

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,

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 ‘Masethabatha 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 ‘Masethabatha 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 ‘Masethabatha, 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. Hoangoang 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 includes 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 'Masethabatha 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 understand 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.

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 level*".

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:	4 th 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:	4 th 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:	4 th 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:	4 th 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:	2 nd 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 level.”

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.