encouraged in teacher education programmes (Loughran, 2007), does not seem to feature much in the context in which the current study was carried out.

However, taking Lintle's case further, there emerges a situation of trust and openness to her own students. She demonstrated what Loughran (2006) refers to as promoting personal relationship with own students. Encouraging student teachers to assess her might influence her students to build such relationships with their own students. Loughran (2006) argues that building personal relationship with own students adds to shaping the nature of pedagogy of teacher education. Additionally, enacting the pedagogy of teacher education requires that teacher educators observe relationships in teacher education as a critical element (Loughran, 2006). In fact, as the proponent of this aspect of enacting the pedagogy of teacher education points out, teacher educators can promote relationships through their own actions. They can also do so through

encouraging student teachers to learn from the questions and critiques of the teaching used to teach them.

Instructional media emerged as an area that pertains to facilitating teaching in the context of this study. Although in very few instances teacher educators had the opportunity to use other forms of instructional media, a not so positive issue in this regard was the predominance of the use of the whiteboard and to a lesser extent the use of an overhead projector or modern technology. None of the participants used modern instructional technologies such as a *PowerPoint* presentations and a projector, even in situations where the class size was so large and the students would have benefited from such an instructional medium. As established in a research study undertaken in the Lesotho College of Education by Lewin and Stuart (2003), it is fair to conclude that student teachers who mainly observe their educators using traditional forms of media frequently tend to depend on their teacher educators more than would be expected at this level of education. Additionally, it is very likely that student teachers would follow this pattern in teaching their own students.

I conclude that determining the sources of teacher educators' knowledge indicates that they operate in complex and difficult circumstances. The literature (Kroll, 2007) clearly illustrates the numerous challenges facing teacher educators in various parts of the world. In particular it has been established that teacher educators are the only teaching professionals who operate within very complex situations (Loughran, 2006). As indicated above, their role extends beyond just teaching but requires them to demonstrate to their own students attitudes that are appropriate to teaching and knowledge and skills of teaching (Loughran, 2006).

The teacher educators' complex responsibility is not only to assist student teachers to be cognizant about learning their content but also to help them see the "competing agendas" whereby they learn about the content and at the same time learn about teaching. Therefore, for the teacher educators who participated in this study to constantly mention school-related activities or practices might have been an attempt to make their student teachers realise the two agendas.

However, they seem to have done so without actually making students question such issues. Therefore the teacher educators were not analytical about how to engage their students in seeing teacher education from the teacher educators' perspective.

Additionally, they were not analytical about seeing teaching about teaching from the student's perspective, an aspect that Loughran (2006, 2007) argues is critical in enacting the pedagogy of teacher education. Seeing practice through students' eyes is an aspect which Loughran (2006) believes teacher educators have to experience anew. He challenges teacher educators to think about participating in a conference in which a mass of complicated PowerPoint slides are presented. Presumably encountering problems in such a conference would help teacher educators think about their own practice and how it impacts on their student teachers.

Discussing the findings and grounding the arguments on research undertaken seem to indicate that enacting professional knowledge is an avenue for teacher educators to learn from their every-day teaching experience. Another avenue could be learning from engaging in research and constructing professional knowledge.

## 5.4  Engaging in Creating Knowledge

It transpired from the research participants' conceptualisation of construction of professional knowledge that formal education positively contributes to professionals' tendency to engage in the creation of professional knowledge. It emerged that the construction of professional knowledge is facilitated by numerous situations, including relationships with people, engaging in intellectual debates and being in the field with student teachers. It became clear that constructing professional knowledge can be realised where teacher educators are free and courageous enough to take initiative steps towards trying out ideas and being prepared to pursue what is being experimented with, regardless of failure or success experienced.

The study revealed that in practice professionals encounter numerous challenges. However, it was not clear whether or not in actual practice teacher educators took advantage of the challenges within their own practice to create and test new ideas. Instead, in some cases it may have been an interpretation of situations that accidentally presented themselves. 'Masethabathaba's idea that teaching about teaching begins with making blunders and learning from them implies the lack of an actual plan to research, other than trial and error, the implementation of new ideas.

However, since the literature (Kremer-Hayon and Zuzouskys, 1995) supports the idea of trial and error it would seem that the blunders referred to here, since they were made in the context of teaching, would, provided they were analysed rigorously, serve as

knowledge constructed in the actual world of teaching student teachers. The trial and error method is classified by Kremer-Hayon and Zusouskys (1995) as constituting one aspect of knowledge construction.

It also transpired that the manifestation of engaging in the construction of professional knowledge can be observed in the outputs emanating from a professional's efforts to construct knowledge. It emerged that some of the participants had created, although not documented, their professional philosophies and that their documented materials were in the form of curricular and assessment materials. For those who had created philosophies, although theoretical, to a large extent these serve as a guide in their professional activities. Although some of the research participants involved their students and challenged them to critique their course outlines it was clear that students did not have the skill to do so.

Other than the creation of professional philosophies, there were no lessons that emanated from involvement in the production of teaching and learning materials. This view is based on the fact that student teachers were minimally involved in activities that would challenge their views and the fact that they were not provided with opportunities to do so. Therefore involvement of student teachers remained technical, with teacher educators having expressed their espoused practical knowledge. In particular, the idea of being flexible with regard to sharing materials developed and accepting the critique, and reviewing them with the purpose of improving upon those, added to lessons emanating from creating own materials and being flexible about their use.

Given that only two of the teacher educators had undergone training that prepared them for the job, it would seem that all had the freedom to come up with their own philosophies, to question the style of asking questions they used and to develop their own curricular and assessment documents. Therefore, while a technical analysis of the depths of professional development could not be done in the current study it is apparent that professional development on the part of the teacher educators escalated. As alluded to above, there is a clear move from the novice level of a professional to other levels.

Research (Bullock, 2007) has established that teacher educators have to find their own ways from thinking as teachers to thinking as teacher educators. Bullock's contention is similar to some of the findings of the current study in that he has established that those who claimed to have developed their own philosophies, even if these are not documented, have moved a step towards ownership of teaching and therefore towards

thinking beyond the routine of educating student teachers. However, while the idea of developing their own philosophies and constructing their own curriculum has implications for engaging in activities that are of a constructive nature, and at the same time illustrates the capability of such creation, creating own knowledge is more complex than this. It is in the work of scholars such as Hamilton (2005) where efforts clearly aimed at creating new knowledge are articulated through research. Therefore the real challenge for the teacher educators who participated in this study, especially in the context of constructing professional knowledge, is undertaking research on their own professional activities. Doing so should provide meaningful information in the teacher educators' arena.

All the research participants had developed their curriculum in the form of course outlines. In essence they had engaged in constructing materials needed to facilitate their own teaching. Analysing their materials revealed that there was one major gap; none had included pedagogic content knowledge. In the actual teaching three consistently referred to the course outlines. Yet, making reference to this type of documentation in situations in which student teachers can engage in analysing the curriculum could serve as an opportunity to engage them in work created by teacher educators themselves. Another gap that was established was the failure on the part of the research participants to analyse these materials critically. Such an analysis would be an opportunity to establish the extent to which they challenged students' learning abilities.

Ponte (2010) illustrates the interface between the application of professional knowledge and its construction. He argues that studying one's own practice means that learning would be characterised by simultaneous construction and application of professional knowledge. Construction and the application of knowledge is in Ponte's view part of the same cyclical process in that professionals apply knowledge, gather information, interpret that information and thereby construct new knowledge which they then apply. To construct the knowledge student teachers would have to develop methodological knowledge, about how to study practice.

Construction of professional knowledge therefore implies engaging in research and producing new knowledge and in the context of teacher education researching own practice. Russell (2007) shares his experience whereby he pursued Schőn's concept of reflection-in-action. Pursuing Schőn's concept required him to study his own teaching to understand whether he really was changing his teaching and whether his students

perceived him as modelling new practice. In essence Russell tested the theory with the intention of constructing new knowledge in the context of teaching. Other researchers share Russell's view that constructing professional knowledge can be achieved through research among other activities. Dinkleman et al. (2001), for example, encourage teacher educators to undertake research. They see teacher education as a place where the breakthroughs and insights of knowledge and practice in teaching and learning are immediately applicable and constantly questioned and tested. Such a view confirms the value attached to teacher educators generating new knowledge through undertaking research.

There ample opportunities for teacher educators who participated in this study to explore creating professional knowledge in their teaching practice and in researching their work were not explored.

## 5.5  Modelling Professional Knowledge

Information on conceptualisation of modelling in the context of teacher educators revealed that teacher education should provide a sound foundation to the student teachers that will emerge from the programmes offered to them. The expectation is that they should emulate personalities that are considered representative of teacher education. In this context teacher educators should model the expected behaviour. Most importantly, teacher educators should help student teachers to love the profession through acting in ways that will provide lessons on how to teach effectively.

Furthermore, modelling professional knowledge as conceptualised by the research participants entails moving beyond the actual teaching and ensuring that student teachers are nurtured and mentored. A particular group of student teachers who needed more attention were classified as those who may have either enrolled in the education programmes because they did not qualify to be admitted in a faculty in which they would have otherwise preferred to be enrolled, and are therefore in the faculty of education by accident. This group of students were classified as a special group that would require teacher educators to work in ways that would attract them to persist in the profession. Although such a group was identified as a special group, I argue that all student teachers need to be addressed as a group or individuals so that they can graduate from a teacher education programme having been provided with similar knowledge and skills.

Other researchers who have tested the theory of modelling in the context of teacher education provide more descriptions of modelling as a concept. The descriptions help to clarify what this concept entails and help to elaborate on what the research participant thought it entailed. Kroll (2007) is of the view that modelling is inherent in all that teacher educators do in teacher education which in practice may be intended or unintended regardless of whether they are conscious of their actions or not. Therefore, in her view modelling, can be "conceptualized as teaching in the very ways we encourage our students to teach but to do so with the intention of offering them access to thoughts of, and knowledge about, such practice by explicating the underlying purpose of that teaching approach" Kroll, 2007,p.94).

Observing modelling good practice in action seemed to be a challenge for both the researcher and most teacher educators. The challenge for this researcher mainly regarded what to classify as modelling in situations where activities remained tacit. One of the participants pointed out that in modelling good behaviour teacher educators have to *walk the talk and walk it in ways that ensure that the one's 'walking the talk' demonstrates the best way of doing so.* It was again in this particular teacher educator where 'walking the walk' was observed not only in her dynamic ways of delivering the content but in her level of involving students, her decisions to work with groups of students in a class of more than 300 which illustrated her dynamism. The type of group activities that students presented challenged them to the extent that some observers could classify her lessons as chaotic while others might view them as facilitating learning so that student teachers could adopt such strategies or model after her.

On the one hand she was consistent in acting out her Master's Degree thesis and her philosophy, which tended to focus on challenging students to act in ways that do not take things for granted. In another example, as clearly stipulated in the data analysis and interpretation chapter, she challenged students to critique test or examination questions. On the other hand, the challenge such as the problems of teaching large classes as referred to by most participants, did not seem to affect the dynamic ways that Peditta used in delivering her content heavily.

However, even for this teacher educator, whose efforts could be classified as exceptionally good, efforts to model professional ways of teaching teachers fell short of empowering the student teachers with what research suggests is modelling professional knowledge. The literature indicates that modelling entails involving student teachers in

activities that allow them to critique or question the very teaching process. The purpose of questioning the very teaching would be to provide student teachers with opportunities of seeing the complexities of the practice (Loughran, 2006). In this regard efforts intended to facilitate "walking the talk" are not as simplistic in nature as the cliché might suggest, especially given that teacher educators operate on a number of levels. These levels include demonstrating how to "walk the talk" and help prospective teachers to, according to Guifoyle (1995), understand how theories are implemented in practice.

Observing the explicit activities and perhaps good practice that could be classified as modelling professional knowledge was mainly in the use of instructional materials. This was particularly so in the use of the whiteboard, textbooks and the development of games that could be used in teaching Mathematics Education. In this regard fewer research participants were observed acting in ways that could be classified as observable modelling of professional knowledge.

Besides the use of instructional media, a peculiar incident was in modelling time management and motivating prospective teachers to act in ways that indicated that they too respect time. Despite the value that may be attached to time in the teaching profession, students never, at least during the period of observing the concerned research participants, had the opportunity to deliberate on time as a factor or relevant concept. Such an opportunity would probably indicate to them that teaching is not just about content or pedagogy but that there are many other teaching and learning-related aspects that are equally important in their field of study.

Another explicit activity that may be regarded as similar to those not directly focusing on the actual learning and teaching was observed in the context in which student teachers were encouraged to celebrate *Teachers' Day*. The celebration was deliberate and intended to motivate student teachers to love the profession that they were pursuing. The presentations by individual student teachers were moving, as one student talked or commented after another recited a poem. These presentations were their own creation and were meant to contribute towards celebrating international teachers' day. The celebration may have had an impact on the attitudes and perceptions of all student teachers who participated in it, yet failure to deliberate on the issues raised in the presentations or in poems that were recited delimits the extent to which the student teachers could critique the profession itself. Thus the teacher educator who facilitated

the celebration of Teachers' Day missed the opportunity to engage student teachers in critical thinking.

While it was clear from the conceptualisation that the participants were conversant with modelling and how to model professional knowledge, there were some challenges. The dilemma is that modelling good practice for the majority mainly remained espoused rather than enacted. In their view their efforts to model were hampered by working conditions. Complaints about large class size, infrastructure and lack of equipment suggested that the context had to be conducive in order to facilitate modelling. It does not seem that this group of research participants realised, as pointed out in the literature, that the actual teaching of content and the pedagogy employed to convey that content (Loughran 2006) embrace modelling.

Therefore, as articulated in the published literature, modelling in the context of teacher education, in which teacher educators teach about teaching "something", is always being modelled, regardless of whether it is good or not so good, deliberate practice or not so deliberate (Loughran, 2006). That modelling does not have boundaries might explain why in one incident one of the participants who consistently used the words "*you are stupid or don't be stupid*", was surprised when in one of her classes she cautioned students to be careful about the language they use; for example, she reminded them that they should never call students stupid, to which they all reacted by laughing. By implication, even the language that those who teach student teachers use in their teaching could have an impact of a modelling of either good or not so good behaviour or attitudes.

Although scenarios were used to illustrate some of the modelling activities observed in undertaking this study, modelling is in itself a complex undertaking. It may remain implicit; yet those who are observing an individual act out in certain ways may choose to or not to adopt what may be transpiring in a classroom situation. The issue that was shared by the research participants regarding the students who passed through their classes indicates that student teachers may choose to model after their former teacher educators. A study undertaken in the Lesotho's College of Education confirmed that student teachers emulate or identify with their best teachers. That they emulate their teacher educators is dependent on their perception regarding what they consider as good or bad. Therefore the criteria that student teachers use to model after a particular

teacher educator is subject to further research. Additionally, the extent to which they are consciously aware of this remains unanswered.

However, as Kosnik (2007) argues, modelling, especially in the context of effective teaching, must be accompanied by an appropriate narrative that explains one's teaching. In such a context, student teachers would begin to understand the complexity and challenges of teaching. A demonstration whereby teacher educators for example model how to handle a "perplexing pedagogical situation" would reveal to student teachers that teaching is not easy even to people who are teaching *teaching*. Senese (2007) adds that teacher educators who are perceived as continuous learners of teaching tend to command respect from student teachers. He concludes by pointing out that, "making practice transparent is [as] equally important as being informed instructors" (p.57). The implication of Senese' views is that one strategy of modelling teaching practice or modelling professional knowledge is being open about lessons accruing from one's practice. Observant student teachers could draw from such situations how they would act in their own teaching.

The participants of this study, while they appeared knowledgeable of what modelling entailed, had not undertaken any research on this aspect of their work. However, some researchers have studied modelling in their own contexts. Modelling in the work undertaken by Hamilton (2005) is demonstrated by learning from an experienced colleague. She points out that in undertaking research that influenced her life as a teacher educator she was influenced by a colleague whose career was at its end while Hamilton had just joined the carder of teacher educators.

Hamilton (2005) explored researching her work using self-study as a way through which she would solicit more information about her own teaching. Her literature review revealed that extensive research on teacher knowledge had been undertaken. There were therefore a number of lessons drawn from the literature. One of the important messages that the literature portrayed was the suggestion that teacher educators must "be good models in the ways that they examine research, demonstrated knowledge, and address experience" (p.91). Engaging in research and reviewing the literature impacts on the professional development of those who embark on such literature reviews.

One other finding regards the prospects of learning from producing teaching and learning material. Although about three of the research participants for the current study claimed to have engaged in the production of teaching and learning materials other than

documented curriculum in the form of course outlines, none had in practice studied the impact of using materials that one has produced. Research, however, suggests that producing and publishing own work adds to professional knowledge (Kosnik, 2005). Presumably such an experience could add to modelling producing own materials for use by students.

Kosnik (2005) shared the research work in which researchers celebrated the publication of the *International handbook of self-study of teaching and teacher education practices*. The two volume work which addresses key issues in teacher education, in her view, seemed to have "moved [them] both symbolically and literally into a central place in the teacher education community. The handbook further formalises "much of what [had] been learned about being a teacher educator and detailed qualities of effective teacher education programmes" (p.216). Kosnik's ideas about publishing research work and being fulfilled from the experience relates to an expression by some of the current study participants that professionals are fulfilled if their work is referred to in publications or in conference papers. Presumably the teacher educators who felt this way saw publications as contributing to their professional development.

One issue missing in discussion about research was actually engaging student teachers to undertake research themselves; yet, as the literature suggests one of the objectives of teacher education programmes as articulated by Kroll (2005) must be to help pre-service candidates develop the technical theoretical knowledge that will allow them to create their own solutions to the challenges they meet as they teach. Kroll (2005) further argues that inquiry is a powerful tool that can help teachers problematise the situation that they encounter. They can systematically examine the issues involved and subsequently find solutions that may carry over into more than one situation. Educating teacher educators on the benefits of undertaking research could help them not only to attain research skills but also to see the value of researching their own work. In this way reflecting on their practice for purposes of improving that practice would not be informed by experience only but experience would be coupled with empirical information. Most importantly, they would be modelling to student teachers how research on one's career could contribute to professional development.

Based on the discussions presented above it is appropriate to conclude that this part of the chapter presents lessons learned by the research participants and the challenges that they are faced with. The following section of the chapter depicts, by presenting

cases of three of the participants, the numerous lessons that accrued from practice. The following section is presented as a deliberate link between the preceding section and the one that follows. The last section of the chapter focuses on learning in the context of teacher education as a possible consequence of the current study.

## 5.6  Drawing Practical Professional Knowledge from Practice: the Cumulative Snowball model

This study has revealed that teacher educators who participated in it draw their professional knowledge from both the programmes they enrolled in as students (propositional knowledge) at both undergraduate and postgraduate levels, and the practical knowledge (phronesis) they draw from practice. They have learned to teach teachers in the teacher education institutions and in their capacity as teacher educators. In this regard, while not downplaying the fact that in practice they still make reference to documented information and learn from it, what they have accumulated is practical knowledge. The conclusion that they have drawn from practice as I indicated earlier, does not dispute the fact that they use propositional knowledge in teaching. Hence reference to the work of Van Driel, Beijaard and Verloop (2001) in this regard.

Van Driel et al. (2001) view practical knowledge as a form of knowledge developed or constructed by teachers in their context of work. The relevance of their work in this section of Chapter 5 is the emphasis on the idea that practical knowledge integrates experiential knowledge, formal knowledge and personal beliefs and that it is often implicit in nature. As I illustrate with the 3 cases to follow, accumulating or learning from practical knowledge is an important area that this study has established.

I have also discussed various types of knowledge in the literature review chapter. However, due to the relevance of "knowledge" in this section, I revisit the concepts *episteme* and *phronesis*, especially in the context of teacher education. On the one hand, according to Loughran (2006), episteme is propositional knowledge, consisting of assertions of a general nature that apply to many different situations and problems. It is traditional, scientifically-derived knowledge that is often described in abstract terms and considered to be objective and timeless. On the other hand, Loughran (2006) argues, phronesis is a form of practical wisdom that is derived through understanding specific situations and cases. It is therefore understood as being developed through experience whereby the knowledge gained may not be immediately generalisable, but is certainly

appropriate to a given situation. This assertion about phronesis was emphasised by one of the research participants as she articulated that practically-based knowledge is not "tangible" and that it is not transferable.

Loughran's (2006) work is more relevant in this section as he contextualises these two forms of knowledge in teacher education. In his view, to both student teachers and teacher educators, epistemic knowledge is not immediately helpful in addressing problems of practice. Instead, experiencing the tensions, dilemmas and problems of practice is necessary in order to learn through the accumulation of knowledge of practice.

The other two and equally related concepts that have been discussed in the literature chapter are *metalearning* and *metacognition*. Metalearning is described as the knowledge that enables learners to be effective as they learn about learning or take control of their learning (Jackson, 2003, Institute of Education, London, 2001, Slabbert et al., 2009). Loughran (2006) refers to metacognition as thinking about thinking and Livingston (1997) adds that metacognitve knowledge refers to general knowledge about how human beings learn and process information, including an individual's knowledge of one's own learning.

I elaborated in Chapter 3 what the concept *learning* as articulated in the work of Flavel (1979) entails. In the context of this study and following on Loughran's (2006) assertions about recognising metacognition in teacher education, the extent to which teacher educators who participated in this study were able to question their own teaching would be an indication of employing these various forms of learning.

In this section of Chapter 5 I present my analogy using the "teacher educator teaching snowball experience model". I do so to illustrate that experience has provided the teacher educators who participated in this study with a landscape from which they have drawn their practical knowledge and have therefore acquired knowledge on teaching about teaching.

As I indicate in the pages that follow the snowball cumulative model I adopt Pillay's (2007) ideas about choice of research participants. She correlates her methodology to telling three tales of her research participants. She indicates that she does so to find the complementary values that may bring some depth to understandings of her research

participants. In the case of this study, the three cases are meant to illustrate issues pertaining to cumulative learning.

## 5.7 Cases on Learning to Teach Teachers

I emphasise here that while the unit of analysis for this study was eight teacher educators, I chose three research participants, mainly to illustrate that while professional knowledge is drawn from both formal education and practice, practice presents more opportunities for acquiring professional knowledge.

Put differently, and as articulated by one of the research participants, professional knowledge is not static as it expands like a "*hypothetical ball which keeps growing*" (Peditta). The study adopts the idea of a snowball to illustrate that as long as teacher educators continue to practise they at the same time are accumulating practical professional knowledge:

Description of Figure 5.1: The Snowball in Teacher Educators' "landscapes": A Cumulative Knowledge Model

The small ball of snow represents academic or formal knowledge obtained from training. It is the core of professional knowledge gained in both undergraduate and postgraduate courses including research courses.

Once it starts rolling down the hill or the teacher educators' professional lives evolve, it picks up snow along the way and grows bigger and bigger.

The added snow is the person's experiential knowledge, what he gains from all the main experiences he has in a professional life, across the varied landscape. The snowball does not shrink but grows with each experience. These are the bits and pieces of snow that get gathered: experiences gathered through others including colleagues, school teachers and students; holding administrative positions and participating in meetings that reveal what may have been taken for granted; the actual teaching practice itself at the university, other levels in which one taught before taking a position of a teacher educator, using instructional media and assessing students; supervision of instruction and research; engaging in professional activities such as undergoing training and participating in conferences; opportunities provided by other avenues such as academic links, membership of professional organisations and through contribution in national education development by providing services, including undertaking research. Some parts of the landscape may be snow free, where professionals do not pick up any new professional knowledge and some may be especially snowy where professionals pick up a lot of snow.

In this snow ball analogy there are instances where teacher educators pointed to the numerous challenges in the context in which the ball rolls; these are possible situations in which they would not gather any snow.

Presumably, as the ball gains momentum and the professional moves through the varied "landscape" he/she learns from the experiences *as novice, advanced beginner, competent, proficient teacher* and eventually becomes more of an *expert* (Eraut. 2006). It may be that while going through the landscape and moving through the different levels the teacher educators could reach a level at which they are comfortable with bridging the gap between theory and practice. It is experiencing and moving gradually but being conscious of the movements that teacher educators could learn through experience (Loughran, 2006).

**Figure 5.1: The Snowball in Teacher Educators' "landscapes": A Cumulative Knowledge Model**
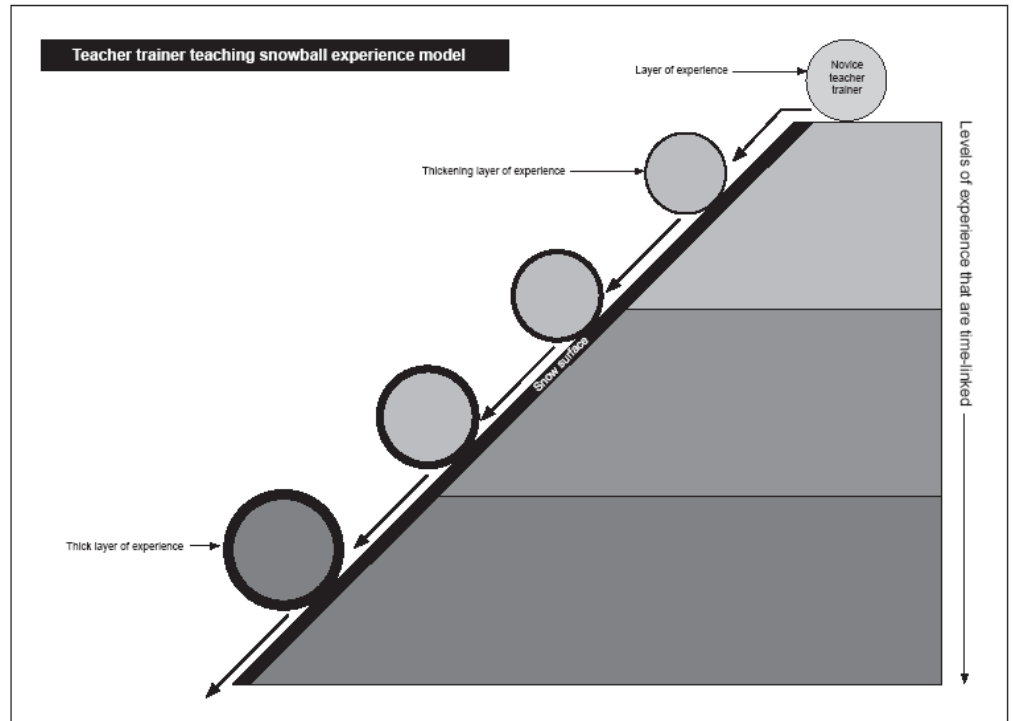


*Illustrative Cases*

Three cases of three research participants were chosen out of 8 for illustrative purposes. I describe the approach used in selecting these 3 elaborately in Chapter 2 being the methodology chapter. I add a few points on the approach followed in the choice in this chapter.

While it may not be common to use a "winnowing" strategy with the research participants, given that it is commonly used in analysing data, this strategy is used here to illustrate a point; the 3 research participants present a clear picture of their professional progression in teacher education and therefore help to illustrate how they

have been learning how to teach in practice; Chapter 4 shows how much of their data has been used to illustrate the various findings presented in that chapter. I cannot deny the fact that while there may be other participants with extensive data, 3 is a reasonable number to work with, especially for illustrative purposes. I therefore decided on winnowing to use a reasonable number with extensive data.

I am influenced at this level by the justification that Pillay (2007) followed in choosing her research participants. In her study the stories of the participants tended to complement each other; there were commonalities. In the case of the current study, besides the fact that the participants came from three different departments, their narratives and lessons observed were more telling. In her work Pillay argues that "if methodology is not only about gathering data but also about hearing the data, writing the data and giving form to the data, not only by the researchers but also by the participants and readers, then methodology is constantly in progress (p.24). I borrow this idea of a methodology that is constantly in progress. It was in analysing the data that I decided that three of the eight participants would help illustrate how the research participants have been experiencing teacher education in practice.

The cases chosen are those of Peditta, Zinzi and 'Masethabathaba who were from the departments of Educational Foundations, Language and Social Education and Science Education respectfully. These cases illustrate the point being made regarding the accumulation of professional knowledge. This is a section that builds on the "snowball/cumulative" model presented above.

### 5.7.1  The Case of Peditta

There definitely is consistency in what Peditta believes in and her practice.

5.7.1.1 The Basis of Entry into Teacher Education

Peditta entered teacher education accidentally in that although she had not taken courses on teacher education at undergraduate level she joined it through applying to an advertised post. She admits that while she became a teacher educator by accident she had grown to like and enjoy it. Interestingly, the fact that she entered 'through a backdoor' propels her constantly to seek out those areas where she thinks that the needs that she has will be addressed.

The circumstances of teaching teachers without a teacher education qualification persuaded her to enrol in a programme that would prepare her for the task. It was during her work on her thesis, which required her to use a developmental approach that she learned about life skills, which included making predictions, being skills that are needed by children. Undertaking research at Master's degree level laid the foundation for the career that she was going to embrace: teacher education. She says her Master's degree dissertation helped her to see the relationship between it and a child. In teaching she sees this dissertation unfold, and it has remained a major point of reference throughout her professional life. The decision to take courses that would prepare her to teach teachers was taken with the understanding that she needed knowledge and skills that could be provided by academic institutions.

## 5.7.1.2 Using Propositional Knowledge as a Guide

Peditta's philosophy very clearly correlates with her dissertation. She sees herself as someone whose mandate as a teacher educator is to assist her student teachers to change. She perceives herself as a person with the ability to intervene in people's lives to promote change and help them realise their potential, even if it is lying dormant. She uses her own experience as someone who joined teacher education by accident and takes advantage of her background in psychology, which requires her to intervene in peoples' lives and to go deep into those lives to unleash the potential which may be flickering a little, and therefore try to kindle it. She therefore perceives herself as someone who has the burden of first of all showing that what she does is something worthwhile, so that student teachers can feel that they also want to do it.

## 5.7.1.3 The Teacher Education Context and Implications

Peditta sees the context in which one operates as a teacher educator as important; it can contribute to professional development or can make one feel stagnated. She feels that teacher educators can either choose to stay within existing contexts or create their own. She sees working within the context of the University as helping her to grow as a teacher educator. There are, however, challenges of working with students and colleagues that contribute to her tendency to reflect constantly in terms of what she actually does or what she tries to do.

She indicates that the context of the University in terms of its mandate of teacher development provides an important dimension to the training of teachers. It is through her work with teachers who are out in schools that she feels she gets to know the extent to which she has made an impact in her teaching. Working with teachers in the schools provides a rich experience in terms of how teacher education has to be conducted. She has learned that teaching teachers is very complex as it depends on individuals to do the best with what they have, because what has been taught cannot work the same for everybody else. Additionally, teachers in the field have come out with their own ways of interpreting what they have learned. They are sophisticated in their way of interpreting their environment and making use of what they have learned. Peditta says the best approach that she has adopted is to give theories, but also make things tentative so that student teachers, even after qualifying as teachers, should know that what has been taught has to remain flexible enough to use in whatever context one finds oneself.

At another level, Peditta sees the importance of teacher educators actually creating a context for themselves by identifying niche areas. It is a context where she feels as a teacher educator she has moved from the general broader view into the specific. It is at this specific level where she says as an individual she can have an impact through devoting her time to activities about which she feels passionate.

## 5.7.1.4 Building Professional Knowledge through Practice

Peditta says the ability to apply propositional knowledge to the extent that application actually changes this knowledge has proved crucial in her career. It is within a teacher educators' landscape that she gets the experience through the opportunities of applying the knowledge. She has discovered that more often than not plans to apply knowledge drawn from the theories do not work out as well as she expects. She feels that experience provides opportunities to keep trying since what may have proved applicable in one situation may not be transferable to other situations, given that in real life situations differ. In her view, therefore, propositional knowledge merely lays a foundation upon which one has to build, although that building never pauses at any point in one's professional career. She is able to analyse her practice basing herself on the fact that she received knowledge that prepared her for the task of teaching student teachers.

### 5.7.1.5 Relating Theory and Practice in the Teaching of Student Teachers

Peditta says the ability to relate one's theoretical understanding to practice has to do with the contextualisation of the theory. In her view it is crucial to present theory to the student teachers in a sophisticated manner. She admits she enjoys challenging her students so that they can think beyond their context to help them move in terms of their intellectual level from a level of simplicity to some level of sophistication of thought.

In this regard students are guided to analyse their context through creating an ideal situation for them to explore. In doing so she knows that she is saying to her student teachers that she wants to move them as far as their thought processes are concerned and expects that they will do the same to their learners, which means moving students from a certain cognitive level to the next level. She thinks cognitive development is something that she has been engaged with in her entire career as a teacher educator. In practice, therefore, she sees the relationship between theory and practice as applying professional knowledge through theory and practice and in the process helping student teachers within their context to move from the simple to the complex. Central to Peditta's professional activities is student involvement in their own learning. This may be a typical example of a teacher educator who learns jointly or together with her student teachers.

### 5.7.1.6 Extent to which Teaching Practice Correlates with Beliefs

I observed Peditta teach student teachers 16 times. In practice she lives her philosophy and what she truly believes in. She is outright in involving student teachers in their own learning. Students study cases from the module she produced herself. On rare occasions they may perform their tasks individually but would be expected to return to present their interpretation of what they had been assigned to do.

Peditta's common strategy is for students to work in groups. She builds communities of learners and creates a context in which students collaborate as they investigate a topic in preparation to come and share their findings. She does so also after posing a question and asking students to discuss in small groups of sometimes just two students.

Peditta did not appear to be disturbed by the almost deafening kind of noise that fills her lecture or seminar rooms when more than 300 students are in her classes. The experience of my technician who videotaped lessons and on one occasion claimed that it did not appear as though there was a lesson to record, is illustrative of the learning

environment in which Peditta operates. Her students research and analyse cases, discuss and share their interpretation of their assigned case studies. On the day on which the technician disappeared, Peditta had spoken for three minutes, during which she instructed student teachers to discuss a case. She mingled with the groups and students noisily discussed the task at hand. The technician could not regard this as an exciting part of teaching. He concluded there was no teaching and decided to walk out of a situation which I interpreted as electrifying.

There were times when she provided explanations or actually lectured. It was only in one lesson out of the 16 in which she lectured for 32 minutes. Otherwise her explanations ranged from three to seven minutes. That most of her talks are short illustrates that in the majority of cases she lets students discover things themselves and present them to the entire group. Peditta therefore mainly practises a phronesis approach. Her most common questions are thought-provoking and mainly *why* and *how* type of questions. To a far lesser extent she asks *what* questions.

It is only in the way she conducts her teaching that one sees the correlation between what she believes in and her practice. Her interest is helping student teachers to attain their highest potential and actually involves them in such a manner that they search for information, and present it so that she can detect the extent to which their interpretations reflect understanding. In summary she plays the role of facilitator in which she intends to see student teachers change and become different people from those they were before enrolling for her course.

Observing Peditta teach confirmed her claim that she upholds the theory of helping student realise their potential. She concluded her narrative by referring to what could be considered as her guiding principles: "walk the talk and walk it in ways that ensure that the ones walking the talk demonstrate the best ways of doing so". It is Peditta who, after validating the content of her story, made a comment that the study, in particular being asked to narrate her story provided her an opportunity to reflect on her thesis. She realises that she has actually been living her thesis throughout her professional life.

### 5.7.2  The Case of Zinzi

This is a case of a teacher educator who believes in student creativity. Her background is in Mathematics education.

## 5.7.2.1 The Basis of Entry into Teacher Education

Zinzi is an invitee into the world of teacher education. She never dreamed of following this career. She says she had planned to become a secondary school teacher. Her university lecturers saw potential in her and invited her to join teacher education at the level of a teaching assistant. She says she was just lucky. She joined teacher education as a person prepared to learn from others; a situation which presented tremendous challenges. Although she was provided with a mentor from whom she would take over, she could not learn from the colleague's ways of teaching. Even though she had hoped that observing her mentor teach and taking notes on how it is done, neither the notes nor observations served as a guide, when confronted with the task alone, she would not handle it with ease. She says she grappled with the teaching of student teachers and had to learn from being immersed in it; a situation she considered messy.

## 5.7.2.2 Using Propositional Knowledge as a Guide

Zinzi says the courses taken at undergraduate level did not prepare her for teaching in the school system. Her Mathematics Education lecturer was too theoretical, focusing mainly on the content of the subject and not on pedagogical content. She left the university puzzled and not knowing how she would teach. Therefore the propositional knowledge acquired at the university was not immediately applicable to her world of teaching. Instead, in practice she listens more to a group of students and transfers ideas from one group to the next. She learns more from her students.

Her philosophy is that people intending to become teacher educators should start at the school level. There is value in the practice of teachers in the school system. Researching education should therefore be a priority. However, she has never seriously considered doing research on her teaching.

Her Master's degree programme did not make her a different person in the context of educating teachers. She says she came back with notes and many new ideas. She used the notes for teaching. These notes were based on her studies in a foreign country. Upon reflection she realised that they were not relevant to the Lesotho context. Her student teachers were very vocal about the claim that the notes were irrelevant. She says she was lacking in coming up with her own style of teaching and she realised student teachers were not gaining much from her teaching, as what she was teaching did not seem to relate to what they would be teaching. However, her PhD course

confirmed her belief that student teachers have to be given some ideas on how they can improve the teaching of content.

## 5.7.2.3 The Teacher Education Context and Implications

Zinzi operates in a context that presents numerous challenges. Two of these challenges are important to her. One is that there is a lack of collegiality in her department and therefore individuals live in isolated contexts. It is a context in which she prefers to focus more on students who present another challenge to her life as a teacher educator. Zinzi says that the problem with many of the students she teaches is that they did not choose to be teachers. They came because they had nowhere to go, given their low performance at the end of secondary education examinations. It is for her a difficult context in which she has to encourage them to like teaching. She strives to help student teachers attain the knowledge and skills they will use after completion of their studies.

Zinzi says one of the strategies she uses is doing activities as she walks around the class. She takes advantage of walking around the class to talk to students about what they want to do in teaching. She says she observes them as they engage in their teaching practice; they do many unacceptable things. Zinzi says she has to pick them up by saying positive things so that they do not become depressed, still bearing in mind that they have to do correct things. It is working with similar groups of students over the years that inspires her to encourage them to remain in teaching.

## 5.7.2.4 Building Professional Knowledge through Practice

Zinzi says she uses practice to guide her teaching. She is mostly guided by her intention to work towards maximising the knowledge of her students. It is in practice where she says she guides student teachers in terms of the relevant content and pedagogy they will need in their own teaching. One of her guiding principles is to solicit student teachers' backgrounds and their expectations of the syllabus they will use in teaching. In her actual teaching she relies heavily on the school Mathematics syllabus and engages students in analysing it.

## 5.7.2.5 Relating Theory and Practice in the Teaching of Student Teachers

Zinzi says that she learned to use games in teaching her subject content. Most of her materials were developed at the time that she did her PhD. For the PhD. they took a lot of computer programmes that have numerous strategies for and are useful in teaching

Mathematics. She teaches them to use games for teaching although her challenge is that student teachers are so dependent on her that they find it extremely difficult to construct their own games. She says they are neither able to pick up and design their own nor do they take her advice to draw from computers and adapt the games so that they can use them in their situations, often because there are no computers in their schools.

## 5.7.2.6 Extent to which Teaching Practice Correlates with Beliefs

I observed Zinzi teach 15 students for 20 lessons. Practical lessons are at the centre of her teaching. Students are given tasks to work either as individuals or as groups. They discuss these in class and present them to the rest of the class. Most of the lessons are guided by the use of games, some of which she has developed herself. This is the only seminar room that still uses a chalkboard. The chalkboard is mainly used by student teachers as they explain the answers they came up with. She hardly lectures and in situations where she has to use expository methods she does so in a few minutes. Her shortest explanations take a minute and her longest 11 minutes.

Her belief is that student teachers should be helped to acquire the skills and knowledge they will need for teaching students. She strongly believes that the best approach is a hands-on one. This belief is clearly displayed in the way she conducts her teaching, with very little talk but ample practical activities. Her class size made it possible to talk to individual students as she tried to encourage them to stay in a teaching career.

### *5.7.3  The Case of 'Masethabathaba*

'Masethabathaba's orientation is that of language teaching. This orientation becomes clear from her style of teaching.

## 5.7.3.1 The Basis of Entry into Teacher Education

Twenty seven years ago 'Masethabathaba was invited by her former lecturers to join teacher education. She was identified by two ladies who made her realise she had the potential to join teacher education. She says she gladly accepted the invitation although she did not know what it meant to become a teaching assistant. 'Masethabathaba is an English language specialist and she was identified as someone who could contribute to the teaching of English language to student teachers. Her Master's degree therefore was

to equip her with more knowledge on English language education, especially as it relates to teaching student teachers.

## 5.7.3.2 Using Propositional Knowledge as a Guide

'Masethabathaba says she was taught curriculum studies in English by professionally seasoned English educationists who knew their subject. She says they emphasised the importance of being prepared when one went to teach and for some reason much of this has influenced how she approaches her own teaching. 'Masethabathaba says she was socialised for teaching by those professors who later mentored her when she joined teacher education. Her critique, however, is that it was '*easier said than done'*, because even as things got emphasised they were not getting involved in the actual development of instructional materials. Nor was her postgraduate degree in a foreign country helpful. She was not understood to be seeking for a course that would prepare her for teaching teachers of the English language. She had to come up with a research topic that would help her answer her needs: training English language teachers to teach for communicative competence in English. 'Masethabathaba says this is what she has lived since then. She gives student teachers assignments that are grounded on her dissertation.

## 5.7.3.3 The Teacher Education Context and Implications

'Masethabathaba works in a difficult context that is without appropriate teaching materials or technical support. It is a context in which she cannot even use appropriate gadgets or infrastructure to deliver her content. She says teaching language education would benefit from a language laboratory.

She also recognises student teachers who join teacher education after having been teaching in the school system. They enter teacher education institutions with certain characteristics and she draws many lessons from this context. The recognition of the value of those characteristics has stayed with her throughout her 27 years of teaching at tertiary level. Experienced student teachers bring their experience to bear on their learning.

### 5.7.3.4 Building Professional Knowledge through Practice

'Masethabathaba has been involved in a number of commissioned research studies. She says she uses findings of studies undertaken when she teaches. She admits she was not trained as a teacher educator but that she took advantage of conferences whenever she could. These would be conferences where teacher educators would be sharing their views and their experiences in training people in English. It was in such a context that she acquired the idea of becoming a teacher educator. She indicated that she values real life exposures more than going to class to be taught and specialise and come out with a certificate. Some of her experiences include interactions with others, participation in conferences, sitting in large committees and commissions, and being assigned or commissioned to undertake professional work in her field of specialisation. These are meaningful to her. She concluded that if she could claim any authority or any professional knowledge at all "*it's because of acquisition more than being formally taught learning*".

### 5.7.3.5 Relating Theory and Practice in the Teaching of Student Teachers

In practice, 'Masethabathaba argues that her teaching is more practice-based than theoretical. She says she has learned from her mistakes; coming into the lecture room and lecturing and walking out at the end of her 50 minutes has never worked for her as it does not help much on the part of student teachers. 'Masethabathaba says she has realised that if she comes to class, presents a topic but engages her students in the presentation of that topic, she tends to reap better results. Her students tend to understand and learn more and, depending again on activities that she gives them, they are better able to be active and take responsibility for their own learning.

### 5.7.3.6 Extent to which Teaching Practice Correlates with Beliefs

'Masethabathaba was observed teaching 21 lessons. She is an outright expository type of lecturer capable of lecturing for 50 minutes. Her shortest explanation was 6 minutes. In practice she was observed giving 13 lectures, ranging from 6 to 15, 27, 30, and 45 minutes, with 3 being 50 minutes. In five of the observed lectures, student teachers did presentations and 3 of the lessons were a combination of her presentation and asking questions. So in practice very few of her lectures actually involved students.

## 5.8 Correlating the Cases to the Teacher Educator Cumulative Snowball Model

The cases exemplify how teacher educators who participated in the study have accumulated practical knowledge through learning to teach student teachers. It is very clear that the three combine their propositional knowledge with practical knowledge in their day-to-day teaching. All have encountered challenges in their work which persuaded them to reflect constantly on their practice. A challenge that Kroll (2007) says is very important is that teacher educators reflect on their practice through framing a problem and reframing it for purposes of learning from that experience.

The idea of reflecting on practice is facilitated by working with student teachers who require teacher educators to think constantly about how they can engage students in their learning. It is in the context of practice where, whether intentionally or unintentionally, enactment of professional knowledge provides opportunities for accumulating practical knowledge. It is in the same contexts of enactment of professional knowledge that learning takes place.

All three research participants whose stories are used to illustrate the accumulation of professional knowledge had the opportunity of either teaching experienced student teachers or meeting graduates who shared with them their experiences gained from teaching. The shared experiences are indicative of learning from experience encountered by the student teachers or graduates. Teacher educators do reflect on these experiences to the extent of using scenarios in their own teaching and in the process accumulate professional knowledge. Teacher educators think about how they have been conducting teaching and how that experience impacts on their own teaching. But most importantly, the depth of the experiences illustrates that theoretical or propositional knowledge gathered in teacher education institutions merely lays the ground but practice needs to be experienced as there are practical experiences to be dealt with in the real world of work.

Modelling comes out as an area in which these teacher educators have had an opportunity to accumulate knowledge. It is from the relationships that they have established with their student teachers that they realise they have in many ways contributed to their learning.

Although it is clear that practice has facilitated learning as illustrated by the research participants, the fact is that in practice teacher educators gather more snow or experience and there are situations where there is little or no snow to gather. Very clearly they make reference to research but the research being alluded to, while it provides opportunities to construct new knowledge and learn from it, does not seem to inform practice. It does not immediately enrich their practice as would be the case with research undertaken in their own context. Accumulation of knowledge in this regard is biased; it is mainly in the context of teaching and other activities such as participating in developing policies that they seem to have accumulated knowledge. The lack of snow to gather or small patches of snow are clear signs that the major challenge for these teacher educators is in undertaking research in their own teaching. The observed challenge is noted, fully cognisant of views expressed by other researchers who seem to sympathise with the situations in which teacher educators find themselves. For example, Murray (2010) is of the view that there are factors that restrict the time and opportunities for teacher educators to participate in research. One of these is declining financial support from governments.

Regardless of Murray's observations, as pointed out by several other researchers, Campbell and McNamara (2010), Groundwater-Smith and Campbell (2010), and Kessels and Korthagen (2001) teacher educators' or academics' work has to be informed by research. Campbell and McNamara (2010) point out that research is central to professional learning; it is more about assimilation of knowledge rather than its gathering. Teacher educators have to take ownership of their professional learning and manage change in their classrooms through knowledge production. Another area that is alluded to in which there is little snow being gathered is with regard to learning from colleagues. Kessels and Korthagen (2001) acknowledge that teacher educators need to collaborate and perhaps learn from colleagues.

In conclusion, the model illustrates that in practice teacher educators accumulate professional knowledge or that they learn about teaching regardless of some serious discrepancies such as a lack of undertaking research on their own work. There are situations during which learning is more significant than in others; hence the idea that they gather more snow and depend less on a situation in which they operate. Reflections or the various experiences gathered as teacher educators enact the pedagogy of teacher education discussed in the previous chapter is elaborated on in this chapter.

Reflections could provide an opportunity for teacher educators to analyse their own learning. Therefore, the concepts discussed earlier in this section, namely, learning, metalearning, metacognition, episteme and phronesis are made relevant in this study by the incidences discussed in this chapter and in Chapter 4 and concretised in Chapter 6.

## 5.9 Conclusion

This chapter has discussed the findings of the study. It is clear that, while the sources of professional knowledge presented in the chapter on data analysis and interpretation are numerous, these are mainly based on practice. It is practice that facilitates experimenting with ideas, constructing new knowledge and using the acquired knowledge in the context of teaching teachers. The research participants did not even realise how much they have been guided by knowledge they have accumulated over the years of teaching as teacher educators.

Based on the findings of the study, particularly that learning for most of them happened without them actually planning it, I decided to include a section on *learning* in this chapter, but direct it at moving beyond the teacher educators themselves to how the proposed new learning could guide the way in which student teachers will be helped to shape their own learning. The understanding here is that once they (student teachers) emulate learning as a construct they too will transfer this into the school system and therefore to their own students.

Based on the discussion presented in this chapter, I move to the conclusion chapter, which ends with suggestions for the future. The first suggestion is on how learning could be infused in the Lesotho teacher education programmes and the second proposes future research by teacher educators and subsequently the creation of new knowledge.

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# CHAPTER 6

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# 6 CONCLUSIONS AND IMPLICATIONS

Wisdom of Practice in Teaching: The practice of teaching involves a far more complex task environment … teachers and students can probably learn to engage in more complex and unpredictable students' responses. But more careful preparation of teachers and of their classes may be needed to support such an effort. For one, a teacher may have to develop deeper content knowledge and pedagogical content knowledge to respond adequately to higher frequencies of less predictable student contributions (Shulman, 2004, p.258 and 264).

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## 6.1 Conclusions

### *6.1.1 Introduction*

The details of the methodology used in carrying out the study, including the justification for its appropriateness are provided in Chapter 2. Nevertheless it suffices to refer briefly to them in this chapter in order to contextualise the conclusions drawn and their implications. An interpretivist approach was followed in undertaking this study. Data was collected through three approaches: narrative, observations of teacher educators' practice and an analysis of the curriculum and assessment documents.

The unit of analysis was eight teacher educators who were based at the National University of Lesotho's Faculty of Education. Their teaching experience, the department in which they were based, their disciplines, their willingness to participate in the study

brought about diversity in carrying out the study. Verification of the extent to which the topic was researchable was done through undertaking a pilot study.

There were immense benefits that accrued from using a qualitative methodology in carrying out this study. As articulated in Chapter 2 it was possible to solicit the research participants' stories about their experience as teacher educators only through engaging them in sharing those experiences. The benefit of qualitative research is seeing action in reality through observations as opposed to being told about how teacher educators teach. Narratives alone would not have revealed the massive data that was collected through actual observations.

The study intended to find answers to the major question, "What are the sources and application of professional knowledge among teacher educators? The encompassing sub-questions are: What sources contribute to teacher educators' professional knowledge? How do teacher educators enact professional knowledge? What types of professional knowledge do teacher educators construct and how do they construct them? And how do teacher educators model professional knowledge? However, they were manageable, especially given the approaches that were used to collect data. Asking the questions facilitated gathering data that informed the entire study.

I have derived several conclusions after undertaking this study. The institution that hired the teacher educators who participated in this study has immersed them in the work of teaching teachers regardless of the credentials they held. Therefore, the challenge for this institution is not so much on the credentials that the newly employed teachers hold but its ensuring that teacher educators are provided with facilities that will facilitate their efforts to learn at work. Work-based learning has been found to be more relevant than learning in a formal setting.

The major finding of this study however, regardless of whether some have relevant credentials, is that working in teacher education programme and teaching student teachers has provided them an opportunity to learn to teach teachers in practice. They therefore sourced professional knowledge in practice.

### 6.1.2 The Status of Teacher Educators and Implications

Despite the fact that this was not a cause and effect study, there is no doubt that a number of issues have a direct relationship to teacher educators. For example, some questions were on characteristics of teacher educators. Additionally, reviewing literature

on the profession as well as looking into the impact of reforms on education systems and mechanisms that governments or states put in place to manage education were other issues. These issues illustrated a direct relationship between these and teacher educators. Education provided, especially where education reforms are commonly implemented, directly benefits from institutions that train teachers. In practice, whether directly or indirectly, international and local initiatives such as the Education for All initiative, impact on the training of teachers.

The finding that few teacher educators received training on teaching student teachers is, as elaborated in Chapters 1 and 3 not unique to Lesotho. In this study only 2 out of the 8 research participants had taken courses that prepared them for teaching in teacher education programmes. It is therefore important to record that it has been empirically established that this is the case at the National University of Lesotho too. A lack of professional qualifications in the teacher education field has implications for teacher education stakeholders.

The employing institution, being the National University of Lesotho, needs to encourage teacher educators to formally engage in continuing professional development opportunities. Most importantly, the teacher educators need to drastically engage in researching their practice and learning from that activity.

The literature review has also revealed that training of academics is the trend in some developed countries. In Lesotho as illustrated earlier, sporadic workshops are held for people and/or academics teaching in various faculties of the National University of Lesotho. Additionally, this study has established that teacher educators who participated take part in workshops and conferences that equip them with new knowledge. However, the major benefit for training in as far as teacher educators are concerned would be to ensure that the knowledge that they have accumulated in practice is deliberated on and made to contribute on new developments in teacher education. In that regard, accumulated knowledge would be considered relevant in the education of teacher educators. Such training could be facilitated by educators who are well grounded in the teacher educator pedagogy and/or discipline. Presumably, well grounded teacher educators would ensure that there is synergy between practice based knowledge and emerging theories. Most importantly, public awareness of the on-going training structured in the manner described here might impact on professionalisation of teacher educators in Lesotho.

The literature review has further revealed that education reforms are initiated and implemented by governments or states. Reference has been made in the literature to programmes such as Teach for America. Decisions made at government level to reform education systems impact on the education of student teachers. The Education for All (EFA) initiative is one such programme from which Lesotho implemented a Free Primary Education Programme (FPE). FPE has an impact on the education of teachers who teach in the school system and are a product of teacher education institutions. As a result of the FPE initiative, class sizes at the primary and secondary school levels have suddenly become very large. Therefore, using teaching techniques that will respond to this development requires teacher educators to be innovative and model strategies for dealing with innovations.

The literature review also makes reference to standards and government's and state's decisions to maintain quality through establishing and operationalising quality assurance institutions. The said organisations are responsible for ensuring that education systems adhere to quality and standards. This development, while being addressed in other parts of the world, remains a challenge in Lesotho and therefore needs to be resolved. The recently established Higher Education Quality Assurance Committee (HEQAC) of the Lesotho Council on Higher Education, in addressing issues of quality assurance, should pay special attention to the teacher educators' carder.

### 6.1.3  Sources of Professional Knowledge

Two major sources of professional knowledge have emerged: propositional and/or received professional knowledge, and practical and/or experiential knowledge.

*Question 1: What sources contribute to teacher educators' professional knowledge?*

Teacher educators holding a Bachelor of Education Degree (B.Ed), as well as those who took postgraduate courses related to the teaching of teachers resort to knowledge gained at the various degree levels to inform their practice and/or the teaching of student teachers. Narrative data revealed that courses that were considered relevant to the teaching of teachers by those who enrolled in them are supervision of instruction, educational research, assessment, teaching and instructional techniques and educational management. Teacher educators, therefore, given that their initial professional knowledge was propositional, relied on conceptual knowledge received from teacher education programmes in their teaching of student teachers.

Teacher educators with an education background regard propositional knowledge to be foundational to the practice of teaching teachers. In practice, the majority of teacher educators use the teaching methods they were taught to use at the time they enrolled in teacher education programmes themselves. Nonetheless, learning to teach teachers in practice is crucial to attaining professional knowledge on teaching *teaching*.

While learning to teach at the undergraduate level introduces those who enrol in teacher education to the field of teaching, and while it is recognised by various teacher education institutions that employ teacher educators to be a relevant exposure to teaching experience, it is risky to assume that the content offered and skills that are taught at this level are necessarily transferrable or applicable in teacher education. The purpose for acquiring appropriate teacher education content or learning about *the pedagogy* of teacher education is to be relevant in the field in which one practices. The implication therefore is that teacher educators need to be trained in the pedagogy of teacher education. Most importantly, they need to take advantage of teaching in teacher education programmes to learn in practice that pedagogy of teacher education.

That teacher educators use the methods of teaching they acquired at undergraduate level and approaches to teaching for the years during which they have been in the teacher education system as this study illustrates does not justify continuity.  The perpetuation of methods of teaching and practices whose viability at the teacher education level have not even been tested calls for the renewal of teacher education. It is incumbent upon teacher educators as professionals to seize an opportunity of being in practice to improve upon their profession.

### 6.1.4  Propositional or Received Professional Knowledge

Teacher education programmes for those who enrol in such programmes serve as the reservoir of professional knowledge. Therefore propositional knowledge attained through the undergraduate and postgraduate programmes in the relevant field of study prepared the research participants who participated in this study for teaching at the various levels of the education system. Additionally, propositional knowledge acquired at postgraduate level, except for the research participants who indicated that they took courses that are of a teacher educator type, strengthened their discipline knowledge such as, for example, mathematics education, language education and geography education.

It would therefore seem that the technical rationale practice observed as a common feature in the lecture halls in this study is an indication of what these teacher educators inherited from the academic programmes. However, the major shortfall of the finding that academic programmes serve as a source of professional knowledge is that teacher educators are still lacking in the content or skills necessary for teaching teachers.

While recognising propositional knowledge as providing requisite knowledge, its major limitation is the fact that it does not fully prepare academics for the unpredictable world of work. Additionally, propositional knowledge acquired in undergraduate and postgraduate programmes, while it may be recognised as valid, does not necessarily prepare teacher educators for the task of teaching teachers. The pedagogy of teacher education as I note in Chapter 3 is broader and very demanding on teacher educators who practise it fully knowledgeable of what it entails.

Most intriguing about teaching teachers is the "dual role" that teacher educators have to play in their task of teaching teachers. It makes their task much more complicated than teaching them content only; they have to prepare them for the task of teaching others. Therefore the dual role they are expected to play posts as a challenge for these teacher educators. The question that one may ask is: can they do so if they have not been equipped with appropriate skills for performing the task? In the real world of teacher educators, they have to be innovative to move beyond propositional and/or traditional knowledge. In fact as fully illustrated by the "cumulative model" analogy, more is learned in practice.

### 6.1.5 Practical or Experienced-based Knowledge

A common feature for all the teacher educators, given that they all started teaching before acquiring a postgraduate degree, was that they were immersed in the teaching of teachers. They learned the art of teaching teachers in the actual context of a teacher education programme. It is therefore significant that the other source of professional knowledge for teacher educators is practical and/or experiential.

Numerous components were found to constitute professional knowledge that is experience-based. It was ascertained that the components of practical and/or experiential knowledge include human resources. Teacher educators are constantly in contact with student teachers. The groups of student teachers vary from those who enter teacher education directly from secondary school to those who have taught before. They

all bring perceptions of teachers and teaching. The varying experiences provide a valuable opportunity for teacher educators to learn from these groups. Lessons learned from the experience of teaching different groups of student teachers, while expressed as valuable remain as knowledge stored in their memories and gets used in the actual teaching whenever necessary. The valued lessons have not been critically analyzed by the teacher educators themselves or shared with the student teachers for the latter to interrogate.

In practice, teacher educators meet serving teachers in schools, especially those who supervise teaching practice or when undertaking research. Contact with teachers, although minimal, provides opportunities for teacher educators to reflect on their teaching. They use messages emanating from their contact with teachers to rethink their teaching. Additionally, as part of the human contact, teacher educators have colleagues within their own departments or broader university contexts. Although there is very little that accrues from contact with colleagues, institutional opportunities facilitated by serving in administrative positions and engaging in professional activities provide ample opportunities to learn from experiences. Therefore the teacher educators' acquisition of professional knowledge benefits from the exposure to such numerous experiences.

### 6.1.6  Relationship between Episteme and Phronesis: Contextualising the Snowball

There is tension between the two forms of knowledge, namely episteme and phronesis referred to in this study. On the one hand, episteme is knowledge attained from academic programmes. On the other, phronesis is the type of knowledge based on appropriate reflection; it provides for construction of knowledge or practical experience and it is attained from wisdom. However, although epistemic knowledge is considered valuable as clearly articulated in Chapter 3, its shortfalls are immense; knowledge acquired through academia programmes does not always help individuals to deal with the real challenges encountered in the world of work. It is in practice where educators engage in activities that provide them opportunities to construct new knowledge and in the process accumulate practical knowledge-based on experience.

I have used the cumulative *model or snowball model to* illustrate what Lortie (1975) regards as an *apprenticeship of observation.* In the work context teacher educators significantly acquire professional knowledge that is necessary to handle work-related

challenges and in the process learn in context how to teach teachers. I resort to the three cases that I indicated in Chapter 5 that I, using Creswell's "winnowing" concept selected. The cases I used are in this section meant to illustrate the tension that might exist between episteme and phronesis.

## 6.1.6.1 Administrative Camouflage: The Case of Zinzi

Zinzi has a degree that equipped her with epistemic knowledge in teacher education. She is a qualified secondary school teacher. Yet as a newly recruited teacher educator, because of fears, discomforts and perceptions about teaching at university, she during her novice days, resorted to deliberately missing a part of her teaching time.

In practice, regardless of having been attached to a mentor, she still could not handle teaching university students. As a beginner or novice (the beginner in the snowball figure has not accumulated much snow), Zinzi can be portrayed in her initial years of teaching as having little snow gathered. The problem of teaching experienced student teachers in the world of work could not be solved even if she made reference to her mentor or her undergraduate content. In the real life of teaching she had to find a solution to her teaching problems herself.

As a consequence of her experience and upon reflecting on her experiences, she changed the strategies for managing her teaching time by engaging in planning. She had to solve her teaching problems herself by means of practice-based knowledge. She passed what she had accumulated over the years to her students. This is one of her messages at the time that she shared her professional life: *Unfortunately I have not had time to be actively involved in research due to* **administrative duties***. However, the little commissioned research I have been involved in has contributed to the way in which I teach. For example, helping students interpret syllabus objectives and designing activities to match these. Another important lesson one learnt is moving away from focusing on writing essays but now engaging students in designing hierarchical concept maps to assist them in planning their teaching".*

I note that she does not say any person told her how to use the little research experience she has. I also note that she must have reflected deeply on her experience and its implications. The implication is that engaging in research related to her work could see her become more creative in her teaching and in the process constructing professionally based knowledge.

## 6.1.6.2 Learning through being thrown in at the Deep End: the Case of Peditta

Peditta is one of the few teacher educators who actually took courses in a postgraduate programme designed for teacher educators. She had taken an educational research course and had actually undertaken research which she admits has remained a relevant point of reference in her practice. The challenge, she admits, was being asked to supervise a student teacher undertaking research for the first time. Although she had fears and discomforts too, she had a helpful mentor with whom she worked in the task of supervising a student teacher.

However, the tension for her was actually observing a student teacher going through an extremely difficult moment of coming up with a research proposal. Although her thesis has proven to be a valued point of reference, she could not in this incident refer to her thesis which of course covered a topic different from that of her student teacher. Additionally, she could refer to her educational research course content in helping a student resolve her practical problem. Yet, her challenge was more in observing the process and helping the student find a solution to the problem herself. Her admission that she is still struggling with balancing theory and practice could be contributing to the tension that surfaced when she had to help students. In her real world of work, Peditta might have reflected on the relevance of her propositional knowledge in the context of her professional challenge and realized that it was not going to immediately assist her address the real life problem she was expected to resolve.

Part of Peditta realises that she had to learn from being thrown in at the deep end. In her narrative she reported as follows: *Regarding supervision of research I wouldn't say I have a lot of experience but thanks to my working at … because, there, one did not have a choice. As soon as you teach, … they just throw you in, and you either swim or sink. They will give you a student and you will work with a senior member of staff. So I co-supervised a student and drew my knowledge for undertaking this task from doing courses in research and experience from teaching - the ability to provide a structure to an argument; and how you are going to follow it up and the logical sequence of presenting stuff. I saw how difficult the process of linking what one has read with research ideas is. I learned the difficulty a novice researcher finds in actually developing that new knowledge.*

An important observation here is that her postgraduate epistemic knowledge alone could not help her address a student teacher's problem. This research participant acknowledges that she took courses that she thought prepared her for engaging in research or could be used for assisting student teachers. Additionally, she did not have much experience that could have helped her address the problem she was experiencing. However, she had to tackle the problem in the context in which it was presented. Her work required her to come up with solutions that were not theoretically based.

## 6.1.6.3 Relationships with Students Come in Many Shapes: The Case of 'Masethabathaba

'Masethabathaba's experiences involved enacting professional knowledge through building relationship with students. She had a student who smoked marijuana and became mad. She is a motherly teacher educator whose students rely on her even during difficult times. This is an aspect of her teaching that she claims she acquired from her undergraduate degree programme; she had a psychology teacher educator who in many ways acted as her role model. However, the way in which she handled a case she experienced in her encounter with a "mad" student teacher could not have come from a psychology lecturer. *I have encountered students in my course who are even mentally disturbed; one just dashed into my office, locked my office door, and I knew he had become mad due to marijuana. He said, "I know you are the only person who can understand"; he came and hugged me and said, "Don't be scared of me madam, it is because they are chasing me" and indeed the security guards were chasing him. He sat there, was calm and we talked, and I immediately said to him "Remember, at this rate you will not graduate and there is no reason why you should not graduate". It worked. He completed his studies and is a regular teacher at high school and whenever we meet he reminds me, "If it were not for you I would not be where I am". You have to be there for them, no matter what*.

'Masethabathaba believes that her psychology course helped her deal with psychologically-related cases she experienced in her role as a teacher educator. What she was not aware of as she related this story was that enacting the pedagogy of teacher education extends beyond lecture halls; building relationships with students is an aspect of being a teacher educator and is part of the pedagogy of teacher education.

In conclusion, the three cases present real work experiences and how the research participants learned from these by being engaged in working with their student teachers to address the cases. Therefore I reiterate here that professionals may have a knowledge base to draw from to address some aspects of their work. This study's research participants seemed to consider knowledge gained from their further studies as a reservoir from which teacher educators get guidance as they engage in professional activities. The challenge, though, is that real life contexts provide ample opportunities for professionals to gather practice-based knowledge. This is true for the research participants who participated in this study. The working context as elaborated in the literature review and the discussion chapters presents numerous challenges, most of which will not depend on the knowledge one may have acquired in teacher education alone.

Professional knowledge cannot be drawn from one source after which professionals would not need to continue to develop. Instead, the finding that the two forms of knowledge complement each other confirms the fact that the essence of building on initially received knowledge is critical. The level of expertise can only be attained through continuing to learn and in the case of teacher educators that learning would come from engaging in activities such as researching own discipline, and publishing and attending relevant continuing professional development activities.

Therefore, one of the lessons that I have learned from reviewing the related literature is that teacher educators too begin their teaching in their own landscape at a very narrow level based on their epistemic knowledge. They soon realise this narrow base expands as they grow professionally. They in the end expand their narrow base in the process of learning more in the very landscape in which they find themselves. Professional development therefore is basically based on their experience in which they continuously reflect and find solutions to real-life challenges.

### 6.1.7 Application of Professional Knowledge

6.1.7.1 How do Teacher Educators Enact Professional Knowledge?

Observing teacher educators in practise unearthed the complex part of a teacher educator's role. The literature on enacting professional knowledge is crystal clear on what it entails to enact or apply professional knowledge in the context of teacher education; enacting professional knowledge as explained in Chapter 5 refers to teaching

*teaching*. Teaching *teaching* entails playing a dual role whereby teacher educators teach the pedagogy of teacher education and in that regard prepare student teachers for their role of teaching and teaching the content that student teachers will themselves teach. Therefore enacting the pedagogy of teacher education goes beyond just teaching.

In my view listening to the research participants narrate their professional lives presented part of that teaching which could not be directly observed. They shared incidences portraying relationships with student teachers, yet parts of the stories revealed what teaching *teaching* beyond a classroom context entails. Issues of personal relationship with own students, for example, are one of the examples provided in detail in narrative data.

Another aspect of the enactment of professional knowledge that the research participants did not mention, although it is implied in that they have been teaching at this level of an education system for years, is the very fact that they teach teacher education programmes. This means that they had the opportunity to learn about teaching student teachers. Being part of a teacher education programme required them to be constantly thinking about teaching student teachers, acting in different ways to challenges posed by the very nature of teaching and reflecting on their teaching *teaching.* Additionally, they had to engage in developing the curricula and implementing their curricula ideas in the real world of teaching and in the process learning about the trade of teaching *teaching* as they constructed the material they needed for teaching. In this regard, the professional advancement was observable and thus learning from serving in the context of teacher education programmes was valued. Learning about learning is what I refer to as metalearning in the literature. However, the major gap is the lack of research specifically on what these teacher educators regard as lessons learned. The scenarios shared about their experience are potential research areas.

Observing teacher educators engage in the act of teaching illustrated that the majority use conventional ways of delivering content. In practice the teacher educators enter a seminar room or lecture hall and lecture. However, lectures varied a great deal in length and in what was taught. Some teacher educators were working in the area of subject content while others were in educational foundations disciplines. Aligned to their areas of specialisation they used technical language specific to a particular field. The teaching of Geography Education, for example, exposed student teachers to such methods as field trips, which were considered relevant to this particular subject. It is therefore evident that

conceptual learning or episteme is a common feature in the teaching of student teachers. Presumably in such courses student teachers begin to have practical experience on what it takes to undertake some research.

In the observation of teaching practice it was established that there are instructional techniques that are used more in particular subject areas than in others. Extensive use of transmissive instructional methods such as lectures is common in English education and in most of the Educational Foundations courses. Extensive lecturing does not seem appropriate for Mathematics and Science Education. While there might be an understanding that certain teaching methods facilitate better learning in some subject areas, in others this is not the case. The common method of teaching therefore, does not provide student teachers with ways to explore other avenues of learning.

Dynamism was observed in the way in which some teacher educators within the same discipline use methods that challenge students to be more responsible for their own learning. Although some of the teacher educators may not have been cognizant of the paradigm that they were promoting, namely episteme, disparity was obvious.

Coincidentally, some teaching methods that could promote individual learning were rarely used, while project methods and field study were occasionally used. These methods of teaching remain espoused to those research participants who mainly used transmissive methods of teaching. Methods of teaching such as those mentioned here, if properly used, could, besides encouraging student teachers to be responsible for their own learning, promote the idea of unleashing student teachers' potential to begin to learn, for example, how to research in their own discipline.

Observing teaching also revealed that some participants use interactive methods of teaching. Most common of these is question-and-answer. Asking questions is an interesting strategy for engaging students, depending on the type of question. Higher order type of question would, for example, provide a great opportunity to become critical in analysing those questions. An advantage of asking questions is that they should not always come from the teacher educators as has been exemplified in this study. Questions asked by the students would also persuade teacher educators to reveal their otherwise tacit knowledge. The example that I constantly refer to in this study because it reveals how a student teacher can ask a question that puzzles a teacher educator is that of one of the research participants, Hoanghoang.

This particular research participant, Hoanghoang, presented a scenario from which he appeared to assume that students would accept inviting a guest speaker as a good method of teaching. He appeared frustrated when students asked him to explain why he thought that inviting that guest speaker is a good method of teaching. One of the student teachers elaborated on his question by indicating that to him that was "*spoon feeding*". Watching Hoanghoang struggle to address the challenge posed by the student teacher's question could have been a great opportunity for him to share with the student teacher his "tacit knowledge" by explaining why he thought so. Yet, he referred this question to other students and denied himself the opportunity to display his teacher education knowledge.

I have indicated in Chapter 5 that critiques of use of the lecture method or transmissive methods of teaching refer to these as a *tyranny of talk*. Extensive use of the lecture method for those participants that I call *expository outright lecturers* seems to have reduced opportunities of engaging student teachers in their own learning. The research participants for this study seem to have the perception that they need to teach student teachers by using a transmissive mode of teaching. This is a counter productive perception if one considers that student teachers need to learn to teach, but their teacher educators do not provide them opportunities to learn to teach. The consequence of this practice is that teacher education is eventually characterised by a perpetual imitation of the same delivery mode which is transmission. One is forced to ask: what is professional about that? There are some serious implications for the use of this particular method of teaching, particularly in teacher education. These include the following:

Firstly, student teachers are provided with tips on how to teach. The research participants constantly referred students to the value of using technical language in teaching. While the idea of technical language could contribute to helping student teachers to become conversant with the language of a particular discipline, it falls short of engaging them in critical thinking on teaching itself.

Secondly, telling student teachers about what to expect as they enter teaching practice to the extent of sharing previous scenarios based on lecturers' observations of teaching practice poses as a challenge. The idea of sharing stories is in itself a good practice but it does not mean that students will use such scenarios when they themselves encounter challenges during their own teaching. Furthermore, sharing stories without challenging

student teachers to interrogate these means they are not provided with opportunities to question some of their lecturers' interpretation of the field-based scenarios.

Thirdly and most importantly, teacher educators have to rethink the lecture or transmissive method/s of teaching and how it can be used to challenge student teachers.

In the final analysis two distinct scenarios emerge from watching teacher educators enact professional knowledge. The first is the one discussed above in which teacher educators use transmissive methods of teaching. The second is whereby some use interactive methods. The interactive methods that were explored by at least two of them through engaging students to analyse cases are one of the many ways of engaging students in ways that allow them (student teachers) to be critical thinkers. Engaging student teachers to analyse cases implies that teacher educators have to consider what the literature challenges them to explore. Teacher educators are required to see teaching through the eyes of a student teacher. In this regard they have to think beyond themselves and position themselves, in terms of thinking, as those who are watching and listening to them as they enact the pedagogy of teacher education.

Teacher educators who participated in this study have more opportunities of learning from engaging in research at the school level than just relating experience-based scenarios. Following the research route would perhaps not interrupt the current teacher education programme; instead it would provide ample opportunities for learning in the process of enacting the pedagogy of teacher education.

My observations of teacher educators as they engage their student teachers in teaching and learning activities have revealed that what students do is a true reflection of the teacher educators' styles of teaching. In the narrative data it is clear that there are incidents that have provided valuable information for teacher educators to the extent that they were able to rethink their teaching. A typical example is that of the research participant who, based on the *visually impaired persons* study she undertook, was able to rethink her teaching. She called her student teachers and inquired about her teaching and how best she ('Masethabathaba) could involve them in their own learning. That inquiry as discussed in Chapter 5 of this study seems to have persuaded her to think of ways of involving them in her teaching.

This particular participant seems to have reflected on her teaching and did so basing her reflection on the study she was commissioned to undertake. However, while I would argue here that reflection on teaching or on implications of a study that one undertook may be common among teacher educators, the problem is that implementing change based on research experiences remains tacit. It may get revealed during in-depth interviews such as was the case in this study; the narrative data was revealing.

The need for parity that recognises individual differences in teaching teachers could be one way of promoting advancement in teaching student teachers. In enacting professional knowledge teacher educators also assess student teachers.

### 6.1.8 Skills Needed for Assessing Student Teachers

In their narratives the research participants presented three scenarios in the context of assessment. Firstly, there are research participants with clear assessment skills. They took courses in assessment and measurement at the postgraduate level. The skills are proving to be helpful in the context of assessing student teachers. The second position is that of research participants who have benefited from workshops on testing and measurement organised by the teacher education institution that they worked for prior to joining the Faculty of Education in this institution. The third scenario on assessing student teachers is that of a group that does not have this skill. It was revealed in Chapter 5 that this need has to be addressed.

Clearly there is tension between what the research participants know about assessment and practice. There is a clear connection between skills attained in an academic institution and the ability to apply that skill in the real context of assessing student teachers. The common practice is that of a pencil and paper mode of assessing student teachers and perhaps teaching practice. The use of a pencil and paper mode has been alluded to in Chapter 5 in particular. In this chapter I refer to researchers who refer to assessment in teacher education as assessing content. In fact their examination papers are a true reflection a bias towards pencil and paper mode of assessment. An exception was noted where only one research participant, while using a pencil and paper assessment required student teachers to, instead of recalling content, apply their knowledge in analysing scenarios. The finding that the research participants lack assessment skills has implications for teacher educators.

Firstly there is an acknowledgement of the need to be equipped with testing and measurement or assessment skills. This acknowledgement is indicative of the extent of the problem. Assessment is a grey area for teacher educators teaching in this faculty; they need to sharpen their skill in this area.

Secondly, the mode of assessing student teachers while on campus needs to be reviewed. The literature referred to in Chapter 5 cautions that passing grades in content courses cannot be taken as evidence that a future teacher adequately understands the facts and principles of the school subjects in the curriculum that he will be working with. There is therefore a need for teacher educators to review the assessment practice commonly used in their programmes. An example is that of using portfolio assessment that would deeply involve the learners in their own learning. Exploring the involvement of student teachers in their own learning could, among other avenues be dealt with during teaching practice. During teaching practice student teachers have an opportune moment to reflect on their own teaching and what they would have learned in the process of learning to teach.

## 6.1.8.1 Students' Activities in Real Classroom Situations

This study has revealed that student teachers' activities are those that are initiated by the teacher educators. One of the interactive methods of teaching that is commonly used is the question-and-answer method. The flipside of this activity is that students, among the many activities in which they engage, include answering questions mainly from the teacher educator, and to a less extent questions from their own colleagues. The practice followed, whether intentionally or unintentionally, promotes dependency on the part of student teachers. There are implications here too.

In the first place involvement of student teachers in teaching about the pedagogy of teaching should, in a typical teacher education context, go beyond just involving them in classroom-based activities, most of which are not that challenging.

In the second place the literature review has revealed that researching with student teachers, can promote both the teacher educators' teaching capabilities or potential, their metacognition and metalearning abilities as well as instil a research culture in student teachers. This would be a culture of undertaking action research to improve their own teaching; a culture that, if initiated in a teacher education programme, could be pursued by the student teachers once qualified to teach.

In the third place, involving student teachers in research work, especially at the postgraduate level, has been researched by numerous researchers as alluded to in chapters 3 and 5. One of the cases discussed in the said chapter is where postgraduate programmes serve as platforms for joint research involving, among others, student teachers. A similar culture, I believe, can be built even at undergraduate level given that most programmes in my institution are at undergraduate level. Teacher educators would probably learn from research in which student teachers also play a significant role.

In the fourth place and as opposed to the routine of seeing teaching practice as a student teacher activity that teacher educators observe and evaluate, there is a need to consider shifting from this paradigm. There are possibilities that new practice would benefit both the teacher educators and the student teachers in a practice that deplores their involvement in evaluating their own teaching. Given such an opportunity, student teachers would probably be in a better position to view teaching differently from the current position in which they act mainly as recipients. Teacher educators on their part would reason about their own practical knowledge as opposed to constantly referring to teaching practice scenarios or research on teaching undertaken by teacher educators elsewhere; an idea that is good for purposes of learning from others. However, while such ideas are good there is a need to use our own expertise and own scenarios based on one's own practice.

## 6.1.8.2 Use of Instructional Media

Very clearly teacher educators strictly adhere to the use of conventional instructional media, mainly whiteboards, textbooks and to some extent overhead projectors. The latter is the only electronic and probably the only contemporary instructional medium used, and then by only two of the research participants. Other than these, some teacher educators make reference to the Internet facility, indicating that it provides ample materials that could be downloaded and used. While studying the curriculum documents and course outlines it became apparent that library materials in the form of books and readers are the major reference points.

The fact that most teacher educators, with the exception of two who developed and used their own teaching modules or games, preferred to use conventional media points to a failure to challenge student teachers to create their own teaching materials.

The fact of the matter is that the National University of Lesotho's Faculty of Education is, as was articulated by the research participants, lacking in modern technology. However, relying on conventional teaching and instructional media has serious implications for student teachers too. It is most likely that student teachers will themselves continue using teaching materials with which they are conversant and will hardly challenge their students to be creative in their own learning environments.

### 6.1.9  Construction of Professional Knowledge

This study to a large extent illustrates that teacher educators have learned the pedagogy of teacher educators from practice. I reiterate this point in this section to extend my argument that learning the pedagogy of teacher education does not end in the teaching arena only. Constructing professional knowledge, while it could be more challenging cognitively, is yet another avenue from which teacher educators would continue to learn the pedagogy of teacher education. I argue this point because I strongly believe that the construction of professional knowledge requires teacher educators not only to think about teaching; it also requires them to construct knowledge through research for purposes of creating new knowledge and learning from that experience. It would be an experience that would be based on concrete research experiences. Conceptualisation of a new paradigm as I suggested earlier would benefit from engagement in research to inform the paradigm before shifting to it.

### 6.1.10     Constructing Personal/Professional Philosophies

Teacher educators construct professional knowledge to some extent. It has been found that they can comprehend what construction of knowledge entails. It has further been established that some have constructed individual professional philosophies but others have not. That is, even those who affirm that they had professional philosophies and actually articulated them spontaneously, only to disclose later that these were not documented, confirms the notion that having an individual philosophy could be considered one of the many outputs of the construction of professional knowledge. Clearly the challenge is for teacher educators to concretise what they consider to be their philosophies as this might guide the way in which they enact their professional knowledge.

### 6.1.11 Production of Professionally Developed Documents

It was evident that teacher educators have to adhere to the principle that there should be curricular documents, even if only in the form of course outlines. All teacher educators had developed course outlines and used examination papers as instruments for assessing student teachers. There are some consistencies with the course outlines; they spell out goals, objectives, content, pedagogy and assessment. It is under the content section where teaching and learning materials are indicated.

It is also evident that pedagogical content knowledge, even to one research participant who very strongly made reference to it as the concept that informed his professional philosophy, is not included in any of the course outlines. Similarities in the course outlines clearly illustrate the line of thinking followed by the majority of teacher educators. Examination questions, with the exception of one subject, mainly focused on student teachers' content knowledge.

Although my initial plan was to analyse materials other than the curricula as indicated in Chapter 5 of this thesis, this could not be pursued due to the fact that only two out of eight had developed modules for use by student teachers or for teaching purposes. The third developed games for the teaching of Mathematics. These games were intended to enable student teachers to learn to use them and to learn to create some for future use. There is a relationship between people who have developed materials for use during teaching. In one case where student teachers were assigned assignments to study and analyse cases presented in the module, it was clear that the materials were used to help students to learn to become critical of real life incidences. These cases, I want to argue, help student teachers to see psychology in the context of their everyday life.

There is therefore a clear link between the narrative and the lessons observed. In the Mathematics lessons the concerned research participants had learned how to develop teaching and learning materials during her PhD studies. This is something she shared during the narrative and was observed practising it in her teaching of student teachers. Here is an individual who used knowledge gained in an academic world to inform the practical world.

In the second case the research participant had made it clear in her narrative that she had at least three exposures in as far as developing teaching and learning materials was concerned. In the first instance she, together with colleagues at the Lesotho College of

Education, was introduced to the idea of developing Self-Instructional Materials, an idea that she applied as a Science teacher then. She further indicated in her narrative that she had other opportunities for developing teaching and learning materials; at the national and regional levels, science teachers had an opportunity to write Science books. Her recent experience was during her sabbatical leave in one South African University where it was mandatory for her and colleagues to develop modules for use by student teachers. The exposure experienced by this particular research participant clearly illustrates the magnitude of learning at work and taking that as part of life by developing materials for use in her current teaching assignment.

While other research participants in narrating their stories made reference to developing teaching and learning materials, these were not in the context of teacher education. Most importantly, other than the three mentioned here, the rest of those who indicated they had developed materials did not have any materials developed for use in their teaching of student teachers. Their experience of developing materials in other context was definitely not transferred to the teacher education context.

The major implication here is that teacher educators need to develop materials for use by student teachers or for modelling the idea of creativity to own student teachers. They themselves have acquired the skill mainly in the world of work and by actually developing the needed materials.

Participation in conferences or professional fora which was mentioned in the narratives by research participants was considered an enriching exposure. Emphasis was on the papers that they prepare and present in the conferences and the benefits accruing from meeting professionals from other institutions. However, in practice none of the teacher educators referred their student teachers to materials they themselves developed. This gap can be easily addressed by requiring student teachers to read and critique materials, including conference papers developed by teacher educators. Such an activity could encourage student teachers to develop writing skill and critique locally developed materials.

It is in the literature chapter that I make reference to an understanding by some educational researchers that constructing professional knowledge has connotations of learning. Some of these researchers refer to a communal journey in which individuals have the opportunity to discover their identities to the extent of constructing their own life trajectories and in the process learning from such experiences.

My reference to the said researchers here is specifically because the research participants, by referring to the lack of collegiality in their institution, implied that teacher education is a lonely field. However, some participants suggested that co-teaching could serve as a strategy for promoting collegiality. While this view is justifiable, engaging in joint research with colleagues could serve as an avenue for creating new knowledge or *actionable knowledge*. The purpose as purported by some researchers would be to contribute towards enhancing professional learning. An additional benefit in my view would be the provision of lessons that could inform teaching. In as far as constructing professional knowledge is concerned, the implications for the teacher educators in the institution in which the study was carried out are many.

Firstly, there is a need for the Faculty of Education at the National University of Lesotho to rethink its core business. The major challenge is ensuring that student teachers who enrol in this Faculty are helped to move from the dependency syndrome resulting from the transmissive methods of teaching to independent learning. The focus should be on cultivating the essential components of teacher educator professional development.

Secondly, there is a need for teacher educators to articulate their philosophies, document them and develop principles to guide their realisation. A learning teacher educator would not have a never changing philosophy or permanent principles to be applied to all groups of student teachers. Reflecting on the philosophy and rethinking own principles would allow teacher educators to think constantly about what they are learning from applying their philosophies and from implementing their principles to different groups of student teachers who join teacher education every academic year and enter with varying characteristics and expectations.

Thirdly, being explicit about professional philosophies and principles directly impacts on teacher educators' construction of what other researchers have labelled *constructing a personal pedagogy*. Constructing a personal pedagogy implies that teacher educators would be reflecting on their experiences and finding solutions to challenging teacher education endeavours. Most importantly they would find their unique areas of expertise or what they are good at.

In the process of addressing issues pertaining to teacher educators, they will probably learn more about teacher education and in the process enrich their practical knowledge. In this regard the wisdom of practice/phronesis will be explicit to all. Perhaps teacher educators may be attracted to the idea of documenting their accumulated practical

knowledge as was the case with Lee Schulman's 2004 work. He found it worth sharing his life as a professor of education in his book: *The wisdom of practice: essays of teaching, learning and learning to teach*. There are benefits of sharing experience as the future teachers may, while learning from such experiences be motivated to engage in similar if not best practices.

Sharing experiences could provide lessons to share with colleagues and students to the extent of building case studies for the teacher educator profession. I have learned from the literature that other professions particularly learn from cases documented by professionals in similar fields.

Finally, it was found that research was considered to be one major area where the research participants felt they had opportunities to construct professional knowledge. However, the research studies in which they were involved appeared to be either those they undertook during their graduate studies or commissioned research. In practice and as alluded to earlier none of the research participants undertook research on their professional activities. As a result undertaking research to inform practice was found to be a major gap for these teacher educators. Yet, if research in one's own area of specialisation was the norm, it could, more than informing practice contribute to the construction of new knowledge.

Undertaking research at postgraduate level and using it in context, as some of the research participants claimed, is a worthwhile practice. However, research undertaken at postgraduate level cannot help resolve the need for research undertaken at this level. There definitely is a need for these teacher educators to shift towards addressing this gap.

### 6.1.12 Modelling Professional Knowledge

Teacher educators are familiar with the concept of modelling in the context of teacher education. However, the study established that modelling professional knowledge in practice is a complex undertaking and an idea that would require more than just being conscious of modelling as a concept but actually living the intentions of modelling. Modelling professional knowledge is more than inspiring student teachers to act and/or behave in certain ways, illustrating being a professional or engaging in unique ways peculiar to teacher education.

This study established that there are some activities that could be linked to modelling, including teacher educators' activities of giving feedback, actually spelling out the intention to demonstrate good practice and encouraging student teachers to behave in similar ways. However, expecting student teachers to share the same sentiments to the extent of emulating their teacher educators could not be established. Very few teacher educators who participated in this study claimed that they consciously modelled professional knowledge in practice.

I have included implications of this study in the relevant sections of this chapter. However there are other implications which need to be reflected separately from those infused in the said sections. These are the implications of the study in a broader context of education.

## 6.2 Challenges of this Study for Teacher Educators and their Professional Learning and Development

The findings of this study are a valuable contribution to the body of knowledge of teacher educator professionalism. The study has revealed the sources of and construction of professional knowledge and how these are reflected in the teacher educator's education practice. It has become clear that the kinds and levels of quality of the sources (or lack thereof) of professional knowledge have a corresponding effect on the quality of the teacher education practice that the teacher educators engage in. The teacher educators who participated in this study have, though informally, started their work as teacher educators through being involved in the art of teaching teachers, albeit with some mentorship for some and none for others.

An example of one of the teacher educators who persistently used interactive methods of teaching has been alluded to in the discussion chapter. A positive correlation between her postgraduate thesis and her interactive methods of teaching seems to exemplify enacting a constructed professional knowledge. In this regard this particular individual seems to illustrate the epitome of having acquired professional knowledge through a formal construction of such knowledge in undertaking research required for the fulfilment of a postgraduate degree and coming to live that research. This is a true example of how episteme and phronesis can be made to complement each other.

It is evident that if professional knowledge has been constructed by the teacher educator through a formal research programme that there could be a significant difference in the

quality of teacher education practice compared to a situation where such construction has not been realised. The case being cited here implies that it is possible to break the mould of this apparently inescapable dimension of teaching practice whereby teacher educators tend to use one method of teaching; a transmissive mode of teaching.

However, the finding that illustrates a combination of propositional and practical knowledge is not necessarily a logical conclusion, given that in practice the opposite has been found to prevail for the majority of the research participants. An important revelation though is that the practice of this individual has exhibited some level of quality which could be her level of intuitive awareness. Secondly, and with regard to others, what matters is the confirmation that the level and the quality of the sources of professional knowledge of teacher educators are reflected in the quality of their teacher educator professionalism. Based on examples such as the one discussed above, it is apparent that the message to teacher educators as indicated in Chapter 3 is that they should *avoid pitfalls and demand professionalism.* In demanding professionalism the call is for teacher educators to strive for the provision of quality education.

The question that could be asked here is what should be regarded as constituting quality sources of teacher educator professional knowledge and its construction that will reflect the required high quality teacher educator professionalism. This question is not necessarily the focus or objective of this research. But as this research progressed and approached its end my concern was aroused by a persistent conventional perception that teacher education is to teach teachers to teach. This particular issue has been questioned by some educational researchers. Therefore, inadequate and outdated deeply ingrained mental models of what education actually is need to be addressed.

## 6.3   Implications of the Study

Discernible from a study of this magnitude, and based on the numerous observations of practice, is that lessons have been learned and valuable experiences obtained. Additionally, numerous impressions are left with both the researcher and the researched teacher educators. Most importantly, I assume that a study of this magnitude has implications for practice and that possible research is likely to emanate from where I left off. There are therefore implications for the core business of teacher education and future research.

### 6.3.1 Rethinking the Core Business of Teacher Educators

In undertaking this study I established that, in practice, very few teacher educators challenge student teachers to the extent of providing them opportunities to construct knowledge. Changing the current practice so that the majority adopt a different paradigm, the Faculty of Education at the National University of Lesotho has to opt for rethinking its core business. The major challenge is ensuring that student teachers who enrol in this Faculty's programmes are helped to move from the dependency syndrome where they seem to learn mainly from the didactic methods of teaching to independent learning. Thus, the observations of the teacher educators enacting their practice have revealed that most students rely heavily on teacher educators. The observed situation contradicts the fact that teacher educators themselves gather their professional knowledge from being immersed in the actual teaching of student teachers as illustrated by the cumulative model.

Therefore, teacher educators firstly have to rethink what their core business should be and it is incumbent upon them to challenge their practice. Some researchers argue that since teaching is a paradoxical profession it is expected to create human skills and capacities. Thus, in the real world of the work, teacher educators have to consider the consequences of their current practice in a world that is evolving.

Secondly, in rethinking the consequences of their practice, they could design and operationalise powerful learning environments to ensure the highest possible quality of learning by student teachers and, by implication, students in the school system. Adopting this frame of thinking would require teacher educators to shift from the paradigm that persuades them to use teaching methods that are transmissive to facilitating learning. Furthermore, that adoption would require teacher educators to rethink the way in which they present content knowledge in teacher education programmes.

In concluding this section of chapter 6, I want to argue that the nucleus of rethinking the role and/or business of the faculty is considering a different learning task. The major challenge is ensuring that student teachers engage in the highest possible quality of learning and in so doing would be helped to produce the learning outcomes, and take advantage of opportunities that present themselves in the teacher education arena. This cannot be a once-off strategy but will have to be a necessary practice of all teacher educators. The Faculty might be required to develop a philosophy that will embrace

learning as key to teaching *teaching.* In such a context, they would need to design and operationalise the best possible strategy of a *powerful learning environment*. Adopting such a strategy would lead to structuring the environment so as to, among other things, ensure that the intended outcomes are achieved.

Additionally, in undertaking the study I have found that while being immersed in teaching, some teacher educators have come up with different styles of teaching. Most crucial is that they have managed to honour the mandate of teaching. However, while they have themselves survived through using the professional knowledge they have acquired in the world of work, the tendency for the majority has been to teach student teachers in the way they themselves were taught. In the process they have followed a paradigm that perpetuates epistemic ways of teaching and learning that fail to recognise that student teachers should be allowed to learn in the best way possible for themselves.

Therefore, moving from this practice implies that teacher educators would be considering adopting the proposed strategy or embracing the model of facilitating learning as advocated for by advocates of learning. Adopting the proposed model implies that they, and eventually their student teachers, will emulate strategies of teaching that recognise and encourage the potential in students to learn in ways that are meaningful to them.

### 6.3.2  Developments in Education

The literature chapter presents some researchers' views that point to contemporary research in learning and teaching. In particular, instructional psychology, instructional design and instructional technology propose new theoretical frameworks in the design, implementation and evaluation of powerful learning environments. This view has prompted the realisation of what the core business of education and subsequently that of the teacher educator entail. It is to design, operationalise or implement and maintain the best possible learning environment in order to ensure the highest possible quality of learning.

Developments in all the mentioned intersecting research fields are obviously characterised by similarities and differences. Although there are differences, it seems as though there is some consensus about what has become a matter of primary importance. Some researchers whose work appear in Chapter 3 of this thesis argue that it is appropriate and important at this point in time to answer the question on how to

design and develop powerful learning environments in an efficient and systematic manner. Designing powerful learning environments should ensure the highest possible quality of learning by the learner.

This study has revealed that one of the benefits that research participants have enjoyed is attending short-term training or participating in conferences. However, the extent to which this has contributed to their professional development is uncertain; this is because it has been shown that these short intermittent events that do not completely engage the "learner" personally, has at most only a marginal influence in a possible transformation of the learner or in this case the professional.

The major finding of this research is that the research participants have learned to teach teachers mainly according to existing education practices which represents only a perpetuation of existing education practices. Merging these experiences with traditional existing theoretical disciplinary content renders a very unsatisfactorily result regarding learning quality and the quality of education. This is what I am suggesting is the major outcome of this study.

Consequently, teacher educators should rather be challenged to engage in research within the demanding and innovative contemporary discourse in education that has as its focus to design, operationalise and maintain powerful learning environments. Thus, to achieve the highest possible quality of learning should become a lifelong pursuit for teacher educators. What follows may therefore be the essential components that should be the focus of teacher educator professional learning and development. Subsequently teacher educators should engage in their own research for purposes of the construction of their own professional knowledge.

> **Essential Components of Teacher Educator Professional Development**
>
> Personal development - Maximising personal potential in all domains (PQ, IQ, EQ, SQ)
>
> a. Cultivating moral character;
> b. Exercising freedom and power of choice;
>
> Professional development – Maximising professional potential: cultivating professional character through:
>
> a. Designing, maintaining and assessing the most powerful learning environments for teachers possible in practice;
> b. Continually constructing a practice theory for professional development;
> c. Engaging in a dynamic reflective practice to become a reflective practitioner;
> d. Engaging as much as possible in action (work-based) research of self-study research;
> e. Designing real-life challenges for student teachers through which they will learn how to design real life challenges for their learners.

## *6.4* **Conclusions and the Thesis**

I am, in bringing a closure to this study, highlighting the conclusions drawn and possible way forward in the context of teacher educators who participated in this case study. The literature reviewed has persuaded me to imagine that, while this study focused on the National University of Lesotho's Faculty of Education, other teacher educators may find it a relevant study to use in their own context.

### *6.4.1* *Conclusions*

In collecting data, analysing and scrutinising the results, it became clear that a study of this nature could not cover a number of issues, no matter how comprehensive. Two issues that seem valid include documenting teacher educators' profiles and approaching research on teacher educators in a manner that they would be part of such an innovation in their own context.

It has emerged that this study provided, to a large extent, an opportunity for teacher educators to reflect deeply on their own teaching, especially at the time that they narrated their stories. A critical issue that emerged is that none of the teacher educators who participated in this research ever studied their own teaching practice. Yet, as they

shared their lived professional lives it was clear that the study had touched on what could, metaphorically, be considered a 'gold mine' of information, which, when documented, could be valuable to the teacher education field of study.

The study has therefore confirmed that teachers or teacher educators in this context privately hold on to professional knowledge, or, as some researchers who study teachers' life histories have proved, professional knowledge remains hidden or tacit; yet it needs to be made public. Making their sacred beliefs public could benefit more teacher educators who enter teacher education institutions. Therefore there is a need for research of a self-study nature to be undertaken by the teacher educators themselves.

The implication of carrying out studies themselves on their own work would be one of the many ways through which teacher educators could better understand their teaching practice. Following a self-study approach could provide them with an opportunity to research their own field of study for its betterment. Researching their own practice could help them nurture action research among their own students, and to a large extent promote researching own professional activities. Therefore consistent reflection, which was mentioned by some of the participants, would be undertaken systematically.

Additionally, a study that thoroughly analyses teacher educators' profiles could highlight their similarities and differences, while they, for their part, could tap on the strengths held by each. A community of teacher educators committed to improving their professional knowledge would probably emerge. That might be a community that will begin to establish a knowledge base on teacher education in the context of Lesotho.

Although there are critiques of current efforts by teacher educators to research the discipline, I adopt what some of the researchers referred to in the literature chapter suggest. In practice, teacher educators should function simultaneously as both researchers and practitioners. This would seem to be an important goal and a possible research topic for future research. Teacher educators have to research their practice if they are to construct professional knowledge in the context of teacher education.

### 6.4.2  The Impact of the Study on the Researcher

During the initial stages of engaging in this study I was emphatic about where teacher educators draw their professional knowledge from, given that they had not undergone any formal education on training student teachers. I close my research with new knowledge: practitioners learn more from experience. Three researchers stand out for

me: Eraut (1996) Clandinin and Connelly (1995), and Jackson (2003) all of whom strongly argue that practitioners accumulate experience and that experience enables them to operate holistically in their own situations. I have come out of this research a different person. I have, based both on the findings of this study, experience during the process of undertaking the study and deep introspection on how I conduct my own teaching, started changing my style of teaching.

As a researcher I have discovered a number of issues that have emanated from engaging in this study on sources and the application of professional knowledge among teacher educators. I have drawn some conclusion and have set directions for the future education of student teachers as well as possible research that could be undertaken in Lesotho teacher education institutions. The suggestions are indicative of new developments in teacher education that call for teacher educators to rethink their teaching. The suggestions further indicate that teacher educators should begin to consider engaging in research that might impact on the quality of their own teaching and consequently that of their student teachers.

The research participants on their part had an opportunity that they applauded; this was an opportunity of thinking more deeply about their work as teacher educators. Asking for the video-taped lessons and expressing the feelings of having to reflect on their experience are signs of people who could, based on this study, begin to think about how they might improve their work of teaching *teaching.* Most significantly, thinking deeply about their practice has consequences for professional knowledge gained over the years.

I have learned that the practical experience that the teacher educators have gathered throughout the years of educating student teachers should have afforded them an opportunity for appropriate reflection. That reflection should have inevitably provided them an opportunity to construct knowledge. The constructed knowledge would have come from their experience. As alluded to in Chapter 3, there is tension between epistemic knowledge and phronesis in that the former is based on, among other things, scientific knowledge and therefore remains rigid. The later is knowledge acquired through enough appropriate and authentic *experiences* and enriched, adapted or changed through reflection and authentic research practice.

Additionally, I have learned that in order for teacher educators to move from what they have learned from experience there is a need to pursue contemporary educational

development if we are to ensure the best and highest quality of education. The major challenge for teacher educators based in my institution is to engage in the risk of transforming their practice. They have to design and implement teacher education and teacher educator education programmes. Such programmes should extend beyond the current practices that do not seem to recognise the contemporary education ethos and the potential and the ability that student teachers and teacher educators have. Both teacher educators and student teachers have to explore various ways of learning for the betterment of the Lesotho education system.

I refer here to contemporary education that requires the highest possible quality of education. Contemporary education calls for a radically different education from that which governments and states policies require and advocate. In essence the call here is for teacher educators to engage in formal research and not so much in formal training along the lines of essential components of the block which could be entitled "teacher educator professional development".

I have alluded in Chapter 3 to the fact that some researchers argue that engaging in learning that will result in challenging the wishes of those who employ teachers may seem a very risky business. Thus, according to some researchers, this is particularly so in the current climate where there is an increasing gulf between the ways in which the factory model of schooling is conducted and the needs and interests of learners in the new millennium schools are allegedly designed for. These arguments are raised in particular by the researchers: Groundwater-Smith and Mockler (2009).

I have further learned from reviewing the literature, particularly the work of Groundwater-Smith and Mockler, (2009) that some researchers promote the perspective of courage that teacher educators operating in the context of education need to consider and perhaps adopt. There is a need for courage to have concern for procedural justice directed to moral outcomes guided by societal norms and principles; engage with teaching's moral purpose that demands authentic change measures; be truly professional in undertaking practice in order to challenge the status quo continually to improve the quality of education; be progressive and take a transformative and libratory stance; tolerate ambiguity; have hope; ask the difficult questions; and propose challenging solutions (Groundwater-Smith and Mockler, 2009, pp 31-32).

Having studied the work of Groundwater-Smith and Mockler I realise that acquiring the virtue of courage has to be part and parcel of teacher educator professional knowledge.

The source of courage is the ethical competence of moral authority in pursuing the highest possible authentic quality in education through consistent inquiry. Utilising this knowledge requires the virtue of integrity and selflessness to fulfil a higher purpose that cannot be replaced by anything else: That of the authentic transformation of the human being in becoming who he or she is supposed to be.

## 6.4.3 The Thesis

Two distinct sources of professional knowledge have come to the fore. Teacher educators receive propositional knowledge from formal teacher education programmes. An immersion of teacher educators in a professional landscape, a landscape in which their mandate is to teach student teachers, provides them with ample opportunities to learn from an array of experiences. They accumulate professional knowledge as they learn to teach, construct, apply and model it in the context that is uniquely teacher education. As is the case with people who learn the vocabulary of a second language in a natural setting, so do teacher educators learn to teach teachers in natural settings. However, failure to take advantage of the situations and interrogate lessons emanating from practice for purposes of coming up with experienced-based professional knowledge delimits opportunities for these professionals to develop in distinct ways. I conclude by recognising the work of Groundwater-Smith and Mockler (2009) who conclude their work with their own call to action and

> for the teaching profession itself as well as those who serve it, such as teacher educators – to pose a challenge to the compliance agenda in education in all its manifestations. Such a challenge is not likely to be easy, swimming as it is against the tides of compliance, instrumentalism, fundamentalism and neo-liberalism which categorise the contemporary age. Given what is at stake, however, we can scarcely afford not to work vigorously and strategically to close the gap between contemporary policy and practice and truly generative and transformative education (p139).

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