Exploring Pre-Service Teachers’ Perceptions of Teacher Qualities in Secondary Education: A Mixed-Method Study

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Abstract

A significant gap in teacher education literature is the lack of ‘voice’ of the pre-service teacher Jegede et al., (2000). Although discourse in teacher education details: a number of learning theory models and methods of knowledge acquisition; the importance of pedagogical practice; the development of personal professional values and beliefs; and, the development of pre-service teachers’ professional identity only rarely is the pre-service teachers’ perspective sought (Bransford et al., 2000; Butler 1992; Combs et al., 1978; Duffy 2009; Solomon et al. 2004; Porter & Brophy 1988; Ferguson & Womcak 1993). This suggests that much of the discourse mirrors the understandings and practices of experts rather than pre-service teachers. This study focuses on the pre-service teachers’ perceptions of valued teacher qualities as they progress to graduate teacher and aims to identify pre-service teachers’ perceptions of effective secondary teacher qualities (attitudes, knowledge and skills) as they progress through their four-year undergraduate degree.

A mixed-methods approach to the research design was adopted. Combining methodological approaches allowed for a more comprehensive collection of evidence providing a fuller understanding from which to address the research question. In clarifying the study’s findings, the mixed methodology revealed a range of assumptions about reality and knowledge that served to guide the construction of the research problem, choice of research methods and extended the breadth and depth of the enquiry. The pre-service teachers’ evolving beliefs on teacher qualities were viewed as being socially constructed with meaning created within their social context. A post-positivist perspective was taken, which assumes a scientific approach to research requiring that quantitative data be used in
a reductionist and logical way with an emphasis on empirical data collection. This was most suited to the multi-year, pre- and post-survey approach used in the study because it allowed the researcher to distil a large body of information into meaningful categories. To explore the pre-service teachers’ perceptions fully, this study also used focus groups and semi-structured interviews. The interviews were used to examine the views of teacher educator experts and pre-service teachers.

The complexity of the research question required the gathering of multiple forms of data from diverse groups. The mixed-methods approach of design and analysis was based on the Exploratory Design outlined by Creswell, Planto Clark, Gutmann and Hanson (2003, pp. 75–79). The interpretations of the combined quantitative and qualitative findings were categorised in a series of constructs, depicting aspects of pre-service teachers’ perceptions of teacher qualities over time including demographic influences, knowledge, pedagogy, interpersonal and professional qualities, notions of ‘the good teacher’, the developmental story and the behind-the-scenes influence of the teacher educators, and external factors.

The Shifting Perceptions Model that was generated from the research (see Figure 13.1) highlights the continuum of practice for the pre-service teacher. This model shows the pre-service teachers’ changing perceptions and allows exploration of the interactions and relationships between the constructs derived from this research. This model shows the transition of the pre-service teacher from somewhat egocentric to more student-centric as they progress towards becoming a graduate teacher.

The pre-service teachers’ prior experiences, age and gender influenced their perceptions. Perceptions were not fixed because their views (on knowledge, pedagogy professional and interpersonal qualities) differed in response to new learning or new
priorities. Learning for the pre-service teacher was developmental, moving from the focus on self to a deeper, more insightful ethical, professional view of themselves.

Further, the study revealed the complex nature of the hidden curriculum stemming from the teacher educators’ personal aspirations and external factors that affected course design. It is anticipated that the findings of this study will contribute to understanding the often-‘neglected’ voice of the pre-service teacher and will inform discourse on how to guide future teacher education.
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entry and editing, Katherine with drawing tools and Thomas with his talent for words and design.

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<th>Description</th>
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<tbody>
<tr>
<td>ACARA</td>
<td>Australian Curriculum Assessment and Reporting Authority</td>
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<td>ACSA</td>
<td>Australian Curriculum Studies Association</td>
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<tr>
<td>ACT</td>
<td>Australian Capital Territory</td>
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<tr>
<td>ANOVA</td>
<td>analysis of variance</td>
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<tr>
<td>DET</td>
<td>Department of Education and Training</td>
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<td>ESD</td>
<td>exploratory sequence design</td>
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<td>FG1</td>
<td>Focus Group 1</td>
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<td>FG2</td>
<td>Focus Group 2</td>
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<tr>
<td>ICT</td>
<td>information and communication technologies</td>
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<tr>
<td>MCEETYA</td>
<td>Ministerial Council on Education, Employment, Training and Youth Affairs</td>
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<tr>
<td>NCATE</td>
<td>National Council for Accreditation of Teacher Education</td>
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<tr>
<td>NSW</td>
<td>New South Wales</td>
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<td>NSWDET</td>
<td>New South Wales Department of Education and Training</td>
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<td>NSWIT</td>
<td>NSW Institute of Teachers</td>
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<tr>
<td>OHS</td>
<td>occupational health and safety</td>
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<tr>
<td>PCA</td>
<td>principal component analysis</td>
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<td>PCK</td>
<td>pedagogical content knowledge</td>
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<td>PDHPE</td>
<td>personal development, health and physical education</td>
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<td>PE</td>
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<td>PIK</td>
<td>pedagogical interpersonal and knowledge</td>
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<td>PPP</td>
<td>pedagogical professional practices</td>
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<td>TAFE</td>
<td>Technical and Further Education</td>
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Chapter 1: Exploring Pre-Service Teachers’ Perceptions of Teacher Qualities in Secondary Education: A Mixed-Method Study

1.1 The Purpose of This Study

This study aims to identify pre-service teachers’ perceptions of the qualities of an effective secondary school teacher (attitudes, knowledge and skills) as they progress through their four-year undergraduate degree. The study group selected for this enquiry was secondary personal development, health and physical education (PDHPE) pre-service teachers.

This study provides new information that expands the discourse around pre-service teachers’ perceptions of teacher qualities. There is limited education literature on the pre-service teachers’ perceptions of teacher qualities. According to Barnett and Coate (2005), ‘students as such are only minimally implicated in the conception of curricula. They come into play only as potential bearers of skills producing economic value rather than as human being in their own right’ (p. 24). The benefit of this enquiry is that recognising these perceptions enables reflection by researchers and educators on the shape of knowledge and practice in secondary teacher education in a more holistic manner. This includes the values and beliefs pre-service teachers bring with them into teaching and their changing ideas on what qualities are needed to be a successful teacher. There is limited literature on the impact of university courses in terms of developing pre-service teachers’ understanding of information on their changing or developing ideas on teacher qualities. Having an in-depth understanding of pre-service teachers’ beliefs assists teacher educators in the design of
teacher education programs, thus creating learning opportunities that are responsive to the needs of the pre-service teacher. Academic frameworks attempt to dictate the qualities good teachers should develop; however, there is a lack of information on how pre-service teachers acquire or value these qualities. Loughran (2006) highlights a need for teacher educators and pre-service teachers to be aware of and sensitive to the types of changes likely to be experienced within the profession (for example, social inequity, diversity of the school population, Australian National and State Education agendas and goals). Awareness of the beliefs of pre-service teachers in teacher education is important in assisting pre-service teachers to deal with these changes as well as addressing the present higher education goals of access, success and retention of new teachers (Bradley, Noonan, Nugent & Scales, 2008). This study aims to identify specific perceptions and track possible changes that occur as pre-service teachers’ progress through their course of study.

The significant gap in the literature is the limited data on students’ perceptions of what qualities of an effective secondary teacher they see as important at specific times in their degree, including the relationship this has with their coursework and interpersonal development. The value of this information is in its use within course development and the construction of learning strategies that better support pre-service teachers’ evolving capability as effective teachers. Loughran (2006) identifies the importance of pre-service teachers having the opportunity to learn, unlearn and re-learn to better know themselves and better understand why they teach in a particular way. Similarly, teacher educators need literature on pre-service teachers’ perceptions during the learning process, to better support them in the development of their professional identity and professional practice. This is supported by Pajares (1992), who argues that:

The beliefs that teachers hold influence their perceptions and judgements, which in turn effect their behaviour in the classroom (therefore) understanding belief
structures of teachers and teacher candidates is essential to improving their professional preparation and teaching practice. (p. 307)

Pajares (1992) makes a further observation that the beliefs about teaching are ‘well established by the time students get to college and include ideas about what it takes to be an effective teacher, how students ought to behave and though usually unarticulated and simplified, they are brought into teacher preparation programs’ (p. 322). Understanding pre-service teachers’ perceptions is essential for scaffolding pre-service teachers learning.

1.2 The Context for This Study

The breadth and depth of literature around the topic of teacher qualities is extensive. Literature in this area is eclectic, from authors situated in a range of discourses and studies in teacher education. What is significant in teacher education literature is the lack of the pre-service teacher voice in these matters. There is an emphasis on research focusing on the experienced teacher or the expert. It is the experts’ views that are often adopted as a measure of teacher quality. For the purpose of this study ‘teacher qualities’ are defined as those characteristics – skills, knowledge and attitudes needed to be an effective secondary teacher. The present debate around standards of practice, both in terms of how to measure teacher quality and what teacher quality looks like in the pre-service teacher, is significant for teacher education, future teacher preparation and practice. The broad range of diversity in people entering teaching reflects the increasing diversity of our school communities. As such, standards of practice in terms of a guide to competency for the pre-service teacher, and the reward and recognition for an experienced teacher, need to consider the voices of all involved, including that of pre-service teachers.

Complexity exists in identifying pre-service teachers’ perceptions of the role of self or identity that they bring into their course of study. The importance of pre-service
teachers’ perceptions and the impressions they have of their own professional development is pertinent to this enquiry. Studies on teacher development suggest that the pre-service teacher develops from an initial preoccupation with self to a focus on tasks and teaching situations and finally to a consideration of pupil learning (Burn et al., 2003). This notion contrasts with the findings of Burden (1990) who identified that pre-service students had a high level of concern for pupils’ learning and an awareness of the complexity of teaching from very early in their training. This contrast highlights the implication and challenges for teacher educators in terms of course structure and curricula and the need to be responsive to individual learners.

This research will have implications for course structures and pre-service teacher development throughout their program of study and consider whether the pre-service teacher curriculum takes into account the complexity and diversity of pre-service to graduate teacher development and identity. This research will also have implications for the ways both university and school-based teacher educators work with pre-service teachers to benefit their development.

The importance of a broader focus on the understanding of pre-service teachers’ professional identity and the pre-service teachers’ perceptions of the qualities of an effective teacher are connected to what they bring into the course and subsequent development is supported by Goodson (1995) for two reasons:

The first being that teaching is a good deal more than technical things we do in classrooms—it relates to who we are, to our whole approach. Secondly, that the interactive practices of classrooms are subject to constant change, thus the importance of the notion of practical knowledge and teachers voices and stories—a story is never just a story it is a statement of belief and of morality, it speaks about values. (p. 55)
The awareness of processes of enculturation or socialisation that the pre-service teachers bring to their course of study and encounter in their training as teachers needs to be emphasised in the discourse of teacher education and considered in course design and practice. This research aims to provide an opportunity to explore the pre-service teachers’ perceptions of teacher qualities at a time when teachers are being held accountable and having their work prescribed, evaluated and accredited.

Teacher education and education generally is undergoing rapid development in direct response to imposed national targets related to political agendas and student outcomes. The Australian federal government is exerting considerable influence and leverage in school education policies and in teacher education directives. Examples of policies that affect the present climate include the Australian Institute for Teaching and School Leadership (AITSL, 2011); the Australian Curriculum Assessment and Reporting Authority (ACARA) (2011); the Ministerial Council for Education, Early Childhood Development and Youth Affairs (2008, 2010) and the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) (2009). In response, state and territory agencies (for example, the New South Wales Department of Education and Training [NSWDET] and the Australian Capital Territory [ACT] Department of Education and Training [DET]) are modifying practice and developing accreditation schemes (for example, the NSW Institute of Teachers [NSWIT] and other state equivalents). Many of these processes are informed by the perspectives of experienced or expert teachers; however, the pre-service teachers’ perspective, that is, the observations of the next generation of teachers, does not appear to be included. A possible implication is that their recent extended experience as a student and their new experience as a pre-service teacher are undervalued. The pre-service teacher has a unique vantage point that is rarely considered in political, pedagogical and discipline-based debates (Welch, 2010).
The choice of the study group—undergraduate (PDHPE) teachers—is significant in terms of the context and the images that this group have of a good teacher. This was a restricted entry course attracting students who achieved high academic results and represented excellence in sports. This group’s particular cultural and belief systems, although viewed as typical to this subject area, represented success in the school systems. They present a useful guide and reference point for all secondary teachers. The reason why the perceptions of this group are important is that they are a representative sample of pre-service teachers in the education system. The development of new teachers, their conceptual frameworks and the role of socialisation is important in this study as it provides an understanding of what the pre-service teachers bring into the course. The study group’s perceptions as they progress from beginning pre-service teacher to graduate teacher over a four-year period is particularly relevant as it provides information on how to cater for the needs of pre-service teachers, thus maintaining high standards of professional practice in teacher education.

1.3 Major Themes and Debates: Teacher Qualities

The major themes that emerged in the literature around teacher qualities include the concept of teachers’ knowledge as a desirable quality. The difficulty in defining teacher qualities emerges as conflicting views around the nature of the knowledge base for teachers, often shifting from the mechanistic to humanistic view of teaching. This tension is increased when the diverse and varied collection of content covered in teacher education, including: knowledge of subject, cognitive psychology, developmental psychology, social contexts, teacher professional practice, learning theory and pedagogy, is considered. Compounding this tension is the more recent emphasis on mandatory areas of study for accreditation including literacy education, Aboriginal and Torres Strait Islander education, non-English speaking background education, special education, challenging behaviours,
classroom management, and information and communication technologies (ICT) (NSWIT, 2007). The increased complexity in teacher knowledge has contributed to an emphasis on process-product rather than process-content in teacher education (Gage, 2009). The pre-service teachers’ perceptions in terms of knowledge qualities becomes important, particularly as teachers’ knowledge is not absolute or complete because it continues to evolve and adapt, and changes with new contexts.

Limited literature on the pedagogical practices of pre-service teachers suggests that much of what we understand about the learning of pedagogy is based on the views of the experienced teacher. There has been an increase in emphasis on pedagogical expertise for the pre-service teacher linked to improving teacher quality and student outcomes. Much of the recent research in this area is grounded in the principles of productive pedagogy outlined by Gore, Griffiths and Ladwig (2006) and Bransford, Brown and Cocking’s (2000) research into how people learn and the design of the learning environment. Examples include the Quality Teaching Framework currently adopted by the NSW Department of Education (2003b); the Productive Pedagogies model used by the DET, Queensland (2002) and the Principles of Learning and Teaching used by the Department of Education and Early Childhood Development, Victoria (2004). These models are centred firmly on the philosophy that ‘it is the quality of pedagogy that most directly and most powerfully affects the quality of learning’ (NSWDET, 2003, p. 4). This has consideration in relation to pedagogy and authentic pedagogical practice required of the pre-service teacher. Learning about pedagogy is based on the ability to interpret the teaching experience. Thus, the importance of understanding how the pre-service teacher interprets pedagogical experiences becomes a pressing concern for teacher education.

The construct of professional and interpersonal practices and the moral and ethical consideration of the professional teacher is another theme emerging from the literature
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(Bayles, 1989; Beauchamp & Childress, 1989; Crawford & O’Neil, 2009). What the pre-service teacher values is important to this enquiry because it plays a significant role in designing teacher education coursework and professional practice experiences, and linking the two. An understanding of the professional and interpersonal qualities the pre-service teachers’ view as important is useful in identifying significant learning moments for the pre-service teacher. The interpersonal and professional qualities needed for beginning professional teacher involves detailed frameworks outlining professional and ethical practices. The teaching standards, NSWIT (2009) and the Australian Institute for Teaching and School Leadership (AITSL, 2011), provide published example of these. These models or frameworks outline key ethical and moral concepts that are deeply embedded in the work of the experienced teacher, rather than the pre-service teacher (Gewirtz, Hextall & Cribb, 2009; Noddings, 1992 & Sachs, 2003). Understanding what teacher qualities are most important to the pre-service teacher involves acknowledging the importance of their personal histories, what beliefs they bring with them into teaching, and the role of socialisation (Clark, 1988; Crow, 1987; Goodson, 1981; Knowles, 1992). Interpreting these perceptions and changes in belief systems over time requires an understanding of the role teacher educators’ play in reinforcing or promoting particular favoured teacher qualities. In this study, the views of the teacher educators were considered alongside the views of the pre-service teachers, providing a useful lens for comparing and interpreting the perceptions of the pre-service teachers.

1.4 The Situated Researcher

This study adopts a mixed methodology as it provides a practical mechanism for collating information from a large group within constrained time periods (quantitative analysis), and ensures that the findings were credible utilising complementary small group (qualitative analysis) triangulation. Further, it provides for the independent acquisition of
comprehensive bodies of evidence that are used together to clarify research findings. From a post-positivist perspective, the mixed methodology allows the researcher to consider the study of the ‘natural and social worlds’ utilising different criteria and ‘represent these multiple constructions adequately’ (Scott & Usher, 1999, p.150). However, the philosophical grounding for the study is that the pre-service teachers actively construct their understanding of the world within a social context, and that this understanding evolves throughout their teacher education program as a result of their experiences (a social constructivist epistemology).

This research methodology acknowledges the subjectivity of the researcher, in particular recognising that the way research practices are developed are based on personal and content-specific experiences in the field. This influences how the research is conducted, the design of the study, the questions asked, the analysis of the results, and what is learnt from the research process (Macfarlane, 2009). The reflective researcher recognises that conducting research may reshape their thinking and beliefs, and accepts that this is a valuable outcome of the research process.

1.5 Research Design

This enquiry used the Sequential Exploratory Design Method of Creswell et al. (2003). The purpose of the design was to develop a quantitative instrument that would trace the pre-service teachers’ perceptions of valued teacher qualities over the course of their degree. The intent of this design is that the results of the first data collection method (qualitative) helped to develop inform the second method (quantitative) (Greene, Caracelli & Graham, 1989). The first phase of the study was a qualitative exploration of the pre-service teachers’ beliefs around teacher qualities using open questioning in a series of focus groups. Data were collected from a subset of the participants in each year of the degree. Focus group work enabled pre-service teacher to use their voice to openly discuss
the attributes of a good teacher and discuss the teacher qualities that they valued. The responses provided the researcher with authentic, rich qualitative statements. Further the responses guided the design of the quantitative instrument utilised in the second phase of the study, by providing variables that were unknown but relevant to the study group. The instrument was administered pre- and post-academic year for each cohort in a four years course. Datasets were statistically analysed using SPSS (Version 16) software and interpreted in the context of the qualitative data from the original focus groups to ensure credibility of the conclusions. Additional qualitative data were collected through a series of semi-structured interviews with PDHPE teacher educators. These data provided a frame of reference for the interpretation of the findings from the pre-service teachers.

1.6 Research Questions

The aim of exploring the perceptions of the pre-service teachers and the teacher educators was to address the following research questions:

- Which teacher qualities were seen as statistically significant and referred to most often in the data at specific points in their course?
  a. Can this development of their ideas on teacher qualities be linked to specific educational experiences in their coursework and professional experiences?

- What perceptions did the pre-service teachers have in terms of the teacher qualities they most valued?
  a. Do pre-service teachers’ perceptions on the importance of particular teacher qualities change and develop as they progress through their degree?
b. What factors identified in the research influenced the change or development in students’ perceptions of teacher qualities?

c. How do students’ perceptions of the most important teacher qualities compare to the ideals and outcomes described by the tertiary educators in their course?

d. What underlying constructs exist, if any, in relation to pre-service teachers’ perceptions of teacher qualities, considering variations: within years, across years, gender, age, experience, and factors specific to PDHPE pre-service teachers?

1.7 Summary of Thesis Content

Chapter 1 introduce the study and provide the contextual and conceptual background to the enquiry. The chapter outlines the research purpose and its contribution to the field of teacher education. The introduction briefly outlines the mixed methodology approach adopted and the theoretical underpinnings, and touches on substantive themes and debates that appear in the literature. It establishes the significance of the study, the research questions and research design and links this to the literature and methodology.

Chapters 2 and 3 draw on a diverse range of literature around the topic of teacher qualities, which provides a framework for exploring the perceptions of the pre-service teachers. These chapters identify that the pre-service teachers’ voice is not apparent in contemporary debate. The chapters highlight the key themes in the literature including generic ideas on teacher qualities and common constructs referred to as teacher qualities—knowledge, pedagogy and interpersonal and professional characteristics, the moral and ethical considerations of the professional teacher and teacher identity. Chapter 3 expands on the idea of teacher qualities by exploring the concept of the good teacher and good
teacher practices. This chapter discusses the pre-service teachers’ development as effective teachers and refers to the role of teacher education in supporting this process. It includes literature that touches on the complexities of teacher education and concludes with the unresolved issues in teacher education discourse and how this study may help to further understanding in these areas.

Chapters 4 and 5 explain and justify the mixed methodology adopted in this study. The study’s research design is outlined and the mixed methodology is located within a constructivist’s epistemology with a post-positive theoretical perspective. The study involved a combination of methodological approaches and methods in the exploration of issues using quantitative (survey) and qualitative (focus group and interview) data collection and analysis. The chapter discusses Creswell et al.’s (2003) Sequential Exploratory Design Method and sequential data analysis. These methods were used for data collection and provided credibility, transferability, dependability and conformability; essential when using a post-positivist’s research approach to produce interpretations (Lincoln & Guba, 1985, as cited in Scott & Usher, 1999). This chapter discusses the choice of informants, the research methods, the ethical issues and the validation of the research processes. The process of data collection, data analysis using statistical software, and thematic analysis are covered in this section.

Chapters 6 to 8 consist of three main results sections. The first section outlines the descriptive content analysis from the initial focus groups. This provided illustrative statements from the open discussions and allowed constraint of variables for the development of the survey instrument. Following on is the statistical data collection from the survey instrument. This includes the factor analysis, demographic testing against the factors, pre- and post-testing against the factors and descriptive statistics. This forms a substantive component of the dataset for the study and provided a detailed overview of the
actual information the pre-service teachers’ provided that enabled the researcher to derive an understanding of their perceptions.

Chapter 7 captures the patterns and themes that were identified in the focus groups. The focus groups were divided into different categories, Years 1 and 2 (FG1) and Years 3 and Year 4 (FG2). Key ideas that emerged from the focus groups were compared and contrasted, and connected through the use of key phrases and comments to the statistical findings in the discussion chapter to support the interpretations of the quantitative data.

Chapter 8 presents the data from a series of interviews that were conducted to gain insights and understanding about the teacher educators’ views on teacher qualities. Three teacher educator interviews were conducted. Each of the interviewees was directly involved with teaching the pre-service teachers in this study and was responsible for key sections of their curriculum. Semi-structured interview techniques were used, employing similar questions to those used in the focus groups. These interviews provided significant insights into the personal narratives of the teacher educators and the experiences of the pre-service teachers in their classes would have encountered. Similar themes emerged from each of the interviewees, which provided a valuable lens from which to view and interpret the pre-service teachers’ perceptions. These data were not directly connected to the pre-service teachers’ data but served as an important framework for interpretation.

Chapters 9 to 12 discuss the findings from the quantitative and qualitative data and situated them according to the methodological perspectives outlined in Chapter 4. The discussion covered four key sections. The first two sections explore the pre-service teachers’ perceptions of teacher qualities and the concept of a ‘good’ teacher. This includes findings from the survey instrument and focus group reflections. Section three discusses the developmental story of the pre-service teacher, looking at the changes in perceptions and practices from ego-centric to student-centric.
The forth section refers to findings and discussion around the teacher educators’ views on teacher qualities and their aspiration for the pre-service teachers, drawn from the structured interviews. It includes a discussion on the external drivers that influence the pre-service teachers’ perceptions of teacher qualities over the course of the degree. Data was collected from the teacher educators and an internal and external review of documentation. The data included the teacher educators’ views and aspirations, curriculum design, unit syllabi and outcomes, university graduate attributes, state and Australian National Graduate Teaching Standards, and state Education Department content requirements. In summary, these chapters provide an overview of the analysis of quantitative and qualitative data collected from the participants on teacher qualities, connecting the different datasets and the literature to establish the key discussion ideas.

Chapter 13 discusses the study findings in terms of what can be learnt about the pre-service teachers’ perceptions on teacher qualities as they progress through their undergraduate degree. This chapter draws together the key themes from the discussions in Chapters 9 to 12. In drawing conclusions and recommendations, this chapter considers the methodologies, methods and philosophical underpinnings that surround the research interpretations. This chapter revisits the original research questions, formulates key ideas and findings that have emerged, and offers future directions and concluding remarks. This chapter reflects on the significance of this study’s findings for teacher education, developing teacher education policies and practice and possible future areas of research.

1.8 The Importance of This Study

This study makes a significant contribution to the discourse surrounding teacher education in Australia and the prevailing themes and arguments that influence teaching and education of future secondary teachers. Specifically, this study focuses on the perceptions of the pre-service teacher, the qualities they value, the beliefs they enter teacher education
with and possible changes that occur during their teacher education program. The study analyses the pre-service teachers’ views as they engage in the teacher education course and explores their beliefs in comparison with the views of their educators in the context of the literature. The findings of this study have implications for how to scaffold pre-service teachers’ learning, and how to educate future teachers. It explores the process of how best to link the theory in coursework to the practice of teaching and pre-service teachers own understanding of teaching. In this way teacher education adopts authentic practices and considers the priorities pre-service teachers place on particular teacher qualities. In engaging the pre-service teacher in the theory and principles of teacher education, it becomes apparent that teacher education must engage with the pre-service teachers’ prior understanding, emerging perceptions, their conceptual frameworks and their beliefs and values of teaching. However, how do we access this information if not through the pre-service teacher voice? The findings within this study have implications and applications for the development of evidence-based University policies, teacher education design, teacher education strategies and the accreditation of teachers.
Chapter 2: Teacher Qualities

2.1 Introduction

The purpose of the literature review is to acknowledge and analyse the literature around teacher qualities, the perceptions and understandings in the discourse on teacher education, most often cited by the expert teacher, and to situate this research in the existing body of work on teacher qualities.

Pre-service teachers are ‘insiders’. They enter teacher preparation with familiarities, strong images and episodes of teacher practice. According to Loughran (2006), ‘A consideration of their perceptions and the way they might affect their development as they filter, construct, adjust, adapt and adopt approaches to creating and using professional knowledge of practice in learning to teach is important for teaching about teaching’ (p. 115). This research will attempt to identify which teacher qualities are valued in teacher education.

The literature on teacher qualities is extensive and varied, often with a focus on experienced teachers or student outcomes. The literature review was organised into two main sections: common constructs identified as teacher qualities and the broader concept of the ‘good’ teacher. The literature was organised in this way as it provided the reader the opportunity to explore individual teacher qualities separate from the over arching image of a good teacher. Given the multifaceted nature of teacher qualities, it is often difficult for pre-service teachers and educators alike to identify the attributes of good teaching. This in turn creates difficulties in linking theory and practice. Developing a clearer understanding of pre-service teachers’ perceptions and experiences is significant for the development and accreditation of programs and professional preparation of teachers. Teacher qualities for
experienced teachers and pre-service teachers are similar; the point of difference is the value that is placed on particular attributes.

Perhaps the most pressing problem associated with identifying teacher qualities in pre-service teachers is the current debate around teacher standards. There is a conflict between purpose and understanding with political agendas supporting a trainer model or curriculum interpretations rather than the concept of reflective practitioners (Australian Curriculum Studies Association [ACSA], 2005). This is highlighted by Australian federal agencies stressing the importance of deepening understandings of teaching and learning through reflection and inquiry (ACSA, 2005). O’Meara and MacDonald (2004) refer to the initiatives in the area of standards for teachers as part of the discourse on professionalism, in contrast to preparing for quality teaching and enhancing student outcomes.

The search for demonstrated standards has become the goal of associations, registration authorities and education departments (MCEETYA, 2003). The problem for an undergraduate teacher course is that the end product is unfinished and only at the early stages of appreciating and attempting to meet these standards. The dilemma is in identifying potential and developing teacher qualities that need to be demonstrated rather than a checklist of standards that need to be reached for employment and/or registration in the profession (Raths, 1999).

This research will focus on pre-service teachers who had limited opportunity to test their teaching in ‘real’ school situations. The debate about whether a teacher is born or whether teaching is a learnt process poses a challenge for the research. Undergraduate students may already enter the course with qualities suited to the profession. The research explores how students use their education program and created learning opportunities to practice and build on their innate knowledge. The assumption is that individuals come into the degree ready to develop and demonstrate the qualities needed to be successful teachers.
It is thus important to consider the role of enculturation or socialisation of the pre-service teachers’ in terms of the type of teacher values or qualities they bring and how these might change and develop during their teacher education program (Koster, Korthagen & Schrijnemakers, 1993).

2.2 Teacher Qualities through a Constructivist Lens

The epistemological stance that underpins this research and thus provides the lens for viewing and selecting relevant literature is the constructivist belief that knowledge and meaning is constructed and that ‘different people will construct meaning in different ways, even in relation to the same phenomenon’ (Crotty, 1998, p. 9). The constructivist worldview has been chosen as the methodological framework for viewing and interpreting the perceptions of the pre-service teachers and the teacher educators because it embodies the assumptions about knowledge in this study.

The constructivist perspective provides a context for the literature review processes and is based on the assumption that knowledge is constructed not discovered and that meaning emerges when consciousness engages with them (Crotty, 1998, p. 43). This belief is supportive of the idea that the pre-service teachers bring with them a set of beliefs and understandings that are constructed and continue to be constructed as they engage with specific experiences throughout their degree.

Meaning is constructed as people engage with the world they are interpreting, and objectivity and subjectivity are brought together. Participants in this study had particular views of the world and the social interactions that are part of this world. As they progressed through the degree, they continued to look at the world and construct different views to make sense of it: ‘no object can be adequately described in isolation from the
conscious being experiences in it nor can any experiences be adequately described in isolation from its object—humans engaging with their human world’ (Crotty, 1998, p. 43).

A constructivist perspective provides a way of thinking about how knowledge is constructed, mediated and inherently situated.

### 2.3 Organisation of the Literature

The literature has been organised to reflect the aim of this study, which is to articulate and analyse pre-service teachers’ perceptions on what teacher qualities they value at specific times in their course and how these perceptions change and develop as they progress through their degree. The extensive and often contradictory nature of research around teacher qualities has resulted in literature that is complex and varied, occurring in a broad range of interrelated areas of study in teaching and learning.

During the review, different themes reflect discrete areas of knowledge; however, they blend into each other when one considers the holistic concept of teacher qualities. The category areas constructed for this study include:

1. **common constructs of teacher qualities**
   a. defining teacher qualities
   b. pedagogy, knowledge

2. **interpersonal and professional teacher qualities**
   a. moral and ethical considerations
   b. values of the professional teacher
   c. professional characteristics and identity

3. **images of the good teacher**
   a. pre-service teachers’ development as effective teachers
   b. the complexities of teacher education
4. the unresolved issues

2.4 Common Constructs of Teacher Qualities

Two broad areas of discussion emerged from the discourse within the literature on teacher qualities. The first encompasses views on what constitutes effective teacher education and what aspects of teacher education contribute to the development of preferred teacher qualities. The second area of consideration is the definition of teacher qualities, how they can be defined and what categories are included.

The research on teacher qualities and subsequent pre-service teacher outcomes is divided in its conclusions. The research highlights the observation that educational coursework has a positive effect on teacher performance at least in the short term. While subject matter knowledge is an important prerequisite for effective teaching it is not sufficient in and of itself. The research acknowledges that knowledge beyond that typically required for certifications does not result in increasing the teacher qualities (Ferguson and Womcak, 1993). Thus, there are problems in identifying what the significant learning moments for pre-service teachers are and how these develop their skills, knowledge, attitudes and approaches.

Evertson, Hawley and Zlotnik (1985) propose that significant aspects of teacher education occur through educational courses, noting the effectiveness in teaching pre-service teachers specific skills and knowledge. Rice (2003) supports both teacher coursework in subject area and pedagogy as contributing to positive student outcomes and overall teacher effectiveness, particularly at the high school level. Research suggests that pedagogical training makes a substantial difference to quality teaching (Hurwitz & Hurwitz, 2005).
Identifying and linking key learning experiences for the pre-service teacher poses an issue for the research. There is little research in regard to assessing the influence of pedagogical training or content knowledge on pre-service teachers’ outcomes (Goldhaber & Brewer, 1997). However, the importance of content knowledge in relation to teacher quality in areas such as mathematics and science has become more crucial in the present information economy (Porter-Magee, 2004). Woolfolk (2000) notes the wide variations in definitions of teacher quality when referring to the different content knowledge required of teachers.

Defining quality teaching versus competent teaching and the difficulty in uncovering the elements that epitomise an effective classroom practitioner are significant to teacher education. Woolfolk (2000) identified 64 statements describing key understandings for beginning teachers, then rated the importance of teacher qualities and grouped them into five categories: human development and learning; curriculum planning and design; management of the learning process; assessment of the learning process; and professional issues related to teaching and learning. The problem is in determining whether lists such as Woolfolk’s (2000) are standards that need to be reached or qualities that need to be demonstrated. This confusion is noted by Covino and Iwanicki (1996), who suggest that research to date focuses on what the teacher does, but not on what they think—the cognitive process. It is what pre-service teachers perceive are effective qualities and how they link these qualities to learning experiences in the four-year degree that will be the most pertinent points to address in this research. A recent review of Australian higher education highlights the need to improve the quality of graduates. This is particularly significant for teacher education (Bradley et al., 2008). The issues raised in this report, such as student retention, recruitment and having a broader representation of the
community in the profession are particularly pertinent to teacher supply and teacher qualities.

2.5 Defining Teacher Qualities

Teacher qualities can be broadly divided into three areas: management, instructional techniques and personal characteristics (American Association of School Administrators, 1986). The three broad areas of teacher preparation and qualifications of teachers are important; however, they have limited impact if teachers do not know how to diagnose their students’ learning needs (Darling-Hammond, 2000). Reid (2005) refers to a time of cultural, technological and economic change with issues of marginalisation and growing divides in society. He refers to new capabilities for teachers and the need for ‘inquirers into professional practice who question their routine practices and assumptions, who are capable of investigating the effects of their teaching on student learning’ (Reid, 2005, p. 68). Thus, the teacher qualities of the reflective and inquiring practitioner, who can think critically, flexibly and creatively, become significant in the present information economy.

Teacher quality has been defined in terms of purpose and divided into three components: a level of professional competence; a student-centred approach that is compatible with a measurement-driven approach; and the moral purpose of teaching (Byrne, 2005). O’Meara and MacDonald (2004) refer to the ‘dimensions of teaching’ by Raths (1999) when discussing teacher qualities. They refer to five generic dimensions: professional responsibilities; content of teaching and learning; teaching practice; assessment; and reporting of student learning and interaction with the school and broader community. These dimensions describe teachers’ expected aspirations. The focus of this model is on teacher development and professional growth.
Defining teacher qualities is an area presently undergoing rapid development in the climate of accountability and standardisation. State and federal education departments have created a complex list of standards and measures to define teachers’ work from the beginning teacher (graduate) through to the professional practitioner. Both the NSWIT (2008) and the AITSL (2011) outline three dimensions of the quality teacher including professional knowledge, professional practice and professional engagement. The articulated professional standards for graduates include aspects such as disciplinary knowledge, literacy, supportive and challenging learning environments and ethical professional practice.

The development of Australian national and state frameworks for professional teaching standards is the current response to promote quality teaching. Defining quality teaching as both content knowledge and practice is outlined by MCEETYA (2003), which argues that ‘teachers have to be both knowledgeable in their content areas and extremely skilful in a wide range of teaching approaches to cater for the diverse learning needs of every student’ (p. 3).

Effective teacher qualities are seen as central to school efficiency and student outcomes, and are recognised as the critical relationship between teachers and learners. The professional standards are an approach to highlight and define what constitutes effective teaching and are used to employ future teachers and provide a basis for their professional growth and assessment. The standards reflect the present trend in accountability but are limited in determining psychological qualities that bolster students’ self-esteem, motivation, inspiration, engagement and a love of learning or produce higher student achievement (Woolfolk, 2000). The importance of professional ethical qualities and psychological aspects of student learning together with subject knowledge are an
important criterion for quality teacher education, yet psychological approaches to teaching and teacher training are not being fully considered (Woolfolk, 2000).

McBer’s (2000) research into teacher effectiveness identified three main factors within the teachers’ control that significantly influence pupil progress. These factors are teaching skills, professional characteristics and classroom climate. Two of the factors, professional characteristics and teaching skills, are factors that are most significant for pre-service teachers. These are the factors that the pre-service teacher will learn and bring to the job. The belief that teaching skills can be learnt was supported, recognising that sustained behaviour will depend upon the deep-seated nature of professional characteristics. According to McBer (2000), effective teachers come from a diversity of backgrounds and they make the most of their professional knowledge by consistently selecting appropriate teaching strategies and exhibiting characteristics, which makes them effective.

The New Zealand Education Department defines teacher quality as ‘elusive and complex, requiring the use of professional judgement and specific knowledge and technical skills’ (Aitken, 1998, p. 3). This system links quality to achieving core competencies and performance. The capable teacher knows what to teach (content) and how to teach it (pedagogy), uses a repertoire of teaching and assessment strategies, has empathy and commitment, and has managerial competence.

Hurwitz and Hurwitz (2005) discuss changes by the New York Education Department to ‘raise the bar’ for teacher preparation in an effort to improve teacher quality. Changes included an induction program, postgraduate study, mentoring in the first year and increased collaboration across disciplines. This approach emphasises a teacher’s content knowledge, while downplaying the importance of studying child development and the art of teaching. Ferguson and Womack (1993), in contrast to other US researchers,
indicate that subject matter expertise alone does not make a good teacher and emphasised that subject matter training at the expense of professional education courses was less effective in preparing pre-service teachers.

Effective teachers are reflective practitioners that are concerned with practicing, continuous growth and developing skills for lifelong learning (Brighouse & Woods, 2000). They are able to demonstrate effective strategies and are part of a culture of shared practice. They are able to reflect, learn and grow. Brighouse and Woods (2000) believe individual characteristics play a role, that there is a charismatic aspect to effective teaching and that teaching skills can be actively learnt. The effective teacher is optimistic, has a desire to improve, is sincere about teaching, is a performer and appears confident and technically able.

Two groups that have attempted to articulate American national standards or criteria for new teachers are the Interstate Teacher Assessment and Support Consortium (2010) and the National Council for Accreditation of Teacher Education (NCATE) (2008, 2010) in Washington, D.C. The NCATE sets standards for teacher education programs and includes aspects such as knowledge, disposition and performance in addition to knowledge of subject matter, knowledge and understanding of how students learn. There is a strong emphasis on self-reflection in terms of their own and students’ learning, with an emphasis on the centrality of student learning in their teaching (Woolfolk, 2000). The recent NCATE (2010) report placed significant emphasis on the importance of the pre-service teacher experiencing ‘the best possible placement’ (p. 1) and the role and ability of the school mentor (p. 20). These two organisations note the importance of the professional role of pre-service teachers.

Research reports from earlier studies provide a description of effective teachers in terms of effective teacher skills with no mention of personal characteristics or student
engagement (Brophy, 1973; Brophy & Evertson, 1976; Brophy & Good, 1986; Bunning, 1984; Covino & Iwanicki, 1996). Teacher quality is an elusive concept. One way to characterise teacher quality is to use research to define specific teacher behaviours that contribute to positive student achievement and other measures of effectiveness (Strong, 2002). Strong (2002) focuses specifically on the teacher and their preparation, personality and practice. He suggests it is important to consider teacher effectiveness within specific contexts and to avoid relying on factors such as demographics or specific organisational decision making, which are outside the teacher’s control.

Exemplary teachers are those who exhibit dispositions and philosophical beliefs that support environments and policies that promote ‘respect’ (Collinson, Killeavy & Stephenson, 1999). Knowing and caring for students has as much importance as subject matter knowledge and pedagogical skills. According to Collinson et al., (1999), pre-service teachers ‘should concentrate on caring as the motivation for competence. Teaching, is a profession that relies as much on skilful human relations as it does on subject matter and pedagogical skills’ (p. 365).

This approach examines the holistic development of students and sees quality teachers as those who are able to create relationships in which learning can flourish. Some researchers suggest that school quality might be inseparable from teacher quality. There is general agreement that the academic skills of the teacher predict how well a person will teach. Some educators argue that teacher quality has less to do with how well teachers perform on standardised tests than with how they perform in the classroom. Other traits that influence whether someone will be effective include interpersonal skills, public skills and enthusiasm (Darling-Hammond et al., 2006d).

A teacher’s choice of techniques, matter and the characteristics of these choices provides some information about the teacher’s effectiveness. However, inconsistent
evidence concerning the nature of teacher effectiveness is due to the fragmented nature of educational research. Teacher effectiveness is often linked to demographics such as years of teaching or formal education, race or sex, the use of pedagogical techniques, and teacher behaviour or student achievement (Murname & Phillips, 1981). An important and often overlooked aspect of knowledge and skills acquisition is the background and culture of the learner (Gredler, 1997). It is suggested that teachers become more effective over time as they gain experience in accomplishing the complex tasks involved in helping children learn. Further, pre-service teachers increase effectiveness as a result of learning by doing and by other influences such as innate ability or time devoted to teaching. Effective teachers do not use particular instructional techniques but they do have an ability to discover techniques that fit the needs of the particular children in their classes. This involves subtle interaction to help define appropriate techniques to use and those are mostly derived through trial and error (Murname & Phillips, 1981). In summary teacher qualities can be defined as those characteristics – skills, knowledge and attitudes needed to be an effective secondary teacher. These qualities can be loosely grouped into professional and interpersonal traits that support environments where learning can occur and knowledge and pedagogical qualities that promote purposeful learning opportunities. Teacher qualities are viewed as ‘qualities’ that need to be met rather than standards that need to be reached Woolfolk (2000).

2.6 Pedagogical Teacher Qualities

Pedagogy can be defined as the practice of teaching; far from simplistic when considering the purpose and role pedagogy plays in effective teaching and subsequent student outcomes. Paris, Polson-Genge and Shanks (2010) when considering the New Zealand Curriculum Ministry of Education (2007) definition of pedagogy, suggest that effective teachers engage in the active role of promoting student learning. This active role
encourages reflective thought and action, enhances the relevance of new learning, facilitates shared learning, makes connections to prior learning and provides sufficient experiences for opportunities to learn and teach through inquiry. The value and purpose of pedagogy in teacher education and its implication if viewed as ‘art’ are explored by Gage (1978). He suggests that the ‘art of teaching’ requires broader divergent thinking processes, suggesting that:

As a practical art, teaching must be recognised as a process that calls for intuition, creativity, improvisation and expressiveness—a process that leaves room for departures from what is implied by rules, formulas and algorithms (Gage, 1978, p. 20).

Gage goes on to suggest that the artistry of pedagogy will influence the choice and use of motivational devices and clarifying definitions. The research implication is that the art of teaching is best learnt first-hand and on the job (professional experience). In addition, the more time that is given to the development of knowledge about teaching and the capacity to teach, the more effective and relevant the pedagogical approaches become (Evertson et al., 1985). What effective teachers have in common is an ability to discover techniques that are most appropriate; those that are the best fit for the needs of their students (Murnane & Phillips, 1981). Key researchers who advocate for an increase in pedagogical components of teacher preparation include Brophy and Good (1986), Hawley and Rosenholtz (1984), MacKenzie (1983) and Rosenshine (1983). An interesting aspect of exploring pedagogy in teacher education is the limited literature on the pedagogy of the pre-service teacher. Rather, it is the pedagogy of the expert teacher that is most often referred to in the literature, typically because it is considered that these teachers model best practice. This has implications for teacher education practices in terms of guiding pre-
service teachers’ pedagogical choice and expectations on their level of expertise with pedagogy.

The choice and expertise of pedagogy can be influenced using the concept of congruent teaching (Swennen, Lunenber & Korthagen, 2008). Congruent teaching involves modelling effective pedagogical practices. This form of teaching is important for both the practice of the teacher educators and pre-service teachers, as it involves having good role models who use effective pedagogical approaches. Learning pedagogy in this way enables the pre-service teachers to link theory to practice and make explicit the connection between the educators’ pedagogy and their own teaching practice. However, Swennen et al. (2008) suggest that congruent teaching is not always self-evident in teacher education.

The linking of theory and the making of explicit connections is viewed as crucial in developing effective pedagogical expertise. Research on the principles for change in teacher education programs and practices highlights the need to learn from experiences when building professional knowledge (Korthagen, Loughran & Russel, 2006). The linking of theory and practical experience in a school setting reinforces relevant practices for the pre-service teacher. It provides the opportunity for pre-service teachers to engage in an authentic environment where the dominant focus is on successful teaching and managing students’ learning. Korthagen et al. (2006) state that ‘telling is not teaching, listening is not learning’ (p. 1021). Authentic learning for pre-service teachers is more meaningful and powerful when it is embedded in the experiences of learning to teach (Korthagen, 2004; Swennen et al., 2008).

The idea of effective teaching is often characterised by teacher management of the classroom rather than the pedagogical expertise or the ‘management of ideas with the classroom’ (Shulman, 1987, p.1). Shulman’s work on pedagogy and pedagogical content
knowledge (PCK) provides ideas for improving teaching as both an activity and a profession. The suggestion is that pre-service teachers need to start with ‘what is to be learned and how it is to be taught’ (Shulman, 1987, p. 1). It is this act of reasoning, imparting, eliciting and involvement that is needed in order for the pre-service teacher to elucidate subject matter through effective pedagogical means (Shulman & Shulman, 2004). It is the process of sound reasoning that is the basis of this model of pedagogical practice, involving thinking about what one is doing and having adequate knowledge, principles and experiences from which to reason. There is a need to understand how teachers change from the status of beginning pre-service teachers to that of teacher:

From being able to comprehend subject matter for themselves, to becoming able to reorganise and partition it, clothe it in activities and emotions, in metaphors and exercise and in examples and demonstrations, so that it can be grasped by students. (Shulman, 1987, p. 13)

The importance of sound reasoning in developing pedagogical expertise in the pre-service teacher is significant. Fernstermacher and Soltis (1998) observed that what a teacher thinks about teaching will determine the individuals’ style and that will dominate and shape their pedagogical practices as a teacher. It is argued that teacher education is not about indoctrinating or training teachers to behave in prescribed ways of teaching but to educate teachers to reflect, question their teaching and perform skilfully (Fenstermacher, 1978, 1994).

Garritz (2010) cites Zembylas (2007) and emphasises the necessity of expanding the current conceptions of PCK to include the role of emotional knowledge. Garritz (2010) suggests that effective pedagogy ensures students attain a deep understanding of specific knowledge and beliefs. To do this, emotional knowledge closely related to the subject content is necessary. Emotional knowledge includes motivational belief, goal-orientation
beliefs, interest and values beliefs, self-esteem and self-efficacy. Self-esteem and control beliefs are all related to the pre-service teachers’ interests, attitudes and emotions linked to their own way of teaching the subject content. In support of this, Amobi (2003) describes how pre-service teachers ‘educational beliefs and practice are symbiotically connected’ and asserts that ‘as we teach pre-service teachers to reflect in action, on action and for action it behoves us to model these processes and nuances of reflections to our students’ (p. 24). To help pre-service teachers grow professionally and demonstrate discovery-based strategies and reflective practice, they need authentic experiences in teacher education that showcase interdisciplinary exploration, collaborative teaching and learning and the interpreting of new knowledge in the context of what is already known (Kaufman, 1996).

In order for the pre-service teacher to demonstrate competent pedagogical planning that incorporates students’ interests and ways of learning, it is necessary for the pre-service teacher to acquire an understanding of subject-related pedagogical expertise. The gaining of this expertise is viewed as an important foundation in teacher education (Fischler, 1999). Teaching pedagogy is not simply an arrangement of instructional strategies; it includes learning processes that need to be recognised and supported. The support and recognition of pedagogical learning processes includes an awareness of learning difficulties, patience with the process of student construction of new knowledge, existing knowledge, classroom climate and the opportunity to provide personal opinions. In this way, the teacher is not only viewed as a communicator and examiner, but as a person who advises and helps students (Scott, Asoko & Denver, 1992). Changing pre-service teachers’ views on effective pedagogy is complex with pre-service teachers, ‘often beginning their programs with fixed conceptions about teaching and learning and as a rule are not willing to take on alternative conceptions unless they have experienced failure when using their own ideas’ (Fischler, 1999, p. 174).
It is suggested that pedagogical knowledge can be characterised as common sense; however, according to Grossman (1989), teachers attribute most of their knowledge on students understanding to their own classroom experience and believe that ‘knowledge is not hanging, ripe and fully formed in the classroom, waiting to be plucked by inexperienced teachers’ (p. 205). However, she notes that pedagogical learning from experience requires first that one interpret that experience.

Professional preparation can help pre-service teachers rethink their perceptions around subject content and understand the relationship between the broader discipline and the school subject. This rethinking enables the pre-service teacher to consider content from an explicitly pedagogical perspective (Grossman, 1989). The implications is that the pre-service teacher will be better able to understand the realities of student motivation and abilities, and thus be more prepared to consider the pedagogical approaches. While the relationship between content knowledge and professional preparation for teaching needs to be conceptualised more clearly, the linking of PCK with subject-specific professional coursework can assist with this connection.

Subject matter and pedagogy presented within the authentic context of a classroom is significant for pedagogical learning. However, the pre-service teacher needs to recognise the classroom as a complex social setting. Within that setting, the teacher must process a great deal of information rapidly, deal with several agendas simultaneously and make quick decisions through the day (Brophy & Good, 1986). In order for pre-service teachers to make the connections between their views on effective teaching and how to operate effectively within this complex setting, teacher education must present information to the teacher within a decision-making format. This format enables them to examine concepts critically and adapt them to the particular context within which they teach. Good teachers provide pedagogical strategies for self-monitoring and improvement. Strategies that target
and explicitly model to students independent learning are more likely to result in purposeful learning for students (Duffy et al., 1986; Palincsar & Brown, 1984; Raphael & Kirschner, 1985). A considerable body of research exists confirms that teacher education recognises the benefits of pedagogical instruction in coursework and its positive effect on teaching performance (Ashton & Crocker, 1987; Darling-Hammond, 1990; Evertson et al., 1985).

Hargreaves (1998) notes that new teachers do not support one best approach to teaching and that most value a wide range of pedagogical approaches: ‘what mattered most was making things interesting and effective for students’ (p. 846). Earlier views of teaching cast teachers as ‘technicians’ whose role is to deliver the curriculum (Porter & Brophy, 1988). Brophy and Good’s (1986) earlier research contradicted this view, suggesting that pre-service teachers who received instruction on how to teach were more effective than those who were left to work through the curriculum materials on their own. The inclusion of active instructions in teacher education helps in developing planning, thinking and decision-making capacities in teachers (Clark & Peterson, 1986). The art of teaching requires teaching qualities such as: using judgement, intuition and insight in handling the unpredictable, while using science to achieve practical ends (Clark, 1988). The combination of the two is plausible for teaching (Clark & Yinger, 1977). Gage’s (1978) and Royce (1969) views support the idea that effective teachers develop an instinct for knowing when to view teaching as a science or as an art rather than as a substitute for each: ‘when you teach, you must know when to forget formulas, but you must have learned them in order to be able to forget them’ (Gage, 1978, p. 16).

Pedagogical learning involves making familiar the language, ideas and pedagogy of the teaching profession (Edwards, 1995). This maps learning as a shift of understanding from half-understood procedures and observations through to the process of clarification
and construction of effective practices. Learning how to teach and thus learning pedagogical teacher qualities, involves engaging in experiences, providing opportunity for active reflection and the building of confidence (Karmiloff-Smith, 1992). Bullough (2005) suggests that many pre-service teachers view professional experience as the most relevant way to learn how to teach and develop effective pedagogical practices.

Effective pedagogy plays an important role in meeting students’ needs: a teacher quality identified as essential to effective teaching. Mayer, Mullens, Moore and Ralph’s (2000) report on school quality, suggests that school quality affects student learning, which in turn is directly related to the training and talent of the teaching force. There is limited data available on the effect teachers’ pedagogy has on student outcomes. Mayer et al. (2000) suggest that these indicators are complex and therefore difficult to measure. The difficulties in measuring critical elements of pedagogy are influenced by the teaching process, which consists of a complex set of interactions between students, the teacher and the curriculum.

What is suggested is that students learn more from teachers with strong academic skills and classroom teaching experience than they do from teachers with weak academic skills and less experience (Mayer, 2006). Students appear to benefit when course content is focused and includes a high level of intellectual rigor and cognitive challenge (Ferguson & Womcak, 1993). Students learn more from experienced teachers, who utilise positive discipline techniques well linked to student learning (Mayer et al., 2000). Teachers that incorporate an expectation of high academic success tend to generate greater student learning (Hamachek, 1999; McBer, 2000). While most recent research on pedagogy refers to pedagogical process and PCK, the link between interpersonal and pedagogical effectiveness was highlighted by Mayer et al. (2005). The authors suggest that pedagogical quality depends on multiple, interdependent elements and suggests three categories for
greater student learning: the quality of the school, the quality of the classroom practices and the characteristics of teachers.

A further important consideration around pedagogical practice is Darling-Hammond’s (2000) belief that teachers have different levels of effectiveness in pedagogy. Differences are linked to how teachers approach the curriculum, their selection of instructional actions and how they employ their resources. Pedagogical practices such as direct teaching, drill and practice and constructivist student-centred learning are the most effective instructional approaches (Darling-Hammond et al., 2006b). These pedagogical approaches place less emphasis on memorisation of facts and mastery of routine skills and greater focus on application, reasoning and conceptual understanding.

Pedagogical approaches that centre on the students while offering the teacher a view of the students’ thought processes are viewed as quality teaching (Byrne, 2005; Darling-Hammond et al., 2006b). McBer’s (2000) research supports this idea and reveals seven key areas for teacher effectiveness. These areas are focused around management of the learning environment, planning, high expectations, homework, assessment, time and resource management, pupil management and discipline, selection of methods and strategies, and time-on-task lesson flow.

It is not enough to have just a strong pedagogical knowledge base. It is also important to have sound professional knowledge and a strong knowledge base in the relevant curriculum areas (Jones, 1999). Jones (1999) states that ‘teacher content knowledge is vital if appropriate classroom pedagogical practice and student learning in a particular knowledge area is to occur’ (p. 170). This belief has had major implications for teacher education programs in recent times (AITSL, 2011; NSWIT, 2008). These standards outline minimum requirements in content knowledge, pedagogical expertise and curriculum for graduating teachers.
In summary, pedagogical research provides a varied and extensive view of the pedagogical understandings of the pre-service teacher. However, much of the research is based on the experience and practice of the expert practitioner (Bransford et al., 2000). The research does provide a useful way to frame the discourse on the pedagogical beliefs of the pre-service teacher and its importance as a valued teacher quality, and allows connections to be made between the pre-service teachers’ developing teaching practices and those of the expert. The experts’ views of pedagogical understandings are important in assisting our knowledge of the pre-service teachers’ perceptions on this teacher quality. It is perhaps useful to consider Bransford et al., (2000) suggestion of replacing the model of ‘answered-filled experts’ with ‘accomplished novices’ when discussing the pre-service teachers, views on pedagogical qualities (p.48). This ensures the distinction between the experienced teachers’ views and those of the beginning teacher.

2.7 Knowledge as a Teacher Quality

Knowledge as a teaching quality includes: subject content, educational theory, pedagogical knowledge and professional knowledge. Gage (2009) suggests that research on teaching has placed a greater emphasis on process-product and has neglected thinking on process-content; involving the combining of content knowledge and pedagogy in effective teaching. This neglect in teacher education research has been repeatedly criticised by philosophers: ‘the failure of process-product research to come to grips with the essential intentionality of teaching is its greatest conceptual shortcoming’ (Garrison & Macmillan, 1984, p. 20). This failure is reflected in the greater focus placed on the process of teaching, in preference to the body of knowledge that surrounds the teaching of teachers in higher education.

There is significant research supporting the value of in-depth knowledge in both subject area content and other core educational theory in teacher education (Anders
Ericsson & Smith, 1991; Cochran-Smith & Lytle, 1993; Ferguson & Womcak, 1993. It is believed that knowledge provides the understanding needed for the pre-service teachers to be able to link theory to practice in the classroom. Research by Core, Griffiths and Ladwig (2004, 2006) recommended a greater coherence and a firmer knowledge base for teachers, which they believed provided:

> A framework for enhancing teacher education, which requires a deep commitment to ensuring that both the teacher education program itself and the preparation it provides for pre-service teachers are serious about deep understanding of important concepts. (p. 376)

A deep understanding of important concepts is fundamental for the interactions of teachers with students through content (Cochran-Smith & Lytle, 1993). Gage’s (2009) view builds on this, suggesting that knowledge in teacher education cannot exist in isolation and proposes a joint consideration of process and content in educational research. Cohen’s (1987) research on instructional alignment explores the degree between content taught and content tested demonstrated a linkage between process and content.

To understand the value of knowledge as teacher quality, it is important to recognise the contribution of specific knowledge in teaching. There are mixed views about what sort of knowledge plays an important part in education programs. There is a general view that knowledge is important but only up to a point (Darling-Hammond, 2003). For some subject areas such as science and mathematics, content knowledge is viewed as more important, a foundational to teaching, compared to other educational knowledge they might study (Darling-Hammond et al., 2006a; Evertson et al., 1985; Jegede, Taplin & Chan, 2000; Hawk, Coble & Swanson, 1985). What has also been suggested is that the value-adding of in-depth subject knowledge has a positive influence on teaching quality,
‘the absolute number of course credits in the subject area is not linearly related to teaching quality’ (Begle & Gleeson, 1972, p. 17).

Teaching that emphasises subject matter knowledge at the expense of professional education courses has been suggested is less effective in preparing the pre-service teacher to teach (Veenman, 1984). This is in comparison to the value of pedagogy, which pre-service teachers often feel they can learn on the job (Darling-Hammond et al., 2006b). The benefits of in-depth knowledge are supported in research, citing those pre-service teachers with education majors that were viewed as having greater expertise in classroom management skills, pedagogical knowledge and an increased ability to relate content to students’ needs and interests (Copley, 1974; Denton & Lacina, 1984; Grossman, 1989). Darling-Hammond (2000) points out that the weight of research in the area of teacher knowledge is closely aligned with teacher effectiveness and student outcomes. Although this is a finding of the research on teacher knowledge, Ashton and Crocker’s (1987) research suggests that in-depth content knowledge in teacher education coursework can influence teachers’ effectiveness in a range of areas. These include teacher sensitivity, dealing with diverse student needs and the ability to teach in a style that facilitates higher-order thinking.

Haycock’s (2000) research on teacher quality claims that students are best served by teachers who have a strong grounding in the subject matter they are teaching, with students’ achieving higher results if teachers have a good grasp of the content. Similarly, Haycock (2000) points to a growing body of research to support the belief that teacher expertise does matter. Students who have several effective teachers (able to engage students with high levels of student learning) consecutively make dramatic gains in achievement, while those who have even two ineffective teachers (unable to engage
students with limited student learning) consecutively lose significant ground that they may never recover.

Having a balance of subject content matter in the curricula in teacher education was viewed as being somewhat beneficial. What was identified as crucial was the need to have a balance between subject matter and education courses (Ferguson & Womcak, 1993). In Ferguson and Womcak’s (1993) Nation at Risk Report, the authors contended that ‘teacher preparation programs are too heavily weighted with courses in educational methods at the expense of courses in educational subjects’ (p. 55).

It was suggested that knowledge needed for pre-service teachers include a balance between subject matter, teaching methods and student learning theory is required in teacher education, including a balance in knowledge areas such as the theories, content on how students learn, and an opportunity to discuss, interpret and reflect on the relationship between theory and practice (Ferguson & Womcak, 1993). The type of teacher education programs that were viewed as most beneficial for the pre-service teachers were those that focused on decision making, attitude formation and analytical skills (Evertson et al., 1985). Schelfhout et al.’s (2006) research expanded this belief to also include a greater coherence between subject matter and learning environments. Although grounding in subject matter is viewed as essential in preparing the pre-service teachers in terms of teacher quality, there is evidence to support the view that subject matter alone does not make a good teacher (Ball & McDiarmid, 1989). Content knowledge is just one of the essential components needed in preparing pre-service teachers. Supporting this argument is the belief that the positive effects of teaching are increased with good instructional techniques and in-depth knowledge of subject area (Evertson et al., 1985).
2.7.1 The knowledge needed by teachers.

Pre-service teachers need a sound foundation in subject content knowledge and learning theory, while research also highlights the need for pre-service teacher to be able to ‘adapt their instruction to students’ pre-existing knowledge and beliefs about subject matter’ (Porter & Brophy, 1988, p. 75). Porter-Magee (2004) refers to this process as the building of connections for students, involving in-depth content knowledge of both the content and the students. Combined with pedagogical knowledge, it is the ability to begin where the pre-service teachers are and to confront and draw out misconceptions that is important. There is an interrelationship that exists between the different forms of knowledge: the knowledge about the content to be taught; knowledge of pedagogical strategies for teaching the content; and knowledge about students.

Shulman’s (1987) supports the ideas of specific knowledge of teaching and states that the advocates of professional teaching reform have argued that there ‘exists a knowledge base for teaching, a codified or codifiable aggregation of knowledge, skill, understanding and technology, of the ethics and disposition, of collective responsibility, as well as a means for representing and communicating it’(p.4). Shulman (1987) outlines seven categories of knowledge including content, general pedagogy, and curriculum and pedagogical content of the learner, of education contexts and of education purpose. Shulman (1987) points out that ‘subject knowledge for teachers is not fixed or final’ (p. 19) and that the teacher’s knowledge base must deal with the purpose of education as well as the methods and strategies of education. Reform in US teacher education highlighted the importance of knowledge, suggesting that content knowledge should frame teacher education and inform teacher practice (Carnegie Task Force on Teaching as a Profession, 1986; The Holmes Group, 1986). The current Australian national and state reforms in teacher registration have placed knowledge of content and knowledge of the learner high
on the agenda, citing specific elements and standards around knowledge categories needed for the registration of teacher education courses and pre-service teachers in the present context (AITSL, 2011; NSWIT, 2009). The licensing of standards around knowledge in teacher education are viewed as important in raising standards of literacy, catering for special needs and for the integration of research-based practices in teacher education (Darling-Hammond et al., 2006c).

2.7.2 Professional knowledge needed by the pre-service teachers.

Although much of the literature around teacher knowledge has necessarily been about subject content, learning theories and pedagogical knowledge, Bobis (2007) emphasises the growing body of professional research on the importance of teachers’ professional knowledge (McBer, 2000). Current views identify the importance of up-to-date professional knowledge (knowledge of policies and practice in the profession and the school context) and practices in teaching (AITSL, 2011; Australian Association of Mathematics Teachers, 2002; Australian National Council for Teachers of Mathematics, 2009; NSWIT, 2009). Bobis (2007) argues that, in addition to the traditional areas of study, there is a need for teachers to have a strong practical knowledge, encompassing current professional practices. As such, his advice to teacher educators about the structure and focus of teacher education courses is to look for opportunities for prospective teacher to discuss, interpret and reflect on the relationship between theory and practice. Another contributor to the idea of professional knowledge and its acquisition is Eraut (1995), who proposes three domains of knowledge for teachers, which include subject matter knowledge, educational knowledge and societal knowledge. Eraut views the three domains as overlapping and capable of subdivision into further knowledge categories, such as classroom, classroom-related, management and other professional knowledge.
2.7.3 Pre-service teachers’ beliefs about knowledge.

One of the significant gaps in the literature that this study proposes to address is in relation to the views of the pre-service teacher about knowledge. There are many opinions on the value of knowledge for effective teachers, many reported from the viewpoint of the expert or experienced educator. Documentation of perceptions of the pre-service teachers has been limited with Jegede et al., (2000) suggesting that very few studies have actually sought the views of pre-service teachers regarding what they think they need to know and to what extent coursework and teaching experience contributes to the development of expert knowledge.

Pre-service teachers believe that as they pass through a teacher education course they gain knowledge about methods and an increased ability to think critically (Ferguson & Womcak, 1993). Ferguson and Womcak (1993) suggest that this enables the pre-service teachers to become more student-centred in their attitudes. Their research supports the belief that coursework in teacher education makes a positive difference in pre-service teaching performance and that achievements in education coursework is a more powerful predictor of teaching effectiveness than measures of subject content expertise. Similarly, pre-service teachers recognise that they need to have a high level of competence with knowledge of concepts, pedagogy and PCK theories of learning if they are to go beyond merely ‘keeping up with change’ (Renyi, 1998, p. 73).

Cochran-Smith and Lytle (2003) cite research by Reynolds on the learning and unlearning that occurs for the pre-service teacher. Cochran-Smith’s (2003) research implicitly takes a position on ways of knowing about teaching and knowledge. Different ways of knowing include practical knowledge and when and how to act in actual teaching situations, ‘what is known and worth knowing about’ (Cochran-Smith, 2003, p. 41).
Teaching is a profession, knowledgeable teachers are not technicians but professionals worthy and able to make reflective decision or judgements; there is no single taxonomy or correct way of structuring knowledge base for teachers; it’s not the volume of knowledge but the understanding of how professional knowledge is organised, validated and used. (Cochran-Smith & Lytle, 2003, p. 41)

The pre-service teacher perceptions of knowledge as a teacher quality and how this might change with educational coursework and professional experience is important aspect of this research. This understanding will assist in identify those learning experiences that are of most value to the pre-service teachers in teacher education.

2.8 Interpersonal and Professional Teacher Qualities

This discussion begins with research on what defines the professional teacher. Hughes (2004) uses his own teaching experiences to define the good teacher with an emphasis on the need for teachers to have humanity and warmth, whereas Smith and Lambert (2008) noted that the professional teacher shows patience, support, respect and dignity when teaching. Brighouse (1995) observes that a professional teacher is optimistic and realistic, has intellectual curiosity, energetic and is a magpie1 for ideas, is confident in admitting weaknesses, a risk taker and never stops learning. Chai (2005) maintains that professional teaching is about teaching less and learning more. Teaching is not just about delivering knowledge, teaching is about communicating and finding out what students like, their opinions, hopes and fears; it is about sharing ideas and feelings with students. Wolk (2008) takes an optimistic stance on professional teaching, advocating joyful learning as a means of counteracting boredom and dreariness. For Wolk (2008), a professional teacher finds pleasure in learning by giving students choice, letting students create things and making the school space inviting by encouraging teachers to have fun with their students.

1 Australian native bird that has an affinity for shiny object for its nest
Kennedy and Hui (2003) believe that a professional teacher has the capacity to influence students through self-belief and self-efficacy, this is in contrast to McBer’s definition that focuses on personal characteristic (i.e. ability to challenge and support others, have confidence, create trust and show respect for others). Goodman (1985) sums up many of the ideas of other researchers by suggesting that there are three broad perspectives towards teaching: utilitarian skills, management and teaching as a craft. Utilitarian skills are the professional academic requirements required by the teacher. Teaching as management places the emphasis on the product not the process of education. Teaching as a craft refers to student autonomy, use of an original curriculum, interest in subject matter, motivation and skills, energy and innovation.

### 2.8.1 Moral and ethical considerations for the professional teacher.

Another consideration of teacher professional and interpersonal qualities is the moral and ethical frameworks and models used for viewing and guiding teachers in their work. Frameworks and models are used to guide thinking on ethical dilemmas and the subsequent decision making. Teaching is not just about product or process, it is a profession that encompasses many of the social justice issues in society. It is suggested that:

Good teaching is charged with positive emotion. It is not just a matter of knowing one’s subject, being efficient, having the correct competences, or learning all the right techniques. Good teachers are not just well oiled machines. They are emotional passionate beings who connect with their students and fill their work and their classes with pleasure, creative challenges and joy (Hargreaves, 1998, p. 835).

Professional teachers require both a moral purpose and practical technical competence that needs to be demonstrated in teaching if desirable teaching quality is to be achieved for all
Beyond technique and moral purpose, good teaching is the desire and passion to contribute and to make a difference (Hargreaves, 1995, 1998). Teachers learn to handle emotional responses as they take on new tasks, gain new experiences, make judgements, build relationships or assimilate new knowledge about teaching and their students (Fenstermacher, 1994; Tickle, 1999). The fundamental purpose to teaching involves a concerted professional awareness and a commitment to the burden of judgements that goes with a moral enterprise (Goodlad, 1990).

There are a broad range of ethical and moral perspectives in the literature that attempt to define the ethical practice of professional teachers in today’s complex society. One example is the ethics of social justice, which is centred on creating learning environments based on rights and dignity for all (Crawford & O’Neil, 2009). In contrast, the Bayles (1989) and Beauchamp and Childress (1989) models focus on the concept of professional obligations. This model identifies seven interrelated obligations of the teachers: honesty, candour, competence, diligence, loyalty, fairness and discretion. Sachs (2003) suggests an emphasis on inclusivity, public ethical code, collaborative and collegiality as a useful guide for professional practice. Two models that rely on interpersonal skills include the ethics of care, which uses modelling, dialogue, practice and confirmation (Noddings, 1992) and Gewirtz, Hextall and Cribb’s (2009) ethical stance on trust, discretion and competency for the teachers practice.

2.8.2 Values of the teacher.

In current educational practice, there is much debate on those interpersonal and professional values that a teacher needs to exhibit and practice as an effective teacher in today’s educational environments. Values are defined as general life goals or standards (Axford, 2005). Pre-service teachers enter education programs with pre-existing values and beliefs about teaching and learning shaped during their entire life histories including both
positive and negative experiences. These beliefs are deeply ingrained and partly unconscious feelings and dispositions developed as a pupil, which exert a continuing influence on the role models for a teachers values, beliefs and behaviour (Koster et al., 1993). According to Murnane and Phillips (1981), the values effective teachers seem to have in common is the ability to discover techniques that fit the needs for particular children in the classes. It is also held that ‘pre-service teachers change their educational values under the influence of teacher education and professional experience mentors’ (Koster et al., 1993, p. 79). A teacher’s personal value system can come into conflict with the values of the professional role, as teaching is not value-free nor are schools valueless; education is in fact value loaded. It is believed that pre-service teachers’ values are influenced by hidden curriculums in school contexts and the socialisation of the pre-service teacher at university and during practicum. According to Barnett and Coates (2005), ‘curricula are formed by many different cultures and exist within universities shaped by disciplinary values, norms and rules of communication, contributing to the collective identities through the culture of the discipline’ (p. 32).

It is through teacher education that values continue to shape and influence the pre-service teachers’ existing belief systems, which then are embedded in their every action as a teacher (Koster et al., 1993). Koster et al., (1993) research identified entry values for pre-service teacher and look at the changes to values and beliefs during the teacher education program. The conclusion was that those pre-service teachers who identified as having strong positive role models did not show a great deal of change in their personal values and beliefs. Pre-service teachers with negative role models experienced a relatively high modification of values and beliefs and that the duration of time students spent in professional experience exerted a relatively high influence on changes in perceptions on teacher qualities and teacher practices.
2.8.3 Professional characteristics and professional identity.

The last decade, a period of increased accountability and standardisation, has seen a great deal of attention given to studies on desirable professional qualities and the professional identity of teachers. Much of this research has been driven by the educators themselves in the attempt to define the desirable characteristics of their profession and role in broader society (Gewirtz et al., 2009). McBer’s (2000) model for professional characteristics include: the ability to challenge and support others, has confidence, create trust and show respect for others. Effective teachers demonstrate analytical and conceptual thinking. They are able to plan and set expectations with a drive for improvement and have the ability to establish initiatives and seek information. The Cognition and Technology Group at Vanderbilt, (1997) explored what it meant to be an expert and the affect it may have on the degree to which people explicitly search for what they don’t know and the steps they take to become an expert. When applied to pre-service teachers according to Bransford et al., (2000, p.48) the discussion tends to be implicit, placing constrains on new learning, as the tendency is concerned with looking competent rather than acknowledging and seeking help (Dweck, 1989). As such, researchers and teachers according to Bransford et al (2000) found it useful to replace the model of ‘answer-filled experts’ with ‘accomplished novice’ (p.48).

Hatano and Inagaki (1986) refer to the concept of ‘adaptive expertise’. This model of learning suggests that adaptive experts are able to approach new situation flexibly and to learn thought their lifetimes. Adaptive expertise according to research by Brown and Campion (1996) is the capacity to identify and solve problems and make contribution to throughout a lifetime. A distinct difference between the expert teacher and the beginning teacher is that the expert first seeks to develop and understanding problems which involves thinking in terms of core ideas or concepts. In contrast, the pre-service teacher is much
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more likely to approach problems by searching for correct formulas and set answers that fit their everyday intuitions (Bransford et al., 2000, p. 49). He suggests that it is a mistake to simply assume that the novice teacher exposed to the expert model will learn effectively, stating that ‘what they learn depends upon how much they know already’ (p.50).

Another characteristic of an expert is the ability to help others learn about the discipline. For the expert teacher this involves understanding a discipline in a pedagogical reflective way, particularly those aspects that are complex for students to master (McDonald and Naso, 1986, p.6). Research suggests that expert teachers have a deep understanding of the structure of their discipline and pedagogical knowledge of how best to teach that subject. This contradicts popular and dangerous myth about teaching that teaching is a generic skill and a good teacher can teach any subject (Ball, 1993; Grossman et al., 1989; Wineburg and Wilson, 1998).

Traits of professional teachers, according to McBer (2000), are leaders; they are flexible, accountable and passionate, and can relate to others through influence and teamwork. The belief in the importance of interpersonal traits is support by Huberman, Grounauer and Martin (1993), who points’ out that a good relationship with pupils is a prerequisite for professional growth from a pre-service teacher to an experienced teacher. Essential for this relationship with pupils is that the teacher demonstrates personal interest in and respect for the pupil. Both qualities should be reflected in their teaching styles (Beijaard, 1995).

While there is a myriad of perspectives that appear in the literature around professionalism and professional characteristics, Mitchell, Robinson, Plake and Knowles (2001) identified the development of professionalism by outlining the changes that have occurred over time. There was a shift in the importance of high moral characters and social
priority of the early 1900s to an emphasis on a broader range of personality and character traits in the 1950s. The 1980s and 1990s were concerned with technical proficiency. The focus today is on the standards-based view, which examines teaching in light of learning, explicitly acknowledging the teachers’ actions or performance with the aim of learning and success for all students (Mitchell et al., 2001). Today’s views on professionalism, according to Mitchell et al. (2001), require that the classroom teacher demonstrates the following: deep subject knowledge, ability to manage and monitor students, reflective practice, membership of the broader community and commitment to student learning.

2.8.4 Teacher identity.

Current literature in teacher education places significant emphasis on examining the formation of teacher professional identity and its impact on teacher quality. Teacher identity is thought to be constructed from life experiences and ongoing learning for the individual teachers (Eraut, 1995; Hargreaves, 1998; Tickle, 1999; 2000). Professional identity refers not only to the influence of perceptions and expectations and images in society of teachers but also their professional work and personal lives. Qualities such as empathy, compassion, understanding, tolerance and flexibility are rarely identified in teacher competencies (Tickle, 2000). Characterising professional identity is an unclear concept considering what and to what extent things are integrated into an identity (Knowles, 1992). One such integration is the belief that many teachers derive their professional identity first of all from the subject they teach (Beijaard, 1995). Beijaard, Meijer and Verloop’s (2004) theories of professional identify propose four features of professional identity. These features include the ongoing process of interpretation and re-interpretation of experiences. This process implies person and context as well as sub-identities within contexts and relationships. The final feature is that the professional is active in the process of professional development and identity formation.
Knowles (1992) suggests that ‘pre-service teachers’ thinking about teaching and their classrooms practice is partially shaped by their prior experience’ (p. 99). As pre-service teachers ‘do not enter teacher education ignorant and unskilled as to the mechanics, processes and rules of their place of work, they already know classrooms’, (Knowles, 1992, p. 101). Personal predispositions are well developed prior to becoming a teacher (Knowles, 1992). There is extensive research with mixed views on the impact that personal biographies and socio-historical pasts play on shaping beliefs and ideas of what makes a good teacher and teaching practice (Brown, 2002; Clark, 1988; Crow, 1987; Fuller, 1969; Goodman, 1985; Lortie, 1975; Silvernail & Costello, 1983; Tabachnick & Seichner, 1984; Zeichner, 2007).

Zeichner (2007) suggests social structural influences have been greatly overemphasised: ‘what students bring into experiences cannot be ignored in an attempt to illuminate socialisation mechanisms’ (pp. 307–308). Goodson (1981) argues that the actions of teachers cannot be separated from their histories. Teachers’ attitudes and beliefs influence their perceptions and understanding of classroom behaviour and can therefore affect their teaching practices and their perceptions of their identity as a teacher. Students come to teaching education with their own ideas and beliefs about what it takes to be a successful teacher; these preconceptions are formed from thousands of hours of observation of teachers, both good and bad (Clark, 1988). Clark (1998) does suggest that students’ conceptions of teaching are incomplete, having only viewed the performance side of classroom teaching, perhaps from the narrow viewpoint of a school student. It is believed that pre-service teachers’ ideas on education are well established, as is the teacher role identity, as such it is often difficult to change pre-service teachers’ established perceptions. This identity is based on memories of previous teachers, former teaching experiences and childhood events (Crow, 1987). Crow found that these established beliefs
work as a filter through which topics and experiences in the teacher education programs were accepted and assimilated or rejected.

The role of socialisation in changing pre-service teachers’ perceptions is not easily shifted. Training in pedagogy does not seem to fundamentally alter earlier ideas about teaching (Weinstein, 1989). Another interesting observation of established views is that according to Goodman (1985):

Students tend to engage in unrealistic optimism and demonstrated self-serving biases perceived as important for teaching including those attributes that they themselves possess. When describing a really good teacher student emphasize interpersonal and affective variables and downplay academic dimensions of teaching. (p. 53)

The confidence in their own ideas and experiences of teaching supports the belief that some pre-service teachers may have a disposition towards teaching. It is also thought that their teaching practices and relationship with pupils appear to owe much to factors embedded in their own personal biographies. Some researchers in this field feel that the impact of altering pre-service teachers’ identity during teacher education is minimal (Lortie, 1975).

This section of the literature review has focused on the exploration of some of the key ideas around the broad constructs of teacher qualities, including pedagogy, knowledge, interpersonal and professional characteristics, moral and ethical considerations, and the values and identity required of the professional teacher. The discussion in Chapter two focuses on what aspects constitute effective teacher qualities, the role of teacher education in fostering these qualities, and the complexities in defining and measuring them. The literature looked at the beliefs held by teaching experts and where possible, the views of
the pre-service teacher. The literature refers to a time of cultural, technological and economic change, with increased issues in social inequity and accountability. This questions existing assumptions of desirable teacher qualities. Thus, the literature asks the reader to consider a broader definition of teacher qualities. This includes aspects such as reflective and inquiring practices, PCK, pedagogical emotional understandings, interpersonal characteristics and professional knowledge, ethical decision making, and the traditional beliefs regarding the value of content knowledge and pedagogy.

The value of professional practice, the linking of theory to practice, engaging in the authentic environments and the use of role models to shape pedagogical and professional practices as teachers were cited in the literature; the review of the literature challenges the role of teacher education. Teacher education is not about indoctrinating or training pre-service teachers, but rather about educating pre-service teachers to reflect and question as well as perform (Brown, Bransford, Ferrara & Campione, 1983). The relationship between teacher qualities was noted in the literature, particularly the link between content and pedagogy. What was also significant was the increasing importance of developing professional knowledge, particularly in terms of being able to think critically and in developing more student-centred attitudes and practices. The concept of what personal teacher qualities are most desirable was initially explored in the notion of favoured interpersonal and professional qualities. This included those desirable personal qualities that cover the plethora of concepts including utilitarian skills, teaching as a craft or art, and the professional teacher who is ethical, optimistic and an advocate of joyful learning. A clear division of categories of different teacher qualities was evident in the literature. What was also recognised was that pre-service teachers come to teaching with firm ideas about teaching and learning. They are not novices to education but novices to being a teacher, this and the different teacher qualities will be important in informing the research focus.
Many of these views were explored in the literature under the broader definition of the good teacher. It was important that this study not just look at the literature on effective or desirable teacher qualities in isolation but also consider what these qualities may look like as a whole package. With this in mind, Chapter 3 focuses on what constitutes the good teacher. The good teacher can be defined as someone with those teacher qualities that enables him/her to be most effective in engaging students in purposeful learning. There were two significant areas of consideration identified in the literature that had additional implication for this study. The first is the present environment of accountability and accreditation practices; the second is the understanding that pre-service teachers bring with them existing ideas and beliefs about teaching. The latter idea is particularly important in the next chapter.
Chapter 3: The Good Teacher

3.1 Introduction

This chapter identifies the key constructs of good teachers: those specific teacher qualities that the pre-service teacher needs to acquire and demonstrate, in order to be effective (ability to engaging students in purposeful learning) teachers. The chapter expands this idea and investigates the literature that focuses not on specific isolated quality areas or constructs but on the good teacher as a whole product— their process, practices and beliefs. There is much to be learnt from teachers’ views on what constitutes the good teacher in the profession of teaching and teaching practice. Pre-service teachers bring views of good teaching that have been largely shaped from their own life histories.

The question of what constitutes a good teacher cannot be answered in a simple way or by a list of competencies. A definition of a good teacher needs to consider a lifetime of experiences and an alignment of beliefs, competencies, professional identity and mission to form a coherent whole that matches the environment (Korthagen, 2004). Good teaching is more than skilful use of pedagogy. It requires a combination of values in thinking creatively, balancing expectations, authentic life-like learning and thoughtful adaptation, rather than technical compliance, professional knowledge, vision and a sense of purpose (Duffy, 2009).

The difficulty in defining the good teacher is due to some extent to the opposing views expressed in the literature. A good teacher, according to Combs, Blume, Newman and Wass (1978), from a humanistic view, refers to a ‘unique personality … an intensely personal thing’ (p. 7). In contrast, the mechanistic view, based in US psychology, focuses on the technical, with teacher knowledge viewed as observable, pre-specifiable trainable
items (Combs et al., 1978). Historically, the view of what a good teacher is has shifted from mechanistic to humanistic (Combs et al., 1978). The most common belief in teacher education today is that ‘teaching is about human relationships and good teachers must possess the most accurate understandings about people and their behaviour available in our time’ (Combs et al., 1978, p. 23). Understanding people is an important ability for the pre-service teacher; as such, teacher education encourages pre-service teachers to develop and acquire positive interpersonal qualities, identified in coursework or through authentic professional practice. Combs et al. (1978) provide a long list of desirable interpersonal qualities, including personal discovery, the ability to perceive the needs of students, making content meaningful and understanding the nature of learning (Combs et al., 1978). Extensive lists similar to Combs et al. (1978) offer parallel summaries of the qualities of a good teacher (Porter & Brophy, 1988; Solmon, Bigler, Hanushek, Shulman & Walberg, 2004). Solomon et al. (2004) particularly stress that the good teacher is self-critical and a reflective practitioner. Another key area relevant to this study and study group was the view that good teachers are ‘characterised by unimaginable levels of energy, of passion, of zeal and of motivation’ (Solmon et al., 2004, p. 59). One difficulty in using these extensive lists in pre-service teacher education is in assessing exactly what the preferred interpersonal qualities are for the pre-service teacher in contrast to the experienced teacher. Literature banks often have omissions in terms of what is most appropriate for the pre-service teacher. Their ‘voice’ on what they view as desirable is often silent, much of the literature is the view and voice of the expert and experienced educator (Reynolds, 1992).

### 3.2 Pre-service Teachers’ Perceptions of the Good Teacher

Identifying and modelling the good teacher and building on prior understanding of pre-service teachers’ views of good teaching was identified by Lieberman (1995). She suggested that pre-service teachers’ enter teacher education with the ability to gauge
conceptual frameworks around what are effective teaching practices. This belief is not widely acknowledged or practiced in teacher education according to Lieberman (1995), who notes that:

What everyone appears to want for students is a wide array of learning opportunities that engage students in experiencing, creating and solving problems, using their own experiences and working with others—is for some reason denied to pre-service teachers when they are learners. (p. 2)

The denial of the pre-service teachers’ prior experiences of teaching manifests in the conventional view that pre-service teachers’ learning is ‘as a transferable package[s] of knowledge to be distributed to teachers in bite size pieces’ (Lieberman, 1995, p. 2). This implies a limited concept of teacher learning that is out of step with current research and thinking. There is conflicting thought on how teachers learn over the years: through direct instruction by outsiders or through their own involvement in defining and shaping the problems of practice. This belief stems from deep philosophical notions about learning, competence and trust (Lieberman, 1995). There is a belief among pre-service teachers that other peoples’ understanding of teaching and learning is more important than one’s own, and that the individual’s knowledge is of far less importance (Lieberman, 1995).

Educationalists theorists tell us that people learn best through active involvement, and through thinking about and becoming articulate about what they have learnt (Bransford et al., 2000). The thinking of pre-service teachers is important because it helps guide their teaching preparation. A good teacher needs to develop reflective practices to improve teaching; however, according to Lieberman (1995), this understanding is often limited by the pre-service teachers’ lack of knowledge about how teachers themselves learn.
Studies confirm that pre-service teachers are capable of contributing sensibly to their professional development based on personal experiences both within and outside the classroom (Ridgeway & Bowyer, 1998). However, very few studies have actually sought the views of pre-service teachers about what they believe good teachers to be, what they think they need to know and the extent to which teaching experiences contribute to their development (Jegeda, Taplin & Chan, 2006). Jegeda et al., (2006) believe that ‘it is important to take into account the teachers’ own perceptions about the areas in which they feel confident and knowledgeable and those in which they do not’ (p. 287). If teacher education is to provide for the learning needs of pre-service teachers, understanding their perceptions and values is important. This has the capacity to change the opportunities teachers have to learn (Fullan, 1995). Olson and Biolsi (1991) discuss the importance of:

Understanding the pre-service teacher, wanting to understand the nature of expertise, how the expert thinks in comparison to how the pre-service teacher may think, how the organisation of concepts, strategies and tactics for interpretation a situation and how the appropriate responses are retrieved and enacted. (p. 242)

Understanding the pre-service teachers’ views of good teaching is important because it assists in developing their learning; however, there are inevitable constraints in teacher education, particularly when many pre-service teachers fail to recognise the link between the school experience and formal university coursework. In addition, a new teacher’s development is rarely analysed and even less likely to be used to shape subsequent pre-service education in deliberate ways (Gunstone & Northfield, 1993, Northfield, 1997). There is a recognised need to create understandings rather than assumptions about how pre-service teachers learn and what they value. It is suggested that the ‘view of learning that is implicit can be seen as related to constructivism, which
emphasises experiences and the personal meaning that individuals construct as newer experiences are linked to existing ideas and values’ (Northfield, 1997, p. 698).

The research supports the view that pre-service teachers as learners are actively constructing new views of good teaching and learning based on personal experiences; their ability to gauge what is important becomes clearer through time. In understanding the perceptions of pre-service teachers and becoming more adept at gauging their conceptual frameworks, teacher education programs can better address alternative conceptions. Increasingly, teacher education is tailoring pre-service education courses to meet the needs of individual cohorts and ensure that staff expectations, learning outcomes and general skill development translate theory and practice into reality (Northfield, 1997). This involves looking at individuals developing perceptions of good teaching as they transition from being a pre-service teacher to a beginner teacher.

3.3 Development Viewed in Stages or Phases

There are distinct phases or stages in pre-service teachers’ learning, and changes in their perceptions on what constitutes a good teacher. This starts with an initial preoccupation with self, moves to a focus on tasks and teaching situations and finally to a consideration of pupil learning (Burn et al., 2003). This notion contrasts with the views of Burden (1990), whose research indicates that pre-service teachers have a high level of concern for pupils’ learning and an awareness of the complexity of teaching from very early in their training. This highlights the contrasting views on pre-service teachers’ learning and has implications for teacher educators in terms of course structure, curriculum and design, and the need to be responsive to the development of the individual learner.

The idea of models or stages of development for teachers was explored in Berliner’s (1986, 2004) research on learning theory for the expert teacher. He viewed
learning to teach as an invariant sequence of stages in which the teacher accumulated domain-specific knowledge. These stages were characterised as the novice, advanced beginner, competent, proficient and expert. In addition, Berliner (1986, 2004) also challenged the reliance on the reflective practice model, suggesting the pre-service teacher often has too little experiences of good teaching on which to reflect adequately. Earlier work by Vygotsky (1978) refers to the two ‘planes’ of learning for the pre-service teacher. These are the intermental or social plane, involving familiarity with language, ideas and skills, and the intramental or personal plane, in which the learner internalises new language, ideas and skills. Expanding on Vygotsky’s two-plane theory is Karmiloff-Smith’s (1992), three phases of individual sense-making: demonstrating the importance of mastery of knowledge, starting from narrow and context-specific knowledge through to more flexible ways of representing knowledge that is context free.

In comparison to the linear models of pre-service teacher development theories is Edwards’ (1995) theory, which describes a zigzagging action of teacher development in which concepts of shifting understandings occur. This pattern of development progresses from half-understood procedures and observations to processes of clarification and reconstruction of effective performance. Fuller and Brown’s (1975, p.38) research also views pre-service teachers undergoing distinct stages of development from novice to experienced, involving:

- **self**: the concern for own survival as an individual
- **task**: concern about the duties of a teacher
- **Impact**: the ability to make a difference and be successful with their students and the teaching and learning process.
Some theories outlined distinct models for developing the good teacher, other research identified teachers’ learning as not so much a developmental sequence but rather a rite of passage (Eisenhart, Behm & Romagnano, 1991; White & Smerdon, 2008). This belief includes the idea that pre-service teachers are in the process of recreating their identity and views of self, with their attitudes socially reorganised by the time they finish the program. This belief can be limiting as prior experiences are viewed as having little practical value and coursework is often seen as too theoretical to be useful in practice situations.

The idea that learning for the pre-service teachers is not just a series of ‘lock steps’ is supported by Burden (1990), who questions the notion of discrete stages that the pre-service teachers pass through. Burden (1990) stresses that pre-service teachers’ development occurs simultaneously with a concern for self-survival, development of teaching strategies, understanding pupil learning, and learning about materials and curriculum. These factors are dealt with concurrently by the pre-service teachers as they progress through their study. Another view is that pre-service teachers begin their programs with fixed conceptions about what it involves to be a good teacher. Fischler (1999) suggests that pre-service teachers only change their perceptions when they experience failure, and then they are prepared to try alternative ideas or conceptions.

Overall, there is a lack of evidence to support common stages of development or an initial preoccupation with management and survival. Rather, pre-service teachers’ learning is a complex process with enormous variations between individuals in terms of their starting points and the development of their thinking processes. Thus, the need to understand the pre-service teachers’ voice in terms of their development of the image of a good teacher is important of the discourse on teacher education (Burn, Hagger & Mutton, 2003; Burn, Hagger, Mutton & Evertson, 2000; Kegan, 1992; Pendry, 1997).
3.4 The Pre-service Teacher’s Development

Metacognition is the ability to monitor one’s own level of understanding and decide when it is not adequate. Metacognition has reflection (thinking about what we know) and self-regulation (managing how we go about learning) as components (Brown, 1980; 1985; 1991; Flavell, 1979). There are three types of metacognitive knowledge: awareness of knowledge, awareness of thinking and awareness of thinking strategies (Flavell, 1979).

According to Branford et al., (2000) ‘the ability to recognise the limits of one’s current knowledge, then take steps to remedy the situation, is extremely important for learners’ (p.47). Effective teachers are good problem-solvers and have highly developed metacognitive skills (Branford et al., 2000). Research has shown that pre-service teachers are metacognitive, they know how to recognise gaps or flaws in their own thinking, articulate these thought processes and revise their efforts (Brown, Bransford, Ferrara, & Campione, 1983). ‘Metacognitive regulation’ includes directing and being aware of one’s own thinking and beliefs (metacognitive knowledge) and being able to use this information to direct or regulate personal learning. It is the ability to problem solve, plan, set goals, organise ideas and evaluate what is known and not known. This process also involves being able to teach others, making the thinking process visible (Brown et al., 1983). To be good metacognitive thinkers (intentional learners) pre-service teachers need to select appropriate learning strategies and understand how to best use them (Bereiter & Scardamalia, 1989).

Gunstone and Northfield (1994) suggest that metacognition has a central place in teacher development (p.523). All learners enter a course of study with existing conceptions, perceptions, beliefs and attitudes about the content and the course of study, the nature and purpose of learning and teaching, and the roles appropriate for learners and teachers (p.
Pre-existing views can conflict with what is to be learned. Conceptual change is required when constructing knowledge and understanding different views of learning. But, for change to occur it must be the learner who recognises the need for change. They must evaluate their ideas and beliefs relating to learning and how it is intended to occur and then decide whether or not to reconstruct these perceptions (Gunstone and Northfield, 1994; Posner et al., 1982). ‘Conceptual change rarely involves complete abandonment of one notion in favour of another. Rather is often involves addition of new notions, retention of existing notions and acquisition of a sense of context in which the new notion is more appropriate.’ (p. 525). Gunstone and Northfield (1994) refer to this as ‘reconstruction.’

Following on from the research that explores how the pre-service teacher learns or develops into a teacher is the consideration of what experiences and learning are viewed as most beneficial. One of the most commonly cited considerations in the literature is the importance of linking theory to practice. The translating of theory involves having a well-developed understanding of theories in textbooks but also the ability to implement practice in a manner influenced by theories (Korthagen, Kessels, Koster, Lagerwerf & Wubbels, 2001; Swennen et al., 2008). Wubbels (1992) suggests that linking theory to practice is often an issue for teacher education programs in which there is a failure of these programs to influence pre-service teachers’ world images and preconceptions of good teachers. It is suggested that to overcome such issues, teacher education should structure coursework so there are many good connections, adequate time and length of learning that allows for reasoning, integration and reflection on theory and practice. It is believed that if active construction of understanding is to occur, teacher education needs to incorporate and recognise pre-service teachers’ beliefs, knowledge and attitudes. These beliefs are often deeply rooted in long experiences in school education influenced by the stereotypical
images in film and TV and resistant to change (Clark, 1988; Fischler, 1999; Schon, 1987; Wubbels, 1992).

A change of perceptions involves pre-service teachers reconstructing personal images of good teaching and learning. When pre-service teachers are able to construct ideal images of good teachers, they may make changes in their practices that are consistent with these images, that is, the images serve as reflections (Briscoe, 1996; Shaw, Davis & McCarty, 1990; Tobin & Jakubowski, 1990). According to Wubbels (1992), ‘integration of ideas is a gradual change process in which connections are made between existing and new conceptions’ (p. 140). New theories of learning should be presented during extended periods and must be moderately aligned with existing preconceptions. Learning needs to have an immediate personal relevance to the pre-service teachers, who need to be motivated to change preconceptions. Briscoe (1996) points to the experiences of the pre-service teacher both inside and outside the classroom that become part of the pre-service teachers’ personal curriculum for learning about teaching. The pre-service teachers’ learning involves constructing and transforming knowledge through reflection:

In practice teachers’ knowledge constructions are both practical and context-bound, tested against the perceived reality of school experiences. These constructions are likely to be changed only in cases where new experiences create perturbations, which lead the teacher to believe that what is known about teaching and learning no longer works, in essence lacks viability in the new context. (Shaw et al., 1990, p. 317)

It is not just the personal histories and the perceived realities of school experience that influence the development of pre-service teachers’ image of good teaching; it is also necessary to look at the interpersonal or role of self in teacher development (Hamachek, 1999). For a pre-service teacher to develop, it takes more than teacher education and
careful crafted links to theory and practice. It takes a certain personality, ‘savvy and interpersonal competence’ (Hamachek, 1999, p. 190), to cope with the changing demands and the complex process of teaching in addition to one’s personal goals.

The exploration of the interpersonal role is embedded in the literature that examines the ‘good’ and ‘bad’ teacher, the ‘expert’ the ‘master’ and the ‘novice’. For example, the difference between good teachers and effective teachers is that good teachers relate standards of practice to outcomes of student actual learning (Berliner, 1986, 2004; Hand & Treagust, 1994). The behaviour and personalities of teachers who are masters of their craft differ from non-experts in three basic domains: using knowledge more efficiently to solve problems, being efficient at problem solving and having greater insight about solutions to problems within their area of expertise (Berliner, 2004). Ayers (2001) states that, ‘good teachers are not always fun; good teachers should aim always for authentic engagement with students’ (p. 12). As pre-service teachers embark on the journey to construct their good teacher identity through authentic practice, they embark on a process to ‘modify and reconstruct their professional images of self as a teacher’ (Kagan, 1992, p. 129). Witt (2009) points to the importance of critical reflection in helping pre-service teachers let go of ‘misconceptions’ and gain new perspectives on being a good teacher.

A description of pre-service teacher belief systems refers to the pre-service teacher as an insider who, in contrast to other students entering a profession, does not necessarily re-define their new context or environment (Pajares, 1992). The insider enters the profession with a positive identification with teaching and this can lead to continuity of conventional practices and reaffirmation rather than a challenging of the past. Kagan (1992) goes on to state that in constructing images of good teachers, pre-service teachers may extrapolate, albeit unconsciously, from their own experiences as learners. In essence, this means they assume that their students will possess similar learning styles, aptitude,
interest and problems to their own. Furlong and Maynard (1995) describe patterns of transition similar to that of Fuller and Brown (1975), which have the pre-service teacher moving from concerns with self, personal survival and dealing with difficulties to the achievement of basic competence and confidence in management and organisation and eventual engagement with students’ learning.

3.5 The Complexities of Teacher Education

For teacher education, identifying and describing the good teacher is an elusive concept dependent on the perspective of the stakeholder making the assessment (Duffy, 2009). The role of outstanding teachers is to be ‘balancers of round stones, marching to a different drummer, who do things their colleagues cannot do’ (Duffy, 2009, p. 1). Good teaching is seen as the ability to combine and to be focused on a combination of management, content knowledge and interpersonal skills (Abbott-Chapman, 1990; Hughes, 2004; McCullough & Mintz, 1992). Strong (2002) points to good teacher behaviours relating to individuals’ preparation, personality and practice, and ways in which these behaviours contribute to student achievement and other measures outcomes. This view supports the belief of the complexity of teacher education involving more than a sound foundation in content knowledge and skilfulness of pedagogy (Duffy, 2009). The challenge for teacher educators is to create a learning environment in which pre-service teachers capitalise on and create links between the school experience, university coursework and prior understandings, and in which good teaching practices evolve (Lieberman, 1995).

When discussing good teaching and teacher education, the importance of cognitive psychology, developmental psychology, learning theory and pedagogy need to be considered (Woolfolk, 2000). Northfield (1988) describes learning as constructivist, in the sense that individuals construct personal meaning ‘as newer experiences are linked to existing ideas and values’ (p. 698). In general, educators acknowledge that knowing the
subject matter does not necessarily make a good teacher of that subject, but recognise that a teacher with good pedagogical capabilities would be more effective if they had in-depth knowledge of the subject they taught (Evertson et al., 1985). In order to develop effective teacher qualities, the pre-service teachers need ‘to be familiar with the complex interrelationship between teachers’ knowledge about both content and pedagogy and the need for teachers’ to represent subject content in a range of ways’ (So & Kim, 2009, p. 104).

Pre-service teachers develop and acquire expertise as they pass through the different stages of increasing professional levels of competency and accomplishments (Berliner, 2004). The linking of teacher practice to achieving core competencies and performance is one way to measure developing good teacher qualities (AITSL, 2011; NSWIT, 2009). Some authors suggest that teacher educators rarely model interactive teaching strategies, cooperative learning techniques or problem-solving skills, yet aspire for these good teaching qualities in their pre-service teachers (Evertson et al., 1985). In order to strengthen teacher education programs, the teacher educator needs to model good practice in reflection, individual instruction, cooperative grouping, microteaching and other strategies that strengthen prospective teachers’ knowledge and expertise in the classroom (Evertson et al., 1985).

Challenges to developing as a good teacher are identified by White and Smerdon (2008), who suggest there is a danger that teacher education is developing future teachers as a compliant workforce of program implementers rather than professional teachers capable of fostering and enhancing creativity. The fear is that pedagogical practice in creativity at universities is increasingly conforming to the reductive training and standards model that limits developing creative, divergent thinkers. Snyder (1971) refers to the hidden curriculum as covert, inferred tasks and meaning associated with mastery of the
curriculum, rooted in the teacher educators’ and mentor teachers’ values and beliefs within the school and social context. The hidden curriculum reflects the social context in which it is located it can be ‘pervasive and powerful, often acting as a deliberate form of gate keeping by ensuring that only certain types of students will be able to use it to their advantage’ (Barnett & Coate, 2005, p. 33). The concern is not that expectations were not stated, but that pre-service teachers often experience a significant gap between formal expectations and what is actually wanted (Joughin, 2010).

Teacher education programs have a complex mix of outcomes, incorporating academic requirements and practical components with the aim of encouraging and promoting learner-centred pedagogical approaches. The purpose is to develop teachers that are more learner-centred and are more responsive and respective of diverse needs of students in their classrooms (Dunn & Rakes, 2010). Learner-centred classrooms move away from the one-size-fits-all, teacher-centred, lecture-orientated classrooms and more towards custom-built classrooms for optimal learning. There is greater interest in students and student outcomes.

Edwards’ (1995) research on stages of learning builds on the earlier work of Gal’Perin’s (1970) sequence of learning in teacher education. This model examines the stages for the development of professional knowledge for the pre-service teacher. It includes: 1) creating a preliminary conception of the action; 2) taking practical action steps; 3) talking about the action and its implications; 4) internalising the routine and potential implications of the actions; and 5) consolidating and understanding through incorporating ideas into practice. Northfield (1988) suggests three alternative models to that of Edwards (1995), with a focus on developing the pre-service teacher to become an expert. Edwards’s (1995) work is based on the earlier research of Farnham-Diggory (1994). The first model suggested by Northfield (1988) is the behaviour model whereby a
novice becomes an expert by accumulating something, becoming better and faster, and having more. The second option is the apprenticeship model, emphasising the new teacher becoming enculturated with knowledge dependant on the context. The final model is the developmental model, which views learning as continually reshaping personal beliefs including a continual search for understanding and reshaping of personal beliefs. The variety of models, suggest that changes do occur for pre-service teachers. The opportunity for this study will be determining what actual changes in perceptions occur for the pre-service teachers, in specific teacher qualities over the course of their degree.

An emphasis on curriculum development rather than human development—good personal and professional qualities—limits the full development of the human potential and in essence is purposeless (Stoddard, 1991). Teacher education that produces good teachers needs to construct a continuum of authentic practices that encourage teacher growth, and move the pre-service teacher from direct teaching to a diversity of practices in a variety of schools both in and out of the school setting (Lieberman, 1995).

An aspect central to critical theorists in teacher education is the development of the teaching philosophy and key values of social justice. For some authors, ‘exemplary [good] teachers’ are those that exhibit dispositions and philosophical beliefs that support environments and policies that promote respect, ‘knowing and caring for your students, has as much importance as subject matter and pedagogical skills’ (Collinson et al., 1999, p. 365). Butler (1992) refers to this ethical development as action learning and states:

That thinking oneself into action … contributes to becoming an effective practitioner who recognises the social and moral content of teaching. He identifies that this approach encourages students to become more responsible for their own learning and more involved as thinking learners rather than rote learners. (p. 223)
Good quality teachers are those with strong personal philosophies, and decision-making skills that require ‘thoughtful adaptation rather than technical compliance’, pre-service teachers ‘should form their own stance … on teaching’ and not follow a set pattern (Duffy, 2009, p. 1). As pre-service teachers move through their degree, their perceptions of themselves as good teachers will change and develop if they are allowed to become thinking learners. Quality teachers are ‘those who are able to create relationships in which learning can flourish. For, teacher educators, this means developing pre-service teachers who have good interpersonal skills and are motivated to create and nurture supportive relationships’ (Duffy, 2009, p. 1).

In addition is the importance of developing good interpersonal qualities, Martin (2006) discusses the vital role of teacher enjoyment and confidence for pedagogy efficacy and effective quality teaching. Teachers’ enjoyment and confidence affect student–teacher relationships, motivation, engagement and outcomes. Students who believe their teachers care tend to learn more (Teven & McCroskey, 1997). Teacher education is viewed by many people, particularly teachers, administrators and governments, as providing inadequate preparation for teaching (Tripp, 1994). This belief has evolved to the point where ‘the professional school’s prevailing conception of professional knowledge may not match well with the actual competencies required of practitioners in the field’ (Schon, 1987, p. 10). Subject matter training at the expense of professional education courses is seen as less effective in preparing good teachers (Ferguson & Womcak, 1993).

The recognition of the moral purpose of teaching has been viewed as essential for good quality teaching (Byrne, 2005). Byrne (2005) considers a level of professional competence as a student-centred approach compatible with a measurement-driven approach. Others suggest that it is a combination of management, instructional techniques and personal characteristics that constitutes the basis for sound professional practice.
McBer (2000) reports on research into teacher effectiveness and finds three main factors within teachers’ control that significantly influence pupil progress. The first is teaching skills, followed by their own professional characteristics and the classroom climate. The importance of professional ethics and subject knowledge was also stated as an important criterion for quality teaching (Woolfolk, 2000). Reid (2005) refers to the need for new capabilities for teachers to question their routine practices and assumptions, and investigate the effects of their teaching on student learning. This is the reflective and inquiring practitioner, who can think ‘critically, flexibly and creatively’, which is significant in the present environment (Reid, 2005, p. 145).

Hargreaves (1995) refers to collegial professional learning as most important to current practice, describing the increase in efforts to build professional cultures and networks in education. The good teacher is collaborative, reflective, concerned about their practices and desires continuous growth and development as a lifelong learner (Brighouse & Woods, 2000). The need to acquire professional language is referred to in Swennen et al.’s (2008) research on congruent teaching. This involves acquiring professional language, enabling them to learn from the expertise of colleagues, and thus reflect on their own teaching and develop as teacher educators.

Silvernail and Costello’s (1983) criticism of pre-service teacher education is that the pre-service teacher does not acquire sufficient good practical experience prior to entry in to the profession. The assumption is that more is better, but this assumption is debatable. Some researchers state positive effects of professional experiences, while others report that pre-service teachers exhibit more negative attitudes towards children and teaching in general after extensive professional experiences (Silvernail & Costello, 1983). Authentic, credible learning experiences need to be focused, purposeful and targeted (Cambourne, as
cited in Ramsey, 2000). Cambourne (as cited in Ramsey, 2000) identified the need for authenticity and relevance in teacher education and states that if possible, the knowledge base of undergraduate teacher education subjects should be reorganised so that they are more integrated with school and classroom culture, and therefore pre-service teacher practice is more relevant and more meaningful. Similar views have been identified in the NCATE (2010) report on clinical teacher practice, which stated that:

> Teacher education has too often been segmented within subject-matter preparation, theory and pedagogy taught in isolated intervals and too far removed from clinical practice … is a profession of practice and perspective teacher must be prepared to become expert practitioners who know how to use the knowledge of their profession to advance student learning … to build on professional knowledge through practice … we must place practice at the centre of teaching preparation. (NCATE, 2010, p. 2)

There is a degree of ambiguity around the term ‘authenticity’ (Ridley & Stern, 1998; Torrance, 1995). This view is particularly relevant when considering the variations in school contexts. In many instances, it is assumed that authentic experiences are accommodated in various forms of practicum in schools and school-based learning, with a component of hands-on teaching experience. Collins (2004) criticised the unhealthy emphasis on so-called ‘repertoire-rehearsal school-based learning’ (p. 230), challenging the view that school-based learning adequately accommodates the authentic experiences needed for developing the good pre-service teacher.

Vu (2007) explores the concept of authenticity in theory and practice in teacher education in terms of enhancing student learning and program outcomes. This involves weaving the practicum into an ‘authentic’ curriculum in which theory informs practice and practice expands theory, with pre-service teachers’ learning at the centre. To do this, real-
life, student-centred situations related to the teaching profession must be integrated into the
teacher education program. Implicit in this statement is the observation that a good teacher
educator must have sufficient credibility as a practitioner to be able to construct an
‘authentic curriculum’ and create opportunities for ‘student-centred situations in the
teaching profession’ to take place (Vu, 2007, p.7).

This view is reinforced by research that suggests that authentic achievements that
produce good teachers involve four critical criteria: students’ active participation in the
construction of knowledge; in-depth discipline inquiry; connectedness of content
knowledge; and a strong link with the wider world of work (Wehlage, Newman & Secada,
1996). This research indicates that the critical criteria are active student engagement and
in-depth knowledge. Learning and organisational theorists suggest that people learn best
through active involvement and through thinking about and becoming articulate about
what they have learnt (Covino & Iwanicki, 1996).

In conclusion, the literature suggests that good teachers are shaped by their
personal histories and experiences rather than a list of competencies. Good teaching is
about human relationships and good teachers have accurate understandings about people
and their behaviour. Good teachers have high levels of energy, passion zeal and
motivation. It is suggested that pre-service teachers bring with them into the course a sense
of what a good teacher is, at least within their own personal experiences. Changing pre-
service teachers’ perceptions of what is a good teacher requires authentic, relevant
experiences and hands-on learning. One of the limitations to changing pre-service teachers’
views on good teaching, according to the literature, is the pre-service teachers’ inabilities
in linking theory to practice. The pre-service teacher reconstructs and modifies their ideas
of good teaching in stages or phases, often marked by changes in practices and beliefs.
Good teaching is a complex interrelationship between teacher knowledge, content and
pedagogy. A good teacher is reflective of their teaching practices, caters for individuals and is able access a range of strategies to suit the context and the individual. The good teacher develops a teaching philosophy that values ethical practices, social justice and recognises the moral purpose of education. Collaborative professional learning, professional characteristics and developing a positive classroom climate were indicative of good teaching.

3.6 Gaps and Blind Spots in the Literature

The significant gap in the literature that this study will address is the limited data on students’ own perceptions of what teacher qualities they see as important at specific times throughout their degree and the relationship this has to their development as pre-service teachers. The is literature importance to pre-service teachers as they have the opportunity to learn, unlearn and re-learn to better know themselves and better understand why they teach in a particular way (Loughran, 2006). The learning about self supports the need for teacher educators to review literature on pre-service teachers’ perceptions as they pass through their teacher education course in an attempt to better facilitate the development of their professional qualities and practices. Pajares (1992) states that there is ‘the belief that expert teachers hold influence on [pre-service teachers] perceptions and judgements, which in turn affect their behaviour in the classroom’ (p. 307). Therefore, understanding belief structures of pre-service teachers is essential in improving professional preparation and teaching practice. Pajares (1992) makes the observation that the beliefs about teaching are:

Well established by the time students get to college … and include ideas about what it takes to be an effective teacher and how students ought to behave and though usually unarticulated and simplified, they are brought into teacher preparation programs. (p. 322)
There is an opportunity for teacher education to influence and inform the perceptions of pre-service teachers regarding teacher qualities, professional practices and good teaching. The constructs identified in the literature and the characteristics of good teachers were used as a guide in developing the broad, open-ended questions used in the focus groups. The teacher qualities identified in the literature review, in conjunction with data from the focus groups, were used to shape and categories the questions asked in the survey instrument (see Appendix G). A series of unresolved issues have been identified in the literature review, covering a broad spectrum of issues raised in relation to teacher qualities. Many of the unresolved issues have been raised by the expert educator, their convictions or ideologies rather than any empirical evidence from the pre-service teacher. The unsolved issues will provide a useful guide to what is important to reflect upon in the study, they include:

1. Established professional standards used for accreditation and registration and as a basis for professional growth are limited in determining qualities that bolster pre-service teachers’ self-esteem, motivation, inspiration, engagement, development of a love of learning, or production of higher student achievement (Woolfolk, 2000).

2. Teacher effectiveness is linked to demographics such as years of teaching or formal education, race or sex, the use of pedagogical techniques, and teacher behaviour or student achievement (Murname, 1981). The background and culture of the learner is often an overlooked aspect of knowledge and skills acquisition in teacher education (Gredler, 1997).

3. There is limited literature on the pedagogy of the pre-service teacher in teacher education. It is the pedagogy of the expert teacher that is most often referred to in the literature (Shulman & Shulman, 2004).
4. Shulman’s (2004) model of pedagogical practice involves the thinking about what one is doing and having adequate knowledge, principles and experiences from which to reason (process of sound reasoning) (Shulman, 1987; Shulman & Shulman, 2004). This questions the reflective practice of pre-service teachers and how they change from the status of beginning teacher to graduate teacher.

5. There is a lack of understanding on the pre-service teachers’ pedagogical learning in teacher education discourse highlighted in the following observations: pedagogical learning from experience requires first that one interpret that experience. Pedagogical knowledge by new teachers is sometimes characterised as common sense. Teachers attribute most of their knowledge on how students understand to their own classroom experience (Korthagen et al., 2001; Loughran, 2006; Shulman, 1987).

6. Teacher educators promote the benefits of extensive pedagogical training (course work methods and professional experience) and education coursework for pre-service teachers based on their convictions or ideologies rather than evidence from practice or empirical studies (Ferguson & Womcak, 1993).

7. The difficulties in measuring critical elements of pedagogy are influenced by the complex set of interactions between students, the teacher and the curriculum in the teaching process. There is limited data available on the effect teachers’ pedagogy has on student outcomes (Mayer, 2005).

8. Jegede et al. (2000) suggest very few studies have actually sought the views of pre-service teachers about what they think they need to know and to what extent coursework and teaching experience contributes to their development.
9. Knowledge about teaching is not absolute or complete; it evolves, adapts and changes as new contexts and knowledge are drawn from disciplines (Cochran-Smith, 2003).

10. There is a lack of understanding of how professional knowledge is organised, validated and used in teaching. There is no single taxonomy or correct way of structuring the knowledge base for pre-service teachers (Cochran-Smith, 2003). Despite this observation different educational organisations continue to attempt to measure what is a quality teacher.

11. Teaching practices and relationship with pupils appear to owe much to factors and experiences embedded in their personal biographies. The impact of altering pre-service teachers’ views during teacher education is viewed as minimal (Lortie, 1975). Fischler (1999) suggests that as a rule, pre-service teachers only change their perceptions when they experience failure and then they are prepared to try alternative ideas or conceptions gained during their teacher education programs.

12. Literature omissions in terms of what are most appropriate and/or preferred interpersonal qualities for the pre-service teacher. Much of the literature reflects the view and voice of the expert and experienced educator (Reynolds, 1992).

13. Pre-services teachers’ development is often limited by lack of their own understanding of how they themselves learn as pre-service teachers (Lieberman, 1995).

14. An egocentric ‘rite of passage’ view to teacher development, where the pre-service teachers belief that completion of a coursework program will make them a teacher, is limiting. Part of this is due to the fact that prior experiences are often viewed as having little practical value in becoming a teacher (Eisenhart et al., 1991; White & Smerdon, 2008).
15. Research suggests that overall, there is a lack of evidence to support the common stages of development or an initial preoccupation with management and survival, and to view pre-service teachers’ learning as a complex process with enormous variations between individuals in terms of their starting points and the development of their thinking processes (Burn et al., 2000, 2003; Kegan, 1992; Pendry, 1997).

16. The linking of teacher practice to achieving core competencies and performance is currently being used to measure developing teacher qualities. These standards are based on the expert voice not that of a novice. (AITSL, 2011; NSWIT, 2009).

17. There is ambiguity around the term ‘authenticity’ (Ridley & Stern, 1998; Torrance, 1995). This view is particularly relevant when considering the increased importance of authentic professional experience in teacher education courses and the large variations in school contexts and mentors. Collins (2004) criticised the unhealthy emphasis on so-called ‘repertoire-rehearsal school-based learning’ (p. 230).

This study will add the voice of the pre-service teacher to the discourse in teacher education and will address a number of these unresolved issues. The focus for this enquiry will be on pre-service teachers, their perceptions and beliefs on teacher qualities and their changing perceptions over time. An iterative process of reviewing the literature; identifying the gaps and unresolved issues, collecting and analysing focus group, interview and survey data, and then re-reading relevant research literature has contributed to the conceptual and theoretical analysis of findings emerging from this study. The following chapters describe the study’s methodological approach, research methods and analytical procedures, which have contributed to the final analysis and conclusion contained in later chapters.
Chapter 4: Research Methodology

4.1 Introduction

This chapter describes the study’s guiding methodology explains the mixed-methods research design. It explains the interdisciplinary approach adopted for this study, which combines quantitative and qualitative data through the use of social constructivist epistemology and a post-positivist theoretical perspective.

This methodology is well placed to address the research questions because the social constructivist epistemology aligns with the notion that beliefs, values, ideologies and perceptions are socially constructed and change as pre-service teachers are exposed to new experiences. The post-positivist theoretical perspective legitimises use of ‘large group’ quantitative analysis in parallel with qualitative findings; that is it allows flexibility with respect to synchronous analysis of natural and social worlds.

The descriptions used in the methodology chapter are based on Crotty’s (1998, pp. 2–11) four elements: epistemology, theoretical perspective, methodology and methods. Epistemology deals with ‘the nature of knowledge, its possibilities, scope and general basis’ (Crotty, 1998, p. 8) thus providing the philosophical grounding for the study. The theoretical perspective is ‘the view of the human world and social life within that world, wherein assumptions are grounded’ (Crotty, 1998, p. 7). The research methodology describes the ‘researcher’s strategy and research design’ (Crotty, 1998, p. 7). The research design in turn is explicitly outlined in the ‘concrete techniques or procedures’ in the research methods (Crotty, 1998, p. 6). This framework describes the study’s guiding theoretical perspectives, the research methods used, data analysis and the reasoning behind the selection of a mixed-methods approach.
A combination of methodological approaches is used to support the research on the perceptions of pre-service teachers’ views on the qualities that constitute good teaching practice. Connole (1993) refers to ‘the loosening of the interdisciplinary and methodological strictures in social science research’ (p. 15). Adopting Connole’s (1993) interdisciplinary approach provides a mixed methodology with a range of assumptions about reality and knowledge used to guide the construction of the research problems and the choice of research methods. The methods employed consist of a combination of quantitative and qualitative data collection involving open and semi-structured discussion in focus groups, completion of pre- and post-intervention survey questionnaires and semi-structured teacher educators interviews. The research methodology and the research methods applied provide a detailed understanding of the perceptions of pre-service teachers views on teacher qualities in a four-year undergraduate degree. In addition to the pre-service teachers’ perceptions, the views of teacher educators were obtained providing a useful framework or lens from which to view the teacher qualities valued by the pre-service teachers.

### 4.2 A Social Constructivist’s Epistemology

A social constructivist’s epistemology was adopted for this study. It provides a theoretical basis for understanding the changing perceptions of the pre-service teachers and will inform the theoretical perspective of the study. The research focuses on the pre-service teachers’ constructed knowledge, their experiences and resultant views about teacher qualities. The constructivist paradigm, the nature of reality, is socially constructed. It is the discourse of the subjects, their multiple realities that were most important. These realities are local in nature, shared in the group and specific to PDHPE pre-service teachers. The philosophical belief that underpins constructivism is that:
There is no objective truth waiting for us to discover it. Truth or meaning comes into existence in and out of our engagement with the realities in our world, there is no meaning without a mind. Meaning is not discovered, but constructed. (Crotty, 1998, p. 9)

The purpose of the study was to gauge teacher qualities, from the viewpoint of the pre-service teacher, including what they valued and how their constructed perceptions changes as they engaged in the realities of teacher education. The pre-service teachers’ evolving perceptions were viewed as forming part of an active process influencing their world, their reality and their constructed perceptions. The constructed realities of the participants in the study were not static, recursive or uniform. Meaning was created within a social context of the education course they were undertaking. The pre-service teachers’ perceptions of teacher qualities are situated among other things in their personal experiences.

In addition to the pre-service teachers’ perceptions, the teacher educators’ constructed views were useful in providing an expert frame of reference for the study. This study identifies the student voice, a gap identified in the literature. Understanding the views of the teacher educators could be used as lens for reviewing the pre-service teachers’ perceptions as it offers constructed meaning from an expert voice, situated within a similar context. Crotty (1998) observes that, ‘in this understanding of knowledge, it is clear that different people may construct meaning in different ways, even in relation to the same phenomenon’ (p. 9).

According to Creswell (2007), the worldview of constructivism is typically associated with qualitative approaches, which work from:
The understanding or meaning of phenomena, formed through participants and their subjective views … [This meaning] is shaped by social interactions with others and their own personal histories. In this form of enquiry, research is shaped from the bottom up: from individual perspectives to broad patterns and untimely, to theory. (p. 24)

It was important in this study that the students’ voice was heard, documented and analysed. Ideas on teacher qualities were gathered from the pre-service teachers and considered in the context of the literature and the views of the teacher educators. The social interactions, relationships and personal histories of the pre-service teachers shape the construction of ideas. According to Sarantakos (2005), ‘constructivism is about realities and relationships’ [that] emerge out of peoples’ interaction with the world (p. 37). The constructivist worldview was useful as it acknowledges the role of the social group in the development of the pre-service teachers’ perceptions. Crotty (2003) support this idea and refers to the role of constructivism as one in which meaning is constructed from human interaction within their world rather than meaning being created in isolation.

The construction of social reality is actively created by human beings in their social world within the ‘interpretative nets woven by individual and groups’ (Marshall, 2002, p. 84). The pre-service teachers, both ‘as individuals and as a cohort were actively constructing new understandings of the world in which they live and work’ (Marshall, 1995, p. 20). They develop subjective meanings for their new experience, and the meanings were varied and multiple, leading the researcher to look for the complexity of views rather than a narrow meaning of a few categories or ideas. The goal of the researcher in this instance was to rely as much as possible on the participants’ views of the situation—the pre-service teachers’ voice (Creswell, 2007, p. 20).
The challenge for this research was in the ambiguous nature of constructed reality, particularly the pre-service teachers’ socially constructed meaning, ‘social constructivism is at once realist and relativist’ (Crotty, 1998, p. 63). This is the dichotomy with constructivist research. The pragmatic yet changeable understanding of knowledge in constructivism research is appropriate for this study, which aimed to capture the pre-service teachers’ perceptions over time, a continuous process of construction and reconstruction as they moved through their course. Gergen (1994) suggests that constructivism theory ‘looks to social constructivism as a means of broadening and democratising the conversation about human practices and submitting these practices to a continuous process of reflection’ (p.64).

The constructivist’s worldview provides a theoretical understanding for the study and a foundation for the theoretical perspective. It is thus necessary to articulate the issue of different worldviews in the design of the mixed-methods approach adopted in this study. In line with this, Creswell & Plano Clark (2007) suggested ‘Stance 2: Researchers can use multiple paradigms or worldviews in their mixed methods study’ (p. 27) has been assumed. This position simply states ‘that multiple paradigms may be used in mixed methods research; researchers must simply be explicit in their use (Creswell & Plano Clark, 2007, p.27). It is important to note that combining different worldviews may give rise to contradictory ideas and contested arguments (Greene & Caracelli, 1997, 2003). According to Creswell and Plano Clark (2007) ‘these contradictions, tensions and oppositions reflect different ways of knowing about and valuing the social world’ (p. 27). The theoretical perspective adopted was the post-positivist approach, recognising that substantial qualitative components of this research. Creswell and Plano Clark (2007) suggest that ‘qualitative and quantitative approaches differ in how researchers implement each step.'
These differences are not opposites: rather, we see them as differences on a continuum’ (p. 28).

4.3 A Post-positivist’s Theoretical Perspective

The constructivist meaning of reality is inherent in the philosophical stance that lies behind the selected mixed-methods design. Post-positivist study enables the analysis of the natural and social worlds in parallel recognising that different criteria are appropriate for each. The most appropriate criteria to use in the traditional post-positivist research include the use of the notions of credibility, transferability, dependability and conformability in contrast to traditional criteria used in the most quantitative positivists’ position (Lincoln & Guba, 1985, cited in Scott & Usher, 1999). In this study, the research design and post-positivist theoretical perspective align with the desire to access the breadth of the pre-service teacher perceptions on teacher qualities. This is consistent with the views of Creswell (2007), who states that ‘it is important for the researcher to fit the paradigm to the design, and matching the study’s purpose’ (p. 17).

A principal assumption is that pre-service teachers are influenced by the social and historical biographies they bring with them. Another is that the pre-service teachers’ perceptions are constructed and can be modified by the social experiences in which the individuals engaged. The teacher education program the pre-service teachers are completing has the potential to modify their beliefs. Interacting with students from all four years of the program gives an indication of how pre-service teachers’ perceptions change through time in response to a program of study. The perceptions of the teacher educators and their beliefs around teacher qualities are embedded in the experiences of the experts in education and in turn shape and influence the pre-service teachers’ perceptions.
The post-positivist perspective takes a scientific and social approach to research. This approach has the elements of being reductionist and logical with an emphasis on empirical data collection. This was most suited to the longitudinal snapshot approach (quantitative data) conducted in this study, which was then connected to the focus group data (qualitative data) and viewed alongside the teacher educators’ interview findings.

Ontologically, post-positivism identifies that reality exists but cannot be fully understood or explained given the multifaceted nature phenomena, the complexity of social meaning and human interpretations in research (Guba, 1990). Post-positivism aims for modified objectivity, with the researcher’s position as neutral as possible. The aim for the researcher is to maintain an objective viewpoint as an ‘outsider’ in the study. However, it is necessary to acknowledge the role of the researcher was to a certain degree as an ‘insider’, providing the unique perspectives the researcher brings into the research process. The important process of objectivity highlights the need for self-reflection during data collection and analysis (Guba & Lincoln, 1994).

Investigating meaning from a mixed-methods study while using quantitative results to confirm or make credible the findings is privileging the latter in a post-positivist manner (Crotty, 1998). It is not the use of quantitative methods but the attribution of conformability, credibility and generalisability to quantitative findings that is important. As such, the researcher must ‘confront the objectivist understanding of meaning and the post-positivist understanding of reality—and declare our hand’ (Crotty, 1998, p. 41).

Post-positivism supports the social construction of theory and reality and the quantitative and qualitative approaches to the discovery of knowledge (Fischer, 1998; Guba, 1990). Ontologically, post-positivism points out the reality exists but cannot be fully understood or explained, given the interrelated cause and effect factors, the meaning of social understanding and human interpretations in research (Guba & Lincoln, 1994).
Researchers must therefore be critical in their findings, considering the wide variation in community interpretations and how well the findings fit with pre-existing knowledge (Fischer, 1998). Fischer (1998) states that ‘social science must also attempt to explain how social groups construct their own understanding of that reality’ (p. 134). Guba (1990) points to the view that post-positivism aims to methodologically reach ‘critical multiplism’ (p. 20). This implies that findings need to be based on as many sources as possible.

Post-positivism recognises ‘the absurdity of assumptions that it is possible for a human inquirer to step outside the pale of humanness while conducting inquiry’ (Guba, 1990, p. 21).

4.4 A Mixed-methods Research Methodology

A mixed-methods design was adopted for this study because it allowed the researcher to use multiple worldviews and was a practical and natural approach to the study. This view is supported by Creswell (2007), who suggests that ‘the complexity of research problems calls for answers beyond simple numbers in a quantitative sense or words in a qualitative sense. A combination of both forms of data can provide the most complex analysis of problems’ (p. 13). In this instance, both quantitative and qualitative data satisfied the practical need to gather multiple forms of data from diverse audiences. The researcher situated the quantitative findings in the contexts and words of participants, and they in turn were framed with numbers, trends and statistical results. This form of enquiry is viewed as a legitimate form of inquiry in social and human sciences (Denzin & Lincoln, 2005).

Creswell and Plano Clark (2007) state that ‘the combining of methods can play an important role in quantitative research. Qualitative researchers realise that reporting only qualitative participants’ views may not permit generalizing the finding to many
individuals’ (p. 13). It is suggested that a mixed methodology provides for a broader audience of policy makers, practitioners and others in the field who wish to apply data results from multiple forms of evidence to document and inform the research problem. An increase in the sophistication of evidence leads to a collection of both quantitative and qualitative data (Creswell & Plano Clark, 2007, p. 13).

The benefits of the mixed methodology for this enquiry are as follows:

1. A better understanding of results as ‘mixed methods offer strengths, which offset the weaknesses of separate applied quantitative and qualitative research methods’ (Creswell & Plano Clark, 2007, p. 18).
2. It allows for the collection of more comprehensive evidence for addressing the study problem (Creswell & Plano Clark, 2007, p. 18).
3. It provided a fuller understanding of the research question and helped to clarify research results (Hesse-Biber, 2010, p. 4).
4. The mixed methodology allowed for new insights into the research question and extended the breadth and range of the enquiry (Greene, Caracelli & Graham, 1989, p. 259).
5. The mixed methodology assisted in the development of research by creating synergistic effect—‘whereby the results from one method … help develop or inform the other method’ (Greene et al., 1989, p. 259).
6. The mixed methodology allowed for method connection to ‘examine the same dimensions of a research problem so has to enhance the credibility of the research findings’ (Bergman, 2009, p. 3).
7. The mixed methodology allowed for the use of different worldviews. It does not claim to bridge the gap between post-positivism and social constructivism; rather
the mixed-methods design provided an alternative to a mono-method design (Bergman, 2009, p. 19).

8. The mixed methodology allowed for multiple forms of research methods well suited to the diversity of participants (Creswell & Plano Clark, 2007, p. 18).

9. The mixed methodology design enabled the researcher to make connections between large quantitative data results and smaller specific qualitative data results, leading to more sophisticated discussions.

10. The mixed methodology allowed for cross-validation and the complementarity of results from qualitative and quantitative parts of the research (Bergman, 2009, p. 19).

4.5 The Strategy and Design of the Research

In this study, qualitative method was selected for the open discussion and structured aspects of the focus groups and for the semi-structured interviews to gain an insight into the participants’ and teacher educators’ views about teacher qualities. The quantitative part of the study used a pre- and post-snapshot survey questionnaire approach. The intent of these specific data collection methods was to see how well data provided by the participants ‘fits’ an existing explanation in the discourse of teacher qualities. Quantitative research was the main data source with the intent to support or refute existing understandings.

The mixed-methods approach selected for this study is based on the Exploratory Design Model outlined by Creswell et al. (2003, pp. 75–79). This model involves sequential data collection phases, which guide the decisions and provide the context for the interpretations of the findings (see Table 5.1) (see Figure 4.1). The overall purpose or intent of this design was that the qualitative data were used to help explain and build upon
the quantitative results. This model was selected because an exploration was needed in
developing a measurement instrument, which was most suited to the specific study group.
The pre-test (focus groups) provided useful information on the variables needed to develop
an instrument that was credible and dependable. It is suggested that this model is useful in
explaining significant or non-significant results (Morse, 1991). The variation selected for
this study was the Exploratory Design: Instrument Development Model with an emphasis
on quantitative data (Creswell et al., 2003, p. 76).

![Diagram of survey instrument development process]

**Figure 4.1. Steps in the development of the survey instrument**

The intent of this model is that the results of the first method (qualitative) were
used to help develop the second method (quantitative). The basis for this decision was that
an exploration was needed to develop a large-scale survey instrument, and because the
variables were broad and in some instances unknown. In this design, the researcher used
the qualitative findings to guide the development of item and scale for the quantitative
survey questionnaire. Thus, the initial focus group together with the literature were used to
develop the survey instrument. This view is supported by Creswell’s research on mixed
methods (Creswell et al., 2003; Creswell & Plano Clark, 2007). The exploratory design is
viewed as being useful for ‘identifying important variables to study quantitatively when the variables are unknown’ (Creswell & Plano Clark, 2007, p. 75). In the second data collection phase, the researcher implemented and ensured credibility of the instrument quantitatively. By doing this, the researcher connected the qualitative and quantitative methods through the development of the instrument item. This approach placed an emphasis on the quantitative aspect of the study.

The researcher used quotations, themes and categories to generate aspects of the quantitative instrument. Using the focus group data and examples from the literature ensured credibility and transferability. Data were collected sequentially; one type of data was collected and analysed prior to the second collection. Similar themes and categories occurred in the quantitative and qualitative data. Sampling procedures were followed; they include using a sample size of 10–12 participants and involving participants who were familiar with the phenomenon being explored. The participants were selected purposefully and chosen to hold different perspectives (for example, different year levels or genders). Collecting data in the second stage does not typically involve the same participants; in this instance, as the researcher wanted to collect data from the whole cohort in the degree, participants needed to be related. To overcome possible bias, the survey instrument was traile using a combination of staff and pre-service students. The instrument was also reviewed by a statistician, and some questions were based on credible instruments used in other published studies. The researcher needed to decide what information was most useful in developing the instrument and what procedures should be used. Quotations from individuals were turned into questionnaire items and categories, and themes established for the focus groups were designated as variables. The use of a likert scale and ranking questions were used. The teacher educator interviews provided another layer of credibility involving a secondary qualitative data collection, occurring concurrently with the survey
instrument. Data were collected and analysed separately to provide a level of
transferability when drawing conclusions from the pre-service teachers’ data. The steps
that have been outlined in this design closely follow those procedures outlined by DeVellis
(as cited in Creswell et al., 2007, pp. 124–125) as being most appropriate when employing
a sequential design model for data collection.
Table 4.1

**Exploratory Sequence Design Steps Adopted in the Study**

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<thead>
<tr>
<th>A two-phase approach, identified as the exploratory sequence design (ESD) (Creswell et al., 2003):</th>
<th>In this study, following Creswell et al.’s (2003) ESD, the following steps were performed:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The ESD starts with qualitative data to explore the phenomenon then builds to the second phase.</td>
<td>1. A series of focus groups (open discussion and semi-structured components) were conducted (qualitative).</td>
</tr>
<tr>
<td>• The second phase uses data to develop the quantitative instrument, with the identified variable being used to test emerging theories or frameworks.</td>
<td>2. Descriptive content analysis of the focus group data was performed—themes and categories emerged.</td>
</tr>
<tr>
<td>• At this stage, there is a connection of qualitative data and quantitative variables through the development of the instrument.</td>
<td>3. The survey instrument was developed using focus group themes and current literature.</td>
</tr>
<tr>
<td>• In this study, the quantitative data were emphasised as most important in line with Creswell et al., (2003) model.</td>
<td>4. The initial trial of the survey instrument was reviewed and modified.</td>
</tr>
<tr>
<td>• In this model, the qualitative data from the focus groups produced specific categories or; these categories were used to design the survey instrument</td>
<td>5. The survey instrument was distributed to all pre-service teachers (Years 1–4), pre- and post-snapshot approach.</td>
</tr>
<tr>
<td>• The quantitative data produced themes and categories that emerged through the factor analysis.</td>
<td>6. Concurrently interviews were conducted with a series of teacher educators—semi-structured questions were asked.</td>
</tr>
<tr>
<td>• Collection of data occurred over a 1 year period for each cohort in a 4 year degree pre and post.</td>
<td>7. Teacher educator interview data (qualitative) were thematically analysed—themes were identified.</td>
</tr>
<tr>
<td></td>
<td>8. Survey data (quantitative) was analysed using SPSS program—factor analysis produced themes or categories; trends and significance were identified.</td>
</tr>
<tr>
<td></td>
<td>9. Focus group data (qualitative) and survey data (quantitative) were analysed together then connected in the discussions.</td>
</tr>
<tr>
<td></td>
<td>10. Interpretations of results of the pre-service teachers’ data both qualitative and quantitative were explored against the research question, with the results from the teacher education interviews acting as a lens in the final interpretations.</td>
</tr>
</tbody>
</table>

Outlined in Table 4.1 are the key approaches of Creswell et al., (2003) model and the corresponding steps taken in this study.
Hesse-Biber (2010) suggests that a mixed-methods approach, involving multi-methods incorporates both quantitative and qualitative data in answering research questions. This combination of methods is defined as ‘involving the collection, analysis and integration of quantitative and qualitative data in a single or multiphase study’ (Hanson, Creswell, Plano Clark, Petska & Creswell, 2005, p. 224). This approach provided the opportunity for the researcher to establish a convergence of the data, enhancing the credibility of the research findings. Connection of the different datasets ultimately, enriched the study’s conclusions. Having quantitative and qualitative data enabled the researcher to gain a fuller understanding of the research problem and clarified the research results (Hesse-Biber, 2010).

### 4.6 Limitations of the Study

Limited time and access to informants for each pre- and post-survey meant that decisions had to be made in relation to:

- the number of focus groups held
- the number of interviews conducted
- the use of a ‘snapshot’ survey approach, instead of a longitudinal enquiry, which would have had higher attrition rates and taken a longer period of study.

The study focused on general secondary teacher education issues rather than those specifically associated with the education of Personal Development Health and Physical Education (PDHPE) teachers. The researcher wanted the results to inform secondary education generally, not just PDHPE pre-service teachers. Existing information on teacher qualities was organised into themes rather than historically because information appears inconsistently in the literature.
A similar decision was made in relation to gender issues. There were differences relating to gender in the data; however, they were not critically analysed in this study because the enquiry was focused on teachers’ perception, not male or female teachers. Focusing on gender differences would have taken the research into the area of gender studies, which did not suit the purpose of this study. Similarly, ethnic background and age differences were not analysed in detail. The latter were not adequately represented in the study group in statistically significant numbers to draw any firm conclusions.

The study exclusively focused on pre-service teachers in teacher education. The intersection of teacher education, teacher educators, schools, experienced schoolteachers and government policies was acknowledged in the literature; however, the research focus was on the perceptions of the pre-service teachers during their course of study.

Teacher quality for the purpose of this study is defined as those characteristics – skills, knowledge and attitudes needed to be an effective secondary teacher. This study attempts to explain the pre-service teachers’ perceptions on the teacher qualities they most value over the course of their study.

Teacher education data, internal and external documentation were gathered to provide a frame of reference for interpreting the pre-service teachers’ views. It is not within the scope of this study to look in detail at ways in which government policies or teacher education practices are shaping pre-service teachers.

This chapter described the research design, providing a theoretical framework for the study. The study adopted a social constructivist epistemology most suited to understanding the socially constructed perceptions of the pre-service teachers. The mixed methodology approach resulted in the combining of different worldviews, and embedding a quantitative analysis reflected the post-positivist theoretical perspective. Creswell et al.’s
(2003) Exploratory Design Model was used to guide the research process. The specific research methods and data analysis procedures used in this study are detailed in the following chapter.
Chapter 5: Research Methods and Data Analysis

5.1 Introduction

The research methods used in this mixed methodology study allowed the researcher to explore and analyse the multilayered experiences of the pre-service teachers. The data collection techniques used included focus groups, snapshot survey questionnaire approach and teacher educator interviews. While the survey analysis (quantitative) data addressed the perceptions of the pre-service teacher educators, it was necessary to broaden the enquiry by interviewing key teacher educators who influenced the perceptions of the pre-service teachers. The analysis of interview data provided a richer and more complex understanding than would have been obtained through survey analysis alone. The qualitative data obtained from the focus groups was initially important for identifying variables in designing the survey instrument. In addition, the qualitative data from the focus groups provided a useful voice to inform interpretations of quantitative findings.

5.2 Focus Groups

The first stage of data collection involved focus groups—qualitative data collection. The focus groups were used to provide students with an open forum to discuss their perceptions of what constituted a good teacher, and so the researcher could gather her insights prior to the development of the main survey instrument. This method did not aim to analyse the group but rather to generate a facilitated group discussion, revealing possible variables and considerations. A process of: coding, conceptually organising ideas, interrelating broad categories, assigning codes or themes, establishing commonalities and eliminating negative cases was followed. The analysis process provided a degree of consistency and small-scale generalisation (Sarantakos, 2005, p. 344–345).
Morgan (as cited in Babbie, 2007) suggests ‘that focus groups are an excellent device for generating questionnaire items for a subsequent survey’ (p. 309). Sarantakos (2005) states that as a ‘pre-research method, focus groups help to prepare the main study by providing sufficient information about the study object, about operationalisation by defining indicators and preventing possible errors’ (p. 195).

The focus groups provided multiple sources of information that involved an open discussion which provided detailed responses to questions or issues raised by the researcher and within the group (Sarantakos, 2005, p.164). Data from the focus groups were also used ‘as a post-research method to explain trends and variances, reasons and explanations for attitudes and opinions’ (Sarantakos, 2005, p. 195). This was not the original intention; however, the data obtained provided a rich and comprehensive view of the pre-service teachers’ voice, including personal stories, attitudes and opinions that helped to explain quantitative trends and variances obtained in the survey.

An ethics application was submitted and approved; it outlined the semi-structured focus group questions (see Appendix H) and the email used for recruitment (see Appendix I). There were two focus groups comprising six to eight participants representing the different year cohorts. The Year 1 and 2 cohorts were grouped together (FG1), as were the Year 3 and 4 cohorts (FG2). This approach was taken to create a balance of power and knowledge in the groups, yet still allow cross-fertilising of ideas, opinions and views of participants in both the early years (Years 1 and 2) and the later years (Years 3 and 4) of the degree. Sarantakos (2005) states that focus groups are, ‘loosely constructed discussions with a group of people brought together for the purpose of the study, guided by the researcher and addressed as a group’ (p. 194). The participants were recruited through a general course email enquiry. A natural group formation (participation selected at random)
was used to construct the groups according to their year of study (Babbie, 2007). The researcher gathered a diverse group with representation of both genders.

Those participants who had volunteered were encouraged to bring a friend along from the same course, using a technique of snowballing to collect participants after the initial enquiry (Babbie, 2007). This technique assisted in establishing a balance in numbers and genders. The researcher’s role in the focus group discussions was as a facilitator and arbitrator, to guide and encourage discussion among the group; it is this approach that distinguishes it from group interviews (Sarantakos, 2005). The focus groups were used to establish the context as a preliminary study leading to the quantitative research (McQuarrie, 1996; Morgan, 1997). The focus group commenced in an open discussion and then proceeded in a semi-structured form (Sarantakos, 2005). Focus groups can ‘generate diversity and difference either within or between groups and so reveal … the dilemmatic nature of everyday arguments’ (Lunt & Livingstone, 1996, p. 96). The aim was to provide a forum that facilitated a diverse group discussion in which participants built on ideas of others and established a mechanism for opinion formation. This process placed the researcher in the role of facilitator, encouraging participants to share their ideas and points of view in an open and relaxed conversational style within the group. The researcher’s role was not to control presentation of personal views but to keep the discussion on the topic, yet allow significant points of view to be discussed (Sarantakos, 2005).

The discussion started with a few general points to familiarise the participants within the group, then progressed to discussion-generated questions related to the research topic. The role of the researcher (facilitator) was to intervene as required; direct the discussion to the research goals; and keep discussions on course, interesting, balanced and equally distributed among the group. Guiding the discussion was the underlying paradigm of social constructivism, as such, group discussion offered ‘access to the construction of
meanings as participants interact with each other within the group, providing breath and variation of views as the group negotiates these views’ (Babbie, 2007, p. 196). The discussions were allowed to evolve organically, with some attention to and reference to the focus questions, but generally the group discussion occurred in an open and accepting manner. This allowed for ‘personal narrative, opinions and significant points of view to be presented in a real, emotional and summated form as spontaneous expression’ (in other words, producing the opportunity for a controlled presentation of personal views) (Babbie, 2007, p. 196). The benefit of the focus groups was that the group social dynamics brought out aspects of the topic that would not have been anticipated by the researcher and would not have emerged from individual interviews (Babbie, 2007).

The skills of the facilitator in controlling group dynamics helped to reduce the limitations of this technique, such as group domination by over-enthusiastic members, the real opinions of individuals hidden from the group, possible power plays between participants and the discussion going off track (Babbie, 2007; Krueger, 1988; Sarantakos, 2005). The facilitator had completed training in focus group facilitation and resisted over-directing the discussion and the focus group participants, thus avoiding possible group conformity or groupthink (Babbie, 2007).

Overall, the focus group technique was successful in exploring rather than describing the perceptions of the pre-service teacher and in identifying the variables needed for the design of the survey instrument. The focus group discussions provided insightful qualitative data, which supported the interpretation of the quantitative findings (Babbie, 2007). The data obtained consisted of a general group narrative on the pre-service teachers ideas about teacher qualities and good teaching based on their own experience as students or their recent experiences as pre-service teachers. This approach allowed the researcher ‘to question several participants systematically and simultaneously’ (Babbie, 2007, p. 308).
Morgan (1997) suggests that focus groups are an excellent device for generating questionnaire items for a subsequent survey.

The focus group transcripts were read through multiple times and the researcher identified 51 emergent descriptive categories. The transcripts were then divided into a series of descriptive statements, and these were organised according to the descriptive categories that emerged from the focus group narrative. The descriptive categories were collated into 5 groups (see Table 6.1). The groups derived from the descriptive analysis were used to guide the scope and style of the survey instrument development.

5.3 Survey Instrument

Following on from the focus groups was the development and distribution of a semi-structured survey instrument. A second ethics application was submitted and approved with a copy of the survey instrument (see Appendix G) and additional teacher educator interview questions (see Appendix J). Examples of published mixed-methods research that incorporated similar structured surveys in their enquiry include Jenkins (2001) and Myers and Oetzel (2003). The development of the survey instrument was Stage 2 of Creswell and Plano Clark’s (2007) Exploratory Model. The qualitative data from the focus groups were used, in conjunction with the literature to design the questionnaire at the outset. Creswell et al. (2007) suggest using ‘specific quotes from individuals, codes that the research generates and themes that consist of group of codes’ (p. 124) as the most useful procedure in designing and developing an instrument, and this procedure was followed. Other survey research relevant to the topic of teacher qualities was referenced in this process. Examples of the pre-service teachers survey studies used to guide the design of the instrument include:
- Nausheen and Richardson’s (2010) research on motivational beliefs of postgraduate teachers
- Reupert and Woodcock’s (2010) pre-service teachers confidence in classroom management
- Loughran’s (2007) teacher education practices
- Darling-Hammond et al.’s (2006b) creating powerful teacher education
- King Rice’s (2003) teacher attributes
- Boe, Cook, Kaufman and Danielson’s (1996) research
- Boe, Bobbitt, and Cook’s (1997) research
- Boe, Cook, Bobbit and Terhanian’s (1998) studies by the American National Centre on Educational Statistics used in research on pre-service teacher quality
- Guyton and Farokhi’s (1987) teacher education attributes
- King, Stahl and Bronzo’s (1985) quality assessment of prospective teachers
- Okey, Capie, Ellett and Johnson’s (1978) teacher validation.

A semi-structured questionnaire was designed and divided into key sections (see Appendix G). There were seven key sections. They included demographics, views on a good teacher, knowledge, interpersonal skills, classroom management, pedagogical practices and professional characteristics. The instrument consisted of a combination of standard responses with some unstructured parts used in each of the sections (Sarantakos, 2005). There was an opportunity for open-ended responses at the end of each section. The open-ended questions were designed to offer additional detail to the pre-coded questions. The demographic categories were age, gender, previous qualifications and socio-cultural.
In developing the demographic sections on the survey instrument the hypothesized difference between the groups included:

- **Age** – Three categories were selected to illustrate that there were few mature age students in the cohort
- **Gender** – That there was a general balance in the gender distribution, with subtle differences in year of study
- **Previous qualification** – To illustrate that division between those who were school leavers and those who might have worked or studies previously
- **Socio-cultural** – To illustrate that the majority of participants identified from Anglo-Saxon background

The questionnaire format adopted a mixed format design, with the questions in each section appearing according to the logic of the study. A box format was used, in which questions are uniform throughout the questionnaire with all questions (Sarantakos, 2005). Pre-coded or closed questions were used in the second section; in this way, the respondents were asked to indicate their response by placing a tick in the relevant category (Sarantakos, 2005). Participants were asked to select specific statements and rank the top five or to select their level of agreement using a one to five Likert scale. The strength of the pre-coded questions allowed for the classifying of responses and provided large amounts of coded information (Sarantakos, 2005). The questionnaire was administered by the researcher at Time 1 and Time 2 (at the beginning and end of the academic year).

This design was most suited to a mixed-methods approach in which the quantitative data are the main dataset. It also allowed for numerical responses (Sarantakos, 2005) utilising a combination of a Likert scales and rankings. This was in accordance with recommended elements identified by Becker (1989), Mahr (1995) and Puris (1995). The
questionnaire design in this study included a focus on one specific category in each section. The selected category sections were relevant as they were developed from a review of the literature and the themes that emerged from the focus groups. The design adhered to the required symmetry, clarity, simplicity, language and positive tone. The use of suggestive questioning or prestige bias was avoided.

In order to ensure face validity of the survey instrument a number of strategies were employed. At the outset a wide range of instrument-based research studies were reviewed (see page 101). In the design of the instruments’ questions, Sarantakos (2005) suggests a series of steps that include self-critique, revision, pre-test or pilot, and revision prior to distribution. In line with these steps, the researcher conducted a self-critique of the survey instrument, critique from an expert statistician, a pilot trial, subsequent revision and modification. The self-critique allowed improved clarity and ensured that none of the questions were leading questions. The critique from the expert statistician ensured that the instrument did not favour certain responses over others, and that the data acquired could be statistically tested. The pilot trial involved a sample group from within the PDHPE cohort and staff volunteers that did not have a direct link to the research or research area, consisting of a group of 12 participants. Principal findings of the trial were that: participants could not be identified on the basis of their responses, there was a spread of responses rather than the instrument artificially preferencing some responses over others, and in a few instances there was direct feedback about clarity of the questions from some participants. In addition the researcher could gauge how long the survey instrument would take to complete. Subsequent revision and modification of the survey instrument addressed feedback from all of the validation steps. This approach ensured a degree of dependability and confirmability with the survey instrument.
To determine changes in participant views over time the survey instrument was distributed at the beginning and end of the academic year, to all year cohorts. The instrument was administered at the beginning of the semester, in the first week, in core education units, this captured the whole cohort. The post distribution was more complex as not all pre-service teachers were completing core units in education, so distribution occurred in more classes on campus. The second distribution was in the last few weeks of Semester 2, so attendance was not as reliable. This study used a pre- and post, snapshot approach, viewed as a sound way to examine changes within a population over time (Babbie, 2007). Sampling all four year cohorts allowed observations to be made at different points in the program.

The response rate at the beginning of the year was significantly higher than at the end of the year. The differences in response rate Time 1 and Time 2 was due to the timing of distribution. Initial distribution of the instrument in a single core PDHPE unit at each Year level meant that the majority of participants were captured (response rate=167/183 =91.3% Year 1 - 54, Year 2 – 35, Year 3 – 31, Year 4 - 47). The second round of instrument distribution took place in the last few weeks of Semester 2 and students were distributed across a greater number of units (response rate=87/129=67.4%, Year 1 - 34, Year 2 - 20, Year 3- 10, Year 4 - 23). The reasons for less consistent returns from these units included student withdrawal from individual units and non-attendance on day. The percentage attrition between pre and post surveys was 29.5% (54 participants) across the whole course.

The non-response rate was kept as low as possible by distributing the survey in person in core PDHPE units at the University. This ensured that the data were adequate both in terms of statistical analysis and credibility (Sarantakos, 2005). After a review of published social research literature, Babbie (2007) suggested that a 50% return rate is
adequate for analysing and reporting. A response rate of 60% is considered good and a response rate of 70% is very good. In this study, a 91.3% response rate was achieved at Time 1 and 67.4% at Time 2, rates that are appropriate for analysing and reporting.

5.4 Teacher Educator Interviews

A primary consideration when selecting the mixed methodology design was the need to ensure that the methods matched the research problem (Creswell & Plano Clark, 2007). Other considerations, as outlined by Creswell and Plano Clark (2007), were the ‘order in which the data were to be used, the relative weight of the quantitative and qualitative approaches and how the datasets should be related or connected’ (pp. 80–81). These considerations were significant, particularly in relation to gathering qualitative data from the teacher educator. It was decided that in order to understand the perceptions of the pre-service teachers, it was necessary to collect data about what the teacher educators believed. A series of semi-structured interviews were conducted using similar discussion questions to those asked in the focus groups, providing a degree of comparability (see Appendix J). These data were collected at Time 2 along with the Time 2 survey data. In terms of its weight or importance, its role was to provide a framework or lens through which the researcher could more fully understand the pre-service teachers’ perceptions. It was not connected directly to the quantitative data but used as a guide in exploring the quantitative findings during the interpretation phase. A published example of mixed methodology in which interviews are used to support major quantitative datasets is the research of Rogers, Day, Randall and Bentall (2003). An example of when qualitative data were embedded within the quantitative data is the research of Aldridge, Fraser and Huang (1999). Both of these studies use qualitative data from interviews to draw connections to quantitative results. This study’s method most closely resembles the research approach used in the Aldrige et al., (1999) study.
The interviews conducted with three teacher educators used a semi-structured interview style; the interviewer assumed a guiding role only (Sarantakos, 2005). The interviews were recorded and transcribed. Participants were encouraged to respond based upon their own experiences and perceptions in their specific area of teaching. This approach produced an open conversational dialogue and aligned with the social constructivist research epistemology as knowledge and understanding was being constructed from the participants’ experiences and understandings. Gergen (1994) explains:

Accounts of the world … take place within shared systems of intelligibility—usually a spoken or written language. These accounts are not viewed as the external expression of the speaker’s internal process (such as cognition, intention) but as an expression of relationships among persons. (p. 78)

The role the researcher played was a passive participant in the discussion, seeking clarification where needed and acknowledging the participants’ comments and ideas (Babbie, 2007). The teacher educators were selected on the basis of their contact with the students as permanent staff members and their varied yet significant discipline focus in the degree. The interview questions were broad and the process adopted an open interview style, which allowed the respondents to feel comfortable in answering questions in an open and truthful manner (Sarantakos, 2005, p. 285). The interviews were open to allow for open discussion with informants. As Strauss and Corbin (1998) point out, ‘different questions and issues arise at different points of the inquiry’ (p. 75). It is important that the researcher remained open to subject-specific contexts in the data and to pursue these in the interviews.

Creswell and Plano Clark (2007) point to the ‘nature of the interviewer-interviewee relationships that encompass all interview situations’ and the importance of sensitivity’ (p.
In this study, it was most important to be a good listener rather than a frequent speaker, to be sensitive and aware of the participants’ teaching responsibilities to the study group and to strictly adhere to ethical protocols. The main challenge for the researcher was maintaining an objective position as the researcher and not the subjective position of an academic colleague. To remove any bias associated with the interviewer factor the participants’ interviews were transcribed by an external agency. Participants in the interviews were provided with the opportunity to read, amend and approve their interview transcript. The advantage of interviewing as a technique in this study was that it enabled the researcher to ask more complex questions than may have been possible in a survey or focus group (Sarantakos, 2005). The interview data provided a broad and diverse picture of each of the teacher educators’ personal beliefs, aspirations for the pre-service teachers and favoured approaches to teaching, depicted through personal narratives and stories.

Additional data on the external drivers influencing the teacher educators and the pre-service teachers’ perceptions of teacher qualities was also collected. Data from the teacher educators included the views and aspirations expressed in the interviews. An internal and external review of documentation was also carried out. The following documentation was reviewed: course design/curriculum, unit syllabi and outcomes, university graduate attributes, state and Australian National Graduate Teaching Standards, and state Education Department content requirements. This collection of data assisted the researcher by providing a context for the analysis of the pre-service teacher perceptions.

5.5 Choice of Informants

In answering the research question, the researcher must decide on the people and sites that can best provide information as well as the number and variety of informants that are needed to provide the data (Creswell & Plano Clark, 2007). Informants were identified for this study through a process of purposeful sampling with the researcher intentionally
selecting participants who had experience with the phenomenon being explored (Creswell & Plano Clark, 2007, p. 112). This ensured that the participants in the study were a representative sample providing data that offered a level of dependability. The researcher selected pre-service teachers in an undergraduate PDHPE degree at each year level (Year 1, 2, 3, & 4) as the main study group. A group of key teacher educators responsible for this degree were also selected to be part of the study. The researcher believed that the informants selected would likely yield maximum information on the topic chosen for the study (Bogdan & Biken, 1982; Krathwohl, 1998). When developing a purposive sample, researchers need to use their special knowledge or expertise about a group to select subjects who are able to represent a specific population (Berg, 1998).

The pre-service teachers selected as informants in this study were identified as teachers with valued teacher qualities, both at university and as beginning teachers in the school sector. For this reason, the researcher believed that as a cohort they could provide insightful knowledge on what pre-service teachers believe are valuable teacher qualities. As new issues, concepts and themes emerged from the data, the need to extend the qualitative enquiry to incorporate the teacher educators’ ideas became obvious. For this reason, the selected teacher educators were included in the study. Each of the teacher educators were influential players in the course, delivering significant components of the program. Thus, their input was important in addressing the research questions.

In total what was conducted included, two focus groups comprising six to eight participants, three individual interviews with teacher educators, and a survey instrument was responded to by 167 participants at Time 1 and 87 at Time 2. The sample size provided sufficient response rate for a rigorous quantitative study and made it possible for the researcher to draw inferences with confidence that the sample reflected the characteristics of the entire population. The lower response rate at Time 2 resulted in the
factor analysis being conducted with Time 1 participants only; however, statistical comparison of Time 1 and Time 2 data was conducted. The probability sampling of individuals for the focus group was initially conducted on a random basis; further participants were recruited using snowballing sampling (Sarantakos, 2005). The participants in the focus groups provided a suitable representation of the population and the results can be generalised to greater cohort. The participants involved in interviews were selected as representative of the secondary teaching population and the specific areas of study in the teaching course. They were targeted rather than random and chosen based on their significant contribution to the teaching of the sample cohort.

5.6 Ethical Issues

The study was designed with attention to ethical issues such as anonymity, confidentiality, consent and minimisation of harm as outlined in the publication manual of the American Psychological Association (2006) and the Australian Association for Research in Education Code of Ethics for Research in Education (1995). Ethics approval was granted for the study, including the focus groups, teacher interviews and the survey instrument.

The ethical issues to be considered included a need to be sensitive to the potential of power imbalances, particularly with the pre-service teachers. The researcher’s role as an ‘insider’ was acknowledged. When working with individuals, the researcher respected participants individually by not stereotyping through the use of discriminatory or identifying language (Creswell, 2007). It was necessary to ensure the privacy and rights of the participants. Rigorous data collection procedures were followed to ensure ethical guidelines were followed, including the opportunity for the interview participants to review transcripts prior to data analysis and the signing of permission and release slips for data collection (see Appendices A to F).
5.7 Credibility, Transferability, Dependability and Confirmability

The criteria of credibility, transferability, dependability and confirmability are inherent in the post-positivist theoretical perspective used in this study (Denzin, as cited in Bergman, 2009; Lincoln & Guba, 1985, cited in Scott & Usher, 1999). Credibility requires that the multiple constructions of reality are adequate and that findings’ represent the phenomenon they are supposed to measure (Hesse-Biber, 2010). Corresponding to this, Hesse-Biber (2010) suggests ‘that drawing qualitative sample directly or even indirectly from a quantitative sample has the added benefit of increasing the credibility and transferability of the qualitative findings’ (p. 122). The connecting of the qualitative and quantitative findings in the mixed-methods design provided support in assessing the credibility and transferability of the findings in the study. The linking of methods allowed the research to address any contradictions in the quantitative study through the exploration of qualitative findings (Hesse-Biber, 2010).

The design method selected was Creswell et al.’s (2003) exploratory design, which was adopted as the mixed methodology approach in this study. Published examples of this approach that demonstrate the dependability and confirmability of the chosen design include Aldridge et al. (1999); May and Eitkina (2002); Schillaci et al. (2004); and Way, Stauber, Nakkula and London (1994). This mixed methodology approach provided a ‘goodness of fit’, as the findings captured the issues outlined in the study (Hesse-Biber, 2010, p. 87). The design was the most appropriate and enabled the researcher to reach logical conclusions. Findings were grounded in the data and were realistic. The use of the category system identified in the factor analysis and the themes identified in the qualitative data offered clarity, explanatory power and fit the data in a realistic way. Finally, the degree and incidence of bias was removed by address issues in the power relationships as outlined in the ethics application (for example, external researchers distributed the survey
instrument). The theoretical ideas outlined in the study were relevant to the data analysis and findings provided a credible framework for the research (Hesse-Biber, 2010).

Ensuring credibility ‘differs in quantitative and qualitative research, in both approaches, it serves the purpose of checking the quality of the data and the results’ (Creswell & Plano Clark, 2007, p. 133). The credibility of quantitative data was maintained by the researcher ensuring that meaningful inferences could be drawn from the results of the tested population. The transferability was ensured through the checking of data for consistency and stability of scores, through statistical procedures (reliability coefficients and diagnostic checks) and for internal consistency and test and retest comparisons (Creswell & Plano Clark, 2007). The investigator assessed and established the dependability of the survey instrument through content credibility approaches. This included ensuring that variables obtained from the focus groups were used in the survey design. The use of validated sample questionnaires found in the literature were used to guide the survey questions and a pre-trial of the instrument was conducted.

The focus for the qualitative data is an emphasis on credibility rather than the transferability of scores emphasised in the quantitative data. Credibility checks are important in determining whether accounts provided by the researcher are accurate, can be trusted and are dependable (Lincoln & Guba, 1985). The credibility approach taken in this study used the sequential approach in Creswell et al.’s (2003) Exploratory Design. This involved connecting the separate datasets in the analysis. In the sequential approach, ‘the analysis from the first phase of the research (qualitative) was used to guide the data collection in the second phase (quantitative)’ (Creswell & Plano Clark, 2007, p. 136). An additional qualitative dataset (teacher education interviews) occurred in phase two. These data were not connected to the main dataset; its purpose was to act as a lens or framework for interpretations and answers to the research questions. This approach provided
conformability to the subsequent findings and interpretations. Creswell’s (2007, p. 148) research identifies potential threats to credibility when adopting the Exploratory Model design and using sequential data analysis. As such, the following guidelines were adopted for this study:

- A large sample of participants was used for the quantitative collection and a smaller sample for the qualitative data.
- The same individuals were used for the focus groups (qualitative) stage one and survey questionnaire (quantitative) stage two.
- Rigorous procedures for developing and validating the survey instrument were used.
- Statically significant or strong predictors were used as the base for interpretation.

5.8 Data Analysis

Following on from the test for credibility, transferability, dependability and confirmability is a description of the data analysis processes. The explanation includes an understanding of the Exploratory Design models and sequential data analysis processes as well as an outline of the methods of analysis implemented to generate the quantitative dataset and qualitative datasets. Prior to an explanation of the analysis processes, it is important to consider the constructivist methodological understandings that unpin the data analysis and theory construction.

5.9 Constructivists Theory Analysis

The approach taken to data analysis in this study was guided by two main considerations. The first is the constructivists’ view on the nature of reality and how we gain the knowledge we know:
Constructing reality means making account of the world around us and gaining impressions based on culturally defined and historically situated interpretations and personal experiences. This means that what people perceive as reality is not the reality but what they constructed through experiences and interpretations. (Lamnek, 1995)

Using the view that reality is constructed through experiences and interpretations analysis requires an understanding that new structures or realities are virtual because they ‘do not realise social phenomena but represent options of expression of phenomena’ (Lueger, 2000, p. 24). The interaction of the researcher with the data requires acknowledging the reality of peoples’ experiences in everyday life, which are constructed realities. The ‘impressions of the participants are constructions of their reality, the information then collected by the researcher become a reconstruction of reality and certainly not objective reality.’ (Sarantakos, 2005, p. 38). This required the researcher to ask questions of the data, to construct meaning from concepts, and to compare ideas and themes based on the active process of creating meaning of a world.

The second understanding that is central to constructed reality in analysis is the recognition that communication is more than a means of exchanging information. Communication is a selective process of producing meaning in social contexts. This required the researcher to consider three components in the analysis process: the choice of the information, the form of information that will be shared and the understanding of that information, all of which are important in the production of meaning (Sarantakos, 2005).

Sarantakos (2005) states that ‘in the social world there is no single structure but multiple structures interwoven with each other’ (p. 37). Meaning making in the constructivist’s paradigm is a continuum and involves collective meaning. This notion suggests that ‘the assignment of meaning is assisted by cultural mechanisms such as
socialisation where people learn to recognise meanings in subjects. The participants’ construction of meanings in the study was influenced by the culture of the group, their gender, age, prior qualifications and experiences, their situated interpretations and personal experiences’ (Sarantakos, 2005, p. 39). This requires that the researcher to be aware of the culture of the participants and the role it played in their constructing meaning. In this study, meaning for the participants was generated collectively, readily available, co-constructed, conveyed through the culture, and shared, constructed and sustained then reconstructed through interaction (Crotty, 2003).

The researcher sorts a collection of instances from the data, hoping that issue-relevant meaning will emerge (Creswell, 2007). According to Stake (1995), data analysis and interpretations in qualitative data involves categorical aggregation, ‘the process of pulling the data apart and putting it back together in more meaningful ways, establishing patterns and looking for correspondence between two or more categories’ (p. 163). The implication is that analysis involved looking for constructed similarities and differences in the population, involving aggregation of data into themes and sub-themes and into categories through a role of interpretation in theory building. The researcher will look for constructed realities and multiple realities in the datasets. In this vein, reality was about relationships and the social constructed realities of the study group (Gergen, 1999, 1994).

In order to demonstrate how interpretations were reached in this study from the data analysis, it is important to clarify the role of inductive and deductive processes that underpin knowledge building. All knowledge, and therefore meaningful reality, is contingent upon human practices being constructed in and out of interaction with their social world and that truth cannot be simply defined as objective or simply subjective was important. Understanding is not constructed in isolation; therefore all conclusions are made using the interpretative strategies adopted.
5.10 Qualitative and Quantitative Analysis

In the quantitative analysis, the researcher analysed the data to describe trends, compare groups, identify related variables, use demographic testing against factors, establish correlations and describe data findings (Creswell & Plano Clark, 2007). Overall, the purpose was to gather enough evidence to statistically support interpretations. According to Creswell et al. (2007), this process ‘from descriptive analysis to inferential analysis and multiple steps in the inferential analysis builds greater refined analysis (for example, from interactive effects to main effects to post hoc group comparisons)’ (p. 131). The qualitative data were used to support deeper understanding of the quantitative data. Qualitative analysis followed a different process involving the establishment of key themes or categories.

An Exploratory Design was used and the variants chosen for the research included survey instrument results (quantitative analysis), descriptive analysis of focus group transcripts and thematic analysis of interview transcripts (qualitative analysis) (Creswell et al., 2003). An example of a mixed methodology question asked in this study was: ‘In what way does the qualitative data help explain the quantitative results?’ (Creswell & Plano Clark, 2007). The sequential data analysis method used the information from the interpretation of the focus group descriptive statements to inform the survey instrument statistical findings (Creswell & Plano Clark, 2007). The researcher compared and contrasted (FG1) and (FG2) looking for points of commonality and difference, and generally found differences in the Year 1 and 2 data compared to the Year 3 and 4 data. The stages of analysis include:

1. The first stage of the sequential design was to quantitatively analyse the data from the survey instrument.
2. The next stage was to analyse the findings from the focus groups.
3. Concurrently, a second qualitative dataset was analysed (teacher educator interviews).

4. The final stage was connecting the findings from the survey with the focus groups, using significant statements or quotations to draw conclusions and form interpretations.

5. The conclusions were developed using the data from the teacher educator interviews as a lens to deepen the researcher’s understandings of the pre-service teachers interpretations derived from the connected focus groups and survey.

5.11 Survey Analysis

Sarantakos (2005) identifies the strengths of the survey as a considered and objective view of the issue; providing a wider coverage; allowing a reduction in the problems of non-contact; allowing less opportunity for bias or errors; being a stable, consistent and uniform measure; and allowing freedom from variations. The strengths suited the large cohort of undergraduate students participating in the data collection. The researcher was looking for changing perceptions before and after the academic year. The survey instrument was an ideal method of collecting data and suited the snapshot approach employed. The focus groups enabled the researcher to gather initial data on student perceptions and then use this information to develop the survey instrument. The instrument was therefore meaningful and relevant to the participants and aligned with the research questions. The quantitative approach provided data that were objective and could be trialled and repeated.

In analysing the data from this instrument, SPSS version 16.0 was used. It was useful software for statistically analysing large amounts of quantitative data and is commonly used in behavioural and social science research (Weinberg & Abramowitz, 2008). The
analysis involved the two general branches of statistics: descriptive statistics and inferential statistics. Descriptive statistics were used to describe the data that were collected, and the purpose of inferential statistics was to make generalisations or inferences based on the data collected (Weinberg & Abramowitz, 2008). Prior to carrying out the specific statistical descriptive and inferential tests, a factor analysis was conducted. Principal component analysis (PCA) with Orthogonal (Varimax) rotation was conducted using SPSS version 16.0 on 41 items from the Quality Teaching Survey on a sample of 111 students. This number was less than the 161 sample at Time 1 as outliers (a variable with a low squared multiple correlation) were detected and deleted from the analysis. For the PCA the outliers reflected survey responses that were not fully completed. For other analyses the specific completed components of these were analysed, but for PCA a complete set of data was required. The PCA results were therefore derived from a representative sample of completed survey instruments.

Coakes, Steed and Ong (2009, p129) state that ‘A factor analysis is a data reduction technique used to reduce a large number of variables to a smaller set of underlying factors that summarise the essential information contained in the variables’. The factor analysis also provides a test of transferability; a ‘test determining whether items are tapping into the same construct’ (Coakes et al., 2009). Data were collected at the beginning (Time 1) and end (Time 2) of a one-year teaching period, providing a snap-shot of all four years in an undergraduate teaching degree. The PCA was only conducted on the data collected for Time 1 due to insufficient data at Time 2. Diagnostic checks were conducted to ensure that the assumptions of PCA were not violated (see Appendix K).

The six-factor orthogonal solution was selected because this solution was the most consistent with the theoretical underpinnings of this study and had the clearest structure. The four- and five-factor solutions, although statistically sound, produced components that
did not make theoretical sense. The six-factor solution accounted for 49.5 per cent of the variance in the original items, a higher variance than 4, 5 or 7 factor solutions. Overall, variables were well defined by the factor solution as 83 per cent of the items had a communality value of 0.40 or above. Inspection of the rotated component matrix revealed moderate to high loadings for each item on at least one factor. Overall, 93 per cent of items loaded onto one factor were greater than 0.40.

The six components were: 1) views on professional and interpersonal characteristics; 2) views on pedagogical approaches: students/resource-centred; 3) views on content knowledge; 4) views on pedagogical professional practice; 5) views on teacher knowledge; and 6) views on the use of textbooks and activity sheets. Although it appears factor 6 could be subsumed into factor 2, the factor analysis identified these as separate factors. Simply combining two factors does not imply a 5 factor solution.

Demographic testing was conducted against the six factors and included a one-way analysis of variance (ANOVA) with the purpose of detecting differences in group means, and a t-test used to determine whether there was significant differences between two sets of scores (Coakes et al., 2009). Follow-up pre- and post-testing was conducted against the six factors. They included t-testing, one-way ANOVA and correlations, which examine the relationships between variables in a linear fashion (Coakes et al., 2009, p. 61). Statistical analysis also included descriptive tests, with the aim of exploring the dataset, summarised and describing the data findings and making some general observations, for example, number of males, females, age range and averages (mean) (Coakes et al., 2009, p. 54).

5.12 Focus Group Analysis

Qualitative research crosscuts disciplines, fields and subject matter (Denzin & Lincoln, 2005). In this study, the researcher attempted to make sense of and interpret
phenomena in the field of teacher education and the meaning that pre-service teachers bring to the discipline. Focus groups were used to gather an understanding of the pre-service teachers’ perceptions, in order to complement quantitative analysis of survey instrument findings. The focus groups were analysed using a descriptive content analysis (Sarantakos, 2005).

Data were obtained from two focus groups Years 1 and 2 (FG1) and Years 3 and 4 (FG2). Descriptive statements for each focus group were compared and contrasted. Patterns were identified for each focus group, providing a means of capturing the developing ideas of the pre-service teachers as they progressed through their study. Comparison of the responses from pre-service teachers in the early years compared to later years identified shifts in perceptions. These patterns and observations were used to reinforce and clarify findings from the analysis of the quantitative data.

### 5.13 Teacher Educator Interview Analysis

The responses from the teacher educator interviews were reviewed through a process of thematic analysis outlined by Braun and Clarke (2006). The authors define thematic analysis as a process ‘of reporting patterns (themes) within data’ (Braun & Clarke, 2006, p. 79). This analysis identified certain themes or patterns across the narrative data rather than within a data item (Braun & Clarke, 2006, p. 81). The analysis of the qualitative research consisted of preparing, organising the data and then, for analysis, reducing the data into meaningful segments. The segments were then assigned names through a process of coding and condensing the codes and finally representing the data as distinct themes and sub-themes or categories. The categories were then related to an analytic framework in the literature, creating a point of view relevant to the constructivist’s position (Creswell & Plano Clark, 2007). Five themes on valued teacher qualities emerged:

1) development of personal philosophy/values; 2) The importance of authentic experience
and credibility as a teacher; 3) professionalism; 4) pedagogy and 5) content knowledge.

Each interviewee also revealed a theme that differed from the response of their colleagues; these were network/team player from the sports specialist, lifelong learner from the health specialist and creativity from the sports scientist. The underlining epistemology in the analysis is that the participants’ views and values on which teacher qualities are based are socially constructed. Crotty (2003, p. 43) reminds us that what ‘constructivism claims is that meanings are constructed by human beings as they engage with the world … and that there is no true or valid interpretation. There are however useful interpretations’ (p. 47). Useful interpretations did emerge from the data analysis that served the purpose of providing a lens for interpreting the pre-service teachers’ perceptions.

The argument for selecting the specific sub-themes was considered in light of relevant literature and the epistemological perspective of the research. This approach provided a flexible and useful research tool. Data from the interviews were rich and detailed with emerging themes and sub-themes common to teacher education and specific to the interviewees’ specialisation and value system.

5.14 Conclusion

This chapter outlined the mixed methodology, research methods and data analysis approaches used in the study. The study is theoretically situated in the social constructivist’s epistemology observed through a post-positivists theoretical perspective. Both worldviews inform the method design and analysis and together suggest a multiple reality of knowledge. Sarantakos (2005) suggests that ‘for the purpose of social research, it may simply not be useful to conceive of an overarching reality to which data, gathered in different contents, approximates’ (p. 121). The choice of which methodology and methods would be useful in constructing individual and group perceptions as the focus of the study was not based so much on tabulating and analysing the response of the participants but
rather on developing an understanding of what the pre-service teachers actually valued in terms of teacher qualities. Through the use of Creswell et al.’s (2003) Sequential Exploratory Design Method and sequential data analysis, the data were connected, and this ensured credibility in producing transferable interpretations. When social enquirers mix methods, ‘possible tensions and dissonance from different sets of assumptions are especially welcomed as they generate new insights and fresh perspectives’ (Green, Kreider & Mayer, 2005, p.276). The mixing of quantitative and qualitative methods enabled the inclusion of the alternative perceptions of the teacher educators, allowing the researcher to view similar data within different contexts by overcoming the context ‘boundedness’ of specific paradigms (Hammersley, 1996). The combination of methods provided credibility, facilitated the design of the survey instrument and supported the analysis of the data by providing a dependable framework. This view is supported by Hammersley (1996), who states that a ‘complementary approach occurs when the two research strategies are employed in order that different aspects of an investigation can be dovetailed’ (p. 275). Chapters 6 and 7 detail the results from the pre-service teachers including both quantitative and qualitative datasets.
Chapter 6: Pre-Service Teachers’ Perceptions of Teacher Qualities

6.1 Introduction

This results section captures the earlier views of the pre-service teachers prior to the distribution of the main quantitative instrument (survey). The purpose of the focus groups was to gain an insight into the participants’ ideas and opinions in terms of what teacher qualities they most value and why, in this way ensuring that questions devised for the instrument were relevant to the study group. The results from the focus groups were used to develop the survey instrument that was then distributed to the whole cohort of pre-service teachers in Years 1 to 4, both before and after, thus capturing a paired snapshot of the pre-service teachers’ perceptions on teacher qualities at different points in their degree; (see Appendix N) for details of the degree structure.

Data were collected from the participants in different years and participants were grouped into separate focus groups: Years 1 and 2 forming focus group one (FG1) and Years 3 and 4 forming focus group two (FG2). Three separate focus groups sessions were conducted, which involved an open discussion at the outset and semi-structured group interviews for the balance. There were a series of six questions and a final reflection question to end (see Appendix H).

The discussions and responses to the focus questions were recorded and transcribed. The transcriptions were analysed using a descriptive content analysis (Sarantakos, 2005, p. 345). This process involved identifying blocks of data that demonstrated some commonalities and recognising relevant themes or patterns across the
narrative data. Five themes and relevant categories on valued teacher qualities emerged (see Table 6.1). The five themes were then used in conjunction with the literature to develop the survey instrument questions for this study. The patterns in each of the focus groups discussions were later compared to the quantitative data.

Table 6.1

Themes and Categories

<table>
<thead>
<tr>
<th>1. Content/knowledge</th>
<th>2. Interpersonal</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. authentic</td>
<td>a. flexible</td>
</tr>
<tr>
<td>b. relevant</td>
<td>b. energetic</td>
</tr>
<tr>
<td>c. knowledgeable/skilful</td>
<td>c. enthusiastic</td>
</tr>
<tr>
<td>d. understands students’ needs</td>
<td>d. genuine</td>
</tr>
<tr>
<td>e. inclusive</td>
<td>e. relates to students</td>
</tr>
<tr>
<td>f.</td>
<td>f. confidence</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. Management and organisational</th>
<th>4. Instructional techniques (pedagogical)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. organisational skills</td>
<td>a. communication skills</td>
</tr>
<tr>
<td>b. plans and designs lessons, curriculum units, assessment</td>
<td>b. uses a range of teaching strategies</td>
</tr>
<tr>
<td>c. positive discipline</td>
<td>c. interactive</td>
</tr>
<tr>
<td>d. uses rules and routines</td>
<td>d. creative</td>
</tr>
<tr>
<td>e. task centred</td>
<td>e. challenges students</td>
</tr>
<tr>
<td>f. manages class interaction</td>
<td>f. helps students make connections</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5. Professional</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. reflective practitioner</td>
</tr>
<tr>
<td>b. lifelong learner</td>
</tr>
<tr>
<td>c. collaborative</td>
</tr>
<tr>
<td>d. team player</td>
</tr>
<tr>
<td>e. identifies students’ needs</td>
</tr>
<tr>
<td>f. develops positive relationships</td>
</tr>
</tbody>
</table>

6.2 Pre- and Post-snapshot Survey Questionnaire

This section provides a statistical overview of the quantitative data collected from the survey instrument. It is the main data collection phase comprising quantitative data in a mixed-methodological design (see Appendix G). The aim of the statistical data was to provide a paired snapshot of pre-service teachers’ perceptions on teacher qualities as they
progress through a four-year undergraduate secondary teacher education degree. The results provided a complex picture of participants’ perceptions and changes to views over time. These results provided a context for the study as well as the vehicle for student voice on teacher qualities at specific points in time. In conducting statistical tests, a series of questions were designed in response to the research questions (see Section 1.6). Tests were conducted against the demographics and the identified factors from the factor analysis (see Appendix K). Tests were also conducted to compare before and after across the Years 1–4.

The following statistical data outline the tests conducted to identify significant differences between two sets of scores against the six factor analysis themes. Descriptive tests were used for questions 2, 4 and 6 in which participants were asked to rank their preferences in order of importance. These questions (survey instrument) were not included in the factor analysis. The descriptive data provided valuable insight into participant perceptions on what constituted a good teacher and the interpersonal qualities they believed were most important.

The specific tests conducted in this results section include the following.

**Factor analysis**

- demographic testing against the six factors
  - t-test: gender difference
  - t-test: age difference
  - one-way ANOVA: situation prior to survey
  - one-way ANOVA: existing qualifications
- pre- and post-testing against the six factors
  - t-test paired samples (Time 1 and Time 2 comparison)
• correlations between factors

• one-way ANOVA: test at Time 1 for significance against the six themes

• descriptive statistics tests

• views on Interpersonal Skills (Q.4 Survey Instrument)

• views on Instructional Techniques (Pedagogical Practices) (Q. 6b Survey Instrument—see Appendix G)

• a good teacher is … (Q.2 Survey Instrument—see Appendix G)

6.3 Factor Analysis

PCA with Orthogonal (Varimax) rotation was performed through SPSS on 41 items from the Quality Teaching Survey on a sample of 111 students (see Appendix K). Data were collected at the beginning and end of a one-year teaching period, covering all four years in an undergraduate teaching degree. The PCA was only conducted on the data collected at Time 1 due to lower return rates at Time 2.

A number of diagnostic checks were conducted to ensure that the assumptions of PCA were not violated. Overall, distributions for each item tended to be normal (as indicated by non-significant levels of skewness and kurtosis) and the few outliers detected did not substantively affect the final solution and were therefore retained. The data were deemed appropriate for a PCA based on Bartlett’s test of sphericity ($\chi^2 = 2065.44, p < 0.001$) and the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (0.72).

The scree plot revealed a possible four-, five- or six-factor solution. For this reason, six principal component analyses were conducted (oblique and orthogonal rotations of the four-, five- and six-factor solutions were conducted). The six-factor orthogonal solution was supported because this solution was the most consistent with the theoretical
underpinnings of this study and had the clearest simple structure. The four- and five-factor solutions, although statistically sound, produced components that did not make theoretical sense. Orthogonal rotation was used because oblique rotation revealed only very weak correlations between components.

Overall, the six-factor solution could explain 49.5 per cent of the variance in the original items. Variables were well defined by the factor solution as 83 per cent of the items had a communality value of 0.40 or above. Inspection of the rotated component matrix revealed moderate to high loadings for each item on at least one factor. Overall, 93 per cent of items loaded onto one factor greater than 0.40.

The patterns of item loadings were then inspected for the purpose of labelling each of the six components. The first component was titled views on professional and interpersonal characteristics, the second component was titled views on pedagogical approaches: students/resource-centred, the third components was titled views on content knowledge the fourth component was titled views on pedagogical professional practice, the fifth component was titled views on teacher knowledge, and the sixth component was titled views on the use of textbooks and activity sheets.

### 6.4 Demographic Testing against the Six Factors

The demographic testing used in the survey instrument included the following categories: gender, to make observations about the general balance of women and men completing the survey; age range, to illustrate the relative youth of the cohort (use of the 18-24 and 25-29 age brackets); prior qualifications and the participants’ situation prior to the distribution of the survey instrument, to discriminate between school leavers and students with a work or study history; and socio-cultural to indicate variation in the heritage of participants. No
variation was observed for socio-cultural status, as all but 2 participants identified as Anglo-Saxon.

Participants’ gender and year of study was identified in the testing. Each of the participants was identified by his or her student number (confidentiality was maintained); individuals were matched before and after on data entry.

### 6.5 Gender Influence

A t-test was used to determine whether there was significance difference between two sets of scores by comparing the mean. Significance was identified in the following theme:

- **view on professional and interpersonal characteristics**

  - Male: 19.0492; Females: 17.5875
  - \( t(139) = 2.09, p = 0.039 \)

  The views on professional characteristics question asked participants to identify their level of agreement (strongly agree to strongly disagree) on the importance of specific professional attributes. On average, the items reflected that males identified professional attributes as being of higher importance than did female students.

### 6.6 Age Influence

To compare the means of two groups or levels of an independent variable, a one-way ANOVA was appropriate. This test was redone using only the 18–24 and 25–29 year age groups because there were not enough participants in the older age group (30+). Significance was identified in the following themes:

- **views on pedagogical approaches—student-centred/resource-centred**

  - level of importance placed on specific instructional techniques
- 18–24 years: 18.42; 25–29 years: 16.85

- \( t(136) = 2.38, p = 0.019 \)

On average, the items reflected that 18–24 year age group identified pedagogical approaches as being of higher importance than did the 25–29 year age group.

- views on pedagogical professional practice

- 18–24 years: 10.31; 25–29 years: 8.93

- \( T(142) = 3.58, p < 0.01 \)

On average, the items reflected that the 18–24 year age group identified pedagogical professional practices (PPP) as being of higher importance than did the 25–29 year age group.

### 6.7 Situation prior to Survey Instrument

A test was conducted to identify whether participants’ situation prior to the survey influenced their perceptions. Participants’ situation the year before this survey includes Year 12, working, post-school study or in degree.

A one-way ANOVA test was conducted to identify differences in levels between all groups being compared. The test items reflected significance in participants’ views on teacher knowledge \( F(4, 143) = 6.1, p < 0.01 \)

A follow-up post hoc analysis was conducted. This involved conducting pair wise comparisons between all of the groups. This test was conducted on each of the groups identified in the survey instrument (Year 12, working, post-school study, in degree) to identify the mean difference in relation to views on teacher knowledge.

On average, the items reflected that students currently in the course identified teacher knowledge as being less important than did students who had just entered the
course from Year 12 and post-school study or work. *Teacher knowledge* was important for pre-service teacher coming into the course.

- *views on teacher knowledge*: $t = \frac{\text{mean difference}}{\text{std. error difference}}$
  - significance mean difference between completed Year 12 and if one is in the year of the degree, mean difference is 2.2 $t (139) = 3.63$, $p < 0.01$
  - significance mean difference between working and have just returned to study and if one is in the year of the degree, mean difference 2.2 $t (139) = 3.65$, $p < 0.01$

### 6.8 Existing Qualifications

A test was conducted to identify whether participants’ existing qualifications influenced their perceptions. A t-test was conducted to compare the means of two groups; an independent variable one-way ANOVA was used.

This test compared the mean of two groups, one group identified as having existing qualifications in addition to their course of study and the other identified as have no existing qualifications. The two groups were compared against the six themes identified in the factor analysis.

Significance was identified in the following theme:

- *views on pedagogical professional practice*
  - Group 1 participants who identified as having existing qualifications—mean of 10.64
  - Group 2 participants who identified as having no existing qualifications—mean of 9.84, $F (1, 146) = 4.71$, $p = 0.032$. 
The results of the t-test suggest that there is a significant difference in the responses of participants’ views on *pedagogical professional practice*. The difference depended upon whether the participant identified ‘yes’ or ‘no’ to the question on existing qualifications. For those pre-service teachers who had existing work/study qualification (said ‘yes’), *pedagogical professional practice* was most important.

### 6.9 Paired Samples: Time 1 and Time 2 Comparison

A t-test was conducted comparing data from related pairs identifying mean differences between Time 1 and Time 2. The repeated-measure t-test, also referred to as the dependent-samples or paired t-test, is used when one has data from only one group of participants. This test was conducted to test for significance for all year levels between Time 1 and Time 2 (before and after).

- **views on pedagogical approaches**
  - Time 1: 6.72
  - Time 2: 15.35
  - \(t(58) = 2.67, p = 0.01\)

  Significance was identified in participants’ **views on pedagogical approaches**. The items reflected that participants at Time 1 identified *pedagogical approaches* as being of greater importance at the beginning of the year than at the end of the Year (Time 2).

### 6.10 Correlations between Factors

A bivariate correlations test using Pearson’s product-moment correlations was conducted to determine correlations between factors; the relationship between two variables in a linear fashion. The bivariate correlation test was undertaken between pairs
identified in the factor analysis to confirm significance as either a positive (high/high or low/low) correlation or negative (high/low or low/high) correlation (see Table 6.2).

The value indicates the strength of the relationship. The coefficient has a range of possible values from –1 to +1. The ‘+’ or ‘−’ symbol indicates the direction.
Table 6.2

*Correlations between Factors Identified in the Survey Instrument*

<table>
<thead>
<tr>
<th></th>
<th>Years since finishing school (1)</th>
<th>Views on professional and interpersonal characteristics (2)</th>
<th>Views on pedagogical approaches: students/resource-centred (3)</th>
<th>Views on content knowledge (4)</th>
<th>Views on pedagogical professional practice (5)</th>
<th>Views on teacher knowledge (6)</th>
<th>Views on the use of textbooks and activity sheets (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
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<td></td>
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<tr>
<td>3</td>
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<td>0.549</td>
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<tr>
<td>4</td>
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<tr>
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<td>−0.212</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
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<td>0.124</td>
<td>0.195</td>
<td>−0.142</td>
<td>0.196</td>
<td>−0.206</td>
<td></td>
</tr>
</tbody>
</table>
6.11 Positive Correlations

Results of the correlation test indicate that a participant’s specific situation prior to starting the course has a direct relationship with the importance placed upon qualities such as professional/interpersonal characteristics, content knowledge and the use of textbooks and activity sheets (see Table 6.3).

High or low scores on professional/interpersonal characteristics are associated with high or low scores for pedagogical approaches and similar patterns for professional pedagogical practices and the use of textbooks and activity sheets. A repeat of this relationship and pattern occurred between pedagogical approaches and PPP. The use of textbooks and activity sheets also shared a positive correlation to both of the pedagogical factors.


Table 6.3

Positive Correlations between Factors Identified in the Survey

<table>
<thead>
<tr>
<th>Factors</th>
<th>Positive Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years since finishing school and views on professional and interpersonal characteristics</td>
<td>( r = 0.003, p &lt; 0.01 )</td>
</tr>
<tr>
<td>Years since finishing school and views on content knowledge</td>
<td>( r = 0.068, p &lt; 0.01 )</td>
</tr>
<tr>
<td>Years since finishing school and views on the use of textbooks and activity sheets</td>
<td>( r = 0.069, p &lt; 0.01 )</td>
</tr>
<tr>
<td>Views on professional and interpersonal characteristics and views on pedagogical approaches</td>
<td>( r = 0.549, p &lt; 0.01 )</td>
</tr>
<tr>
<td>Views on professional and interpersonal characteristics and views on pedagogical professional practice</td>
<td>( r = 0.450, p &lt; 0.01 )</td>
</tr>
<tr>
<td>Views on pedagogical approaches (student/resource-centred) and views on pedagogical professional practice</td>
<td>( r = 0.456, p &lt; 0.01 )</td>
</tr>
<tr>
<td>Views on pedagogical approaches (student/resource-centred) and views on the use of textbooks and activity sheets and</td>
<td>( r = 0.195, p = 0.025 )</td>
</tr>
<tr>
<td>Views on content knowledge and views on teacher knowledge</td>
<td>( r = 0.368, p &lt; 0.01 )</td>
</tr>
<tr>
<td>Views on pedagogical professional practice and views on the use of textbooks and activity sheets</td>
<td>( r = 0.196, p = 0.022 )</td>
</tr>
</tbody>
</table>

Results of the correlation further indicate that high or low scores on teacher knowledge are associated with high or low scores on content knowledge.

6.12 Negative Correlations

Results of the correlation test indicate that low/high or high/low scores on teacher knowledge and years since finishing school resulted in negative correlation (see Table 6.5). This suggests that participants’ specific situation prior to the start of the semester could influence the level of importance placed on teacher knowledge.
Table 6.4

Results of the Teacher Knowledge Correlation

<table>
<thead>
<tr>
<th>Factors</th>
<th>Negative correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years since finishing school and views on teacher knowledge</td>
<td>( r = -0.460, p &lt; 0.01 )</td>
</tr>
</tbody>
</table>

Results of the correlation indicate that a negative relationship (a relationship when one was valued highly and the other was not and vice versa) existed for the two knowledge areas teacher knowledge and content knowledge and with each of the following factors: professional and interpersonal characteristics, pedagogical approaches, pedagogical professional practice and the use of textbooks and activity sheets.

Table 6.5

Negative Correlations between Factors Identified in the Survey

<table>
<thead>
<tr>
<th>Factors</th>
<th>Negative correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Views on professional and interpersonal characteristics and Views on content knowledge</td>
<td>( r = -0.298, p &lt; 0.01 )</td>
</tr>
<tr>
<td>Views on professional and interpersonal characteristics and Views on teacher knowledge</td>
<td>( r = -0.272, p = 0.002 )</td>
</tr>
<tr>
<td>Views on pedagogical approaches (student/resource-centred) and views on content knowledge</td>
<td>( r = -0.317, p &lt; 0.01 )</td>
</tr>
<tr>
<td>Views on pedagogical approaches (student/resource-centred) and views on teacher knowledge</td>
<td>( r = -0.267, p = 0.002 )</td>
</tr>
<tr>
<td>Views on pedagogical professional practice and views on content knowledge</td>
<td>( r = -0.390, p &lt; 0.01 )</td>
</tr>
<tr>
<td>Views on professional pedagogical practices and views on teacher knowledge</td>
<td>( r = -0.212, p = 0.012 )</td>
</tr>
<tr>
<td>Views on textbooks and activity sheets and views on content knowledge</td>
<td>( r = -0.142, p = 0.093 )</td>
</tr>
<tr>
<td>Views on the use of textbooks and activity sheets and views on teacher knowledge</td>
<td>( r = -0.206, p = 0.015 )</td>
</tr>
</tbody>
</table>
6.13 Test at Time 1 for Significance against the Six Themes

A one-way ANOVA was conducted to compare the means of each factor over the four years of the degree. A follow-up *post hoc* analysis was conducted on the three themes that were identified as significant:

- **views on the use of pedagogical approaches**
  - $F(3, 137) = 2.76, p < 0.05$

- **views on the use of textbooks and activity sheets**
  - $F(3, 143) = 2.69, p < 0.05$

- **views on teacher knowledge**
  - $F(3, 144) = 2.69, p < 0.05.$

- The results of the ANOVA test suggest that there is a significant mean difference in the responses of participants’ views on the importance on the use of *pedagogical approaches*, the *use of textbooks/activity sheets* and *teacher knowledge* across the four years (see Figure 6.1). Bonferroni tests were used to follow-up the findings from the ANOVA test. Significant mean differences were identified for the following ($P = \text{Mean Difference divided by Standard Error [Std. Error]}$):  
  - *views on teachers knowledge between*  
    - Year 2 and Year 3 $p = 3.19$
    - Year 2 and Year 4 $p = 5.56$

- *views on the use of textbooks and activity sheets between*  
  - Year 1 and Year 4 $p = -2.72$

- *views on pedagogical approaches between*
Year 1 and Year 4 \( p = 2.48 \).

Mean plots indicating changing views on teacher qualities from Year 1 to Year 4 includes teacher knowledge, pedagogical approaches and use of textbooks and activity sheets (see Figure 6.1).
Figure 6.1. Mean plots: Views on teacher knowledge, pedagogical approaches and use of textbooks and activity sheets.
6.14 Descriptive Statistics


A series of descriptive tests was conducted on data from questions 2, 4 and 6 from the survey instrument. These include data on the participants’ perceptions of interpersonal qualities, pedagogical qualities and qualities of the good teacher, respectively.

6.14.2 Views on interpersonal qualities.

In question 4 of the survey instrument, participants were asked to rank from one to five those interpersonal qualities that they believed were most useful as a teacher. To test for the overall distribution of what was ranked first choice, most often a chi-square test was conducted across all four years at Time 1 and Time 2 (see Tables 6.5 and 6.6).

At Time 1, a chi-square was used to test the overall significance across the whole dataset (i.e. certain qualities ranked consistently more useful than others).

\[ \chi^2 (42 \ N = 156) = 47.84, \ p = 0.248 \]

\[ \chi^2 (42 \ N = 82) = 41.65, \ p = 0.486 \]

The results of the chi-square test were that in all years, five common interpersonal qualities were identified as most useful. These qualities varied to some degree from Time 1 to Time 2 (see Tables 6.6 and 6.7). Significance was identified for project enthusiasm for teaching (Year 2) and sensitive to students’ needs and concerns (Year 4) (see Table 6.8).
### Table 6.6

**Interpersonal Qualities Identified as Most Useful at Time 1**

<table>
<thead>
<tr>
<th>Time</th>
<th>The most useful interpersonal qualities are …</th>
<th>Overall%</th>
<th>Within years</th>
<th>Freq. years 1–4</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sensitive to students needs and concerns</td>
<td>15.9</td>
<td>1</td>
<td>4</td>
<td>8.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>3</td>
<td>7.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>3</td>
<td>10.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>1</td>
<td>2.4</td>
</tr>
<tr>
<td>1</td>
<td>Employs Knowledge of students to facilitate learning</td>
<td>11</td>
<td>1</td>
<td>4</td>
<td>8.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>3</td>
<td>10.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>3</td>
<td>10.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>2</td>
<td>4.9</td>
</tr>
<tr>
<td>1</td>
<td>Challenges and Encourages Students</td>
<td>11</td>
<td>1</td>
<td>7</td>
<td>14.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>5</td>
<td>13.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>6</td>
<td>21.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>5</td>
<td>12.2</td>
</tr>
<tr>
<td></td>
<td><em>Is warm and friendly, firm and reasonable expectations</em></td>
<td>8.5</td>
<td>1</td>
<td>4</td>
<td>8.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
<td>2.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>1</td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>2</td>
<td>4.9</td>
</tr>
<tr>
<td>1</td>
<td>Projects enthusiasm for teaching</td>
<td>9.8</td>
<td>1</td>
<td>5</td>
<td>9.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>1</td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>7</td>
<td>17.1</td>
</tr>
<tr>
<td>1</td>
<td>Helps students develop self-esteem</td>
<td>9.8</td>
<td>1</td>
<td>5</td>
<td>10.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>6</td>
<td>15.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>4</td>
<td>14.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>5</td>
<td>12.2</td>
</tr>
<tr>
<td>1</td>
<td>Encourages students to take on responsibility</td>
<td>6.1</td>
<td>2</td>
<td>2</td>
<td>4.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>2</td>
<td>7.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>7.3</td>
</tr>
<tr>
<td>1</td>
<td>Is flexible—able to change and adjust</td>
<td>6.1</td>
<td>1</td>
<td>3</td>
<td>6.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
<td>2.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>1</td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>3</td>
<td>7.3</td>
</tr>
</tbody>
</table>
There were five common interpersonal qualities that occurred at Time 1 and again at Time 2 (see Table 6.8). They include *challenges and encourage students*, *helps students’ develop self-esteem*, *employs knowledge of students to facilitate learning*, *projects enthusiasm for teaching* and *is sensitive to students’ needs and concerns*. Overall, percentages for the five first-choice interpersonal qualities were grouped between 6.1 per cent and 15.9 per cent. *Sensitive to students’ needs and concerns* had the highest percentage at Time 1 at 15.9 per cent and *challenges and encourages students* had the
Participants identified a broad range of interpersonal qualities as being most useful to a teacher at Time 1 and Time 2. No interpersonal quality was identified as significant across the four years. Participants identified most of the interpersonal qualities in the survey as useful. Five interpersonal qualities ranked most often as first choice, and these interpersonal qualities achieved a percentage greater than six per cent. The highest percentage and most common first choices were sensitive to students’ needs and concerns.

Table 6.8

Comparison of the Most Common Interpersonal Qualities at Time 1 and Time 2, Years 1–4

<table>
<thead>
<tr>
<th>Interpersonal quality most useful</th>
<th>Time 1 Years 1–4</th>
<th>% Time 1</th>
<th>Freq. Time 1</th>
<th>Time 2 Years 1–4</th>
<th>% Time 2</th>
<th>Freq. Time 2</th>
<th>% diff.</th>
<th>χ²</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Challenges and Encourages Students</td>
<td>1 (49)</td>
<td>14.3</td>
<td>7</td>
<td>1 (35)</td>
<td>8.6</td>
<td>3</td>
<td>−5.7</td>
<td>0.8</td>
<td>ns</td>
</tr>
<tr>
<td>Helps students develop self-esteem</td>
<td>2 (38)</td>
<td>13.2</td>
<td>5</td>
<td>2 (18)</td>
<td>22.2</td>
<td>4</td>
<td>+9</td>
<td>1.10</td>
<td>ns</td>
</tr>
<tr>
<td>Employs knowledge of students to facilitate learning</td>
<td>3 (28)</td>
<td>21.4</td>
<td>6</td>
<td>3 (12)</td>
<td>8.3</td>
<td>1</td>
<td>−13.1</td>
<td>2.57</td>
<td>ns</td>
</tr>
<tr>
<td>Projects enthusiasm for teaching</td>
<td>4 (41)</td>
<td>12.2</td>
<td>5</td>
<td>4 (17)</td>
<td>5.9</td>
<td>1</td>
<td>−6.3</td>
<td>0.55</td>
<td>ns</td>
</tr>
<tr>
<td>Sensitive to Students needs and concerns</td>
<td>1 (49)</td>
<td>8.2</td>
<td>5</td>
<td>1 (35)</td>
<td>8.6</td>
<td>3</td>
<td>−6.3</td>
<td>0.55</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>2 (38)</td>
<td>13.2</td>
<td>5</td>
<td>2 (18)</td>
<td>22.2</td>
<td>4</td>
<td>+9</td>
<td>1.10</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>3 (28)</td>
<td>21.4</td>
<td>6</td>
<td>3 (12)</td>
<td>8.3</td>
<td>1</td>
<td>−13.1</td>
<td>2.57</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>4 (41)</td>
<td>12.2</td>
<td>5</td>
<td>4 (17)</td>
<td>5.9</td>
<td>1</td>
<td>−6.3</td>
<td>0.55</td>
<td>ns</td>
</tr>
</tbody>
</table>

Participants identified a broad range of interpersonal qualities as being most useful to a teacher at Time 1 and Time 2. No interpersonal quality was identified as significant across the four years. Participants identified most of the interpersonal qualities in the survey as useful. Five interpersonal qualities ranked most often as first choice, and these interpersonal qualities achieved a percentage greater than six per cent. The highest percentage and most common first choices were sensitive to students’ needs and concerns.
at Time 1 at 15.9 per cent and *challenges and encourages students* at Time 1 at 14.7 per cent.

There were five interpersonal qualities that were common first choices identified at both Time 1 and Time 2 these included:

- *challenges and encourages students*
- *helps students develop self-esteem*
- *employs knowledge of students to facilitate learning*
- *projects enthusiasm for teaching*
- *sensitive to students needs and concerns.*

In comparing specific years from Time 1 to Time 2 against the five common interpersonal qualities (see Table 6.8), the range of percentage differences varied from a maximum of decrease of 13 per cent for *challenges and encourages students* in Year 3, through to a maximum increase of 15 per cent for *sensitive to students’ needs and concerns* in Year 4. Other percentage changes over 10 per cent across the years are demonstrated in Tables 6.9 and 6.10. This result showed change in perceptions overtime.
Table 6.9

*Interpersonal Qualities Identified as Having a >10 Per Cent Change in Importance across the Years*

<table>
<thead>
<tr>
<th>Interpersonal qualities as most useful</th>
<th>Changes in % in the years ...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helps students develop self-esteem</td>
<td>An increase of 10.2% in Year 2</td>
</tr>
<tr>
<td>Employs knowledge to facilitate students’ learning</td>
<td>An increase of 12.2% in Year 4</td>
</tr>
<tr>
<td>Projects enthusiasm for teaching</td>
<td>A decrease of 14.1% in Year 2</td>
</tr>
</tbody>
</table>

Table 6.10

*Overall Comparison of Interpersonal Qualities Most Often Ranked as First Choice for all Years 1-4*

<table>
<thead>
<tr>
<th>Interpersonal qualities ranked most useful</th>
<th>Time 1</th>
<th>Time 2</th>
<th>% diff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitive to students needs and concerns</td>
<td>15.9</td>
<td>7.1</td>
<td>−8.8</td>
</tr>
<tr>
<td>Challenges and encourages Students</td>
<td>11</td>
<td>14.7</td>
<td>+3.7</td>
</tr>
<tr>
<td>Helps students develop self-esteem</td>
<td>9.8</td>
<td>12.8</td>
<td>+3</td>
</tr>
<tr>
<td>Shows and expects respect</td>
<td>1.2</td>
<td>10.3</td>
<td>+9.1</td>
</tr>
<tr>
<td>Employs knowledge of students to facilitate learning</td>
<td>11</td>
<td>8.3</td>
<td>+2.7</td>
</tr>
<tr>
<td>Projects enthusiasm for teaching</td>
<td>9.8</td>
<td>9</td>
<td>−0.8</td>
</tr>
<tr>
<td>Is warm and friendly, firm and reasonable expectations</td>
<td>8.5</td>
<td>5.1</td>
<td>−3.4</td>
</tr>
<tr>
<td>Encourages students to take on responsibility</td>
<td>6.1</td>
<td>4.5</td>
<td>−1.6</td>
</tr>
<tr>
<td>Is flexible—able to change and adjust</td>
<td>6.1</td>
<td>5.1</td>
<td>−1</td>
</tr>
</tbody>
</table>

Most of the interpersonal qualities were identified as important at some point over the four years. This reduced the power of any one interpersonal quality to identify as significant. Five interpersonal qualities identified most often as first choice at Time 1 and Time 2, even though no one interpersonal quality was identified as significant (see Table
6.8). There were nine interpersonal qualities overall that were seen as most useful at Time 1 and/or Time 2 having a percentage greater than six per cent in either Time 1 or Time 2 or both (see Table 6.10).

Two of the nine interpersonal qualities identified percentage differences. *Sensitive to students need and concerns* decreased from Time 1 to Time 2, by 8.8 per cent and *shows and expects respect* increased by 9.1 per cent from Time 1 to Time 2: they are highlighted in Table 6.9.

A follow-up chi-square test was used to test for significance from Time 1 to Time 2 over years 1–4.

A \( \chi^2 \) test – \( \chi^2 (O – E)^2 \div E \)

Significance was identified for, *projects enthusiasm for teaching* Year 2 \( p < 0.01 \) and *is sensitive to students needs and concerns* Year 4 \( p < 0.001 \) (see Table 6.8).

6.14.3 Views on pedagogical skills.

Question 6 of the survey instrument asked students to rank from 1 to 12 those pedagogical approaches that they believed were most relevant and important for a secondary teacher. A chi-square test was conducted to identify the overall distribution of what was ranked first choice most often across all four years at Time 1 and Time 2 (see Tables 6.11 and 6.12). The results of the chi-square test identified four common pedagogical approaches in all years as most relevant or important, with a percentage value of less than 10 per cent. These qualities varied to some degree from Time 1 to Time 2. Identified (highlighted) are those pedagogical skills with higher percentage increases at either Time 1 or Time 2 within years (see Tables 6.11 and 6.12).

A chi-square was used to test the overall significance across the whole dataset at Time 1 (i.e. certain qualities ranked consistently more important/relevant than others).
χ²(30, N = 148) = 39.29, p = 0.119

A chi-square was used to test the overall significance across the whole dataset at Time 2 (i.e. certain qualities ranked consistently more important/relevant than others).

χ²(30 N = 78) = 29.92, p = 0.575

Table 6.11

Pedagogical Approaches Identified as Most important at Time 1

<table>
<thead>
<tr>
<th>Time</th>
<th>The most relevant/important pedagogical approaches are ...</th>
<th>Overall %</th>
<th>Within years %</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Uses high-interest lessons—interactive, student interest high</td>
<td>26.4</td>
<td>1 23.1 12</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 20.0 7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3 50 14</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4 18.2 6</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Uses a range of teaching Strategies</td>
<td>20.9</td>
<td>1 21.2 11</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 22.9 8</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3 7.1 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4 30.3 9</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Plans lessons that are relevant to students</td>
<td>12.8</td>
<td>1 17.3 9</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 8.6 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3 14.3 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4 9.1 3</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Adapts teaching to students’ learning styles</td>
<td>10.1</td>
<td>1 11.5 6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 8.6 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3 3.6 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4 15.2 4</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Communicates purpose/outcomes of the lesson</td>
<td>7.4</td>
<td>1 7.7 4</td>
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<td>2 2.9 1</td>
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<td>3 3.6 1</td>
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<td>4 15.2 4</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>A student-centred approach</td>
<td>5.4</td>
<td>1 7.4 2</td>
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<td>3 11.4 2</td>
<td></td>
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<td>4 7.1 &lt;1</td>
<td></td>
</tr>
<tr>
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<td>Adapts teaching to their environment/context e.g. caters for special needs</td>
<td>5.4</td>
<td>1 0.0 &lt;1</td>
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</tr>
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<td>2 11.4 4</td>
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<td>4 9.1 2</td>
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</tbody>
</table>
Table 6.12

Pedagogical Approaches Identified as Most Important at Time 2

<table>
<thead>
<tr>
<th>Time</th>
<th>The most relevant/important pedagogical approaches are …</th>
<th>Overall %</th>
<th>Within years</th>
<th>%</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Uses a range of teaching Strategies</td>
<td>23.1</td>
<td>1</td>
<td>18.8</td>
<td>6</td>
</tr>
<tr>
<td></td>
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<td>4</td>
<td>12.5</td>
<td>2</td>
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<tr>
<td>2</td>
<td>Uses high-interest lessons—interactive, student interest high</td>
<td>16.7</td>
<td>1</td>
<td>15.6</td>
<td>5</td>
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<tr>
<td></td>
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<td></td>
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<td>11.1</td>
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<td>4</td>
<td>31.3</td>
<td>4</td>
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<tr>
<td>2</td>
<td>Adapts teaching to students’ learning styles</td>
<td>14.1</td>
<td>1</td>
<td>25.0</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>11.1</td>
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<td>8.3</td>
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<td></td>
<td>4</td>
<td>0.0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>Plans lessons that are relevant to students</td>
<td>14.1</td>
<td>1</td>
<td>9.4</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<td>22.2</td>
<td>4</td>
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<td>8.3</td>
<td>1</td>
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<td></td>
<td></td>
<td>4</td>
<td>18.8</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>Encourages students to take responsibility</td>
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<td>1</td>
<td>9.4</td>
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<td>16.7</td>
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<td>3</td>
<td>8.3</td>
<td>1</td>
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<td></td>
<td></td>
<td>4</td>
<td>12.5</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Adapts teaching to their environment/context e.g. caters for special needs</td>
<td>6.4</td>
<td>1</td>
<td>6.3</td>
<td>2</td>
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<td></td>
<td></td>
<td>2</td>
<td>11.1</td>
<td>2</td>
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<td></td>
<td></td>
<td></td>
<td>3</td>
<td>0.0</td>
<td>0</td>
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<tr>
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<td></td>
<td></td>
<td>4</td>
<td>6.3</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>A student-centred approach</td>
<td>5.1</td>
<td>1</td>
<td>0.0</td>
<td>0</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>8.3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>12.5</td>
<td>2</td>
</tr>
</tbody>
</table>

There were six pedagogical approaches identified as important at both Time 1 and Time 2. The highest percentages for specific pedagogical approach in Years 1–4 at Time 1 or Time 2 are highlighted (see Tables 6.11 and 6.12). These six pedagogical approaches tended to stay consistent over time with small percentage changes from Time 1 to Time 2.
They ranged in percentage from highest percentage of 26.4 per cent to lowest percentage of 5.1 per cent. Percentage differences occurred within years and across the years, three specific pedagogical approaches are identified (see Table 6.13).

Table 6.13

Percentage Differences across the Years for Pedagogical Approaches

<table>
<thead>
<tr>
<th>Pedagogical approaches most important/useful</th>
<th>Changes in % differences within years and across the years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uses high-interest lessons—interactive, student interest high</td>
<td>Time 1 Year 3 (50%) and Time 2 Year 4 (31.3%)</td>
</tr>
<tr>
<td>Uses a range of strategies</td>
<td>Time 1 Year 4 (30.3%) and Time 2 Year 3 (50%)</td>
</tr>
<tr>
<td>Plans lessons that are relevant to students</td>
<td>Time 2 Year 2 (22.2%) and Time 2 Year 4 (18.8%)</td>
</tr>
</tbody>
</table>

To test for significance from Time 1 to Time 2 across Years 1–4, a chi-square test was conducted:

\[ \chi^2 = \frac{(O - E)^2}{E} \]

Significance was identified in the following pedagogical approaches: uses high-interest lessons—interactive, student interest high Year 3 \( p < 0.05 \); plans lessons that are relevant to students Year 2 \( p < 0.01 \); and adapts teaching to their environment/context (for example, caters for special needs) Year 1 \( p < 0.05 \). High percentage differences for specific pedagogical approach within years are highlighted in Table 6.14. High percentage changes for pedagogical approaches identified as most relevant from Time 1 to Time 2 are also highlighted in Table 6.14.
### Table 6.14

Comparison of Common Pedagogical Approaches at Time 1 and Time 2, Years 1–4

<table>
<thead>
<tr>
<th>Pedagogical approaches most relevant/important</th>
<th>Time 1</th>
<th>%</th>
<th>Yearly Freq.</th>
<th>Time 2</th>
<th>%</th>
<th>Yearly freq.</th>
<th>% diff.</th>
<th>$\chi^2$</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uses high-interest lessons—interactive, student interest high</td>
<td>1 (52)</td>
<td>23.1</td>
<td>12</td>
<td>1 (32)</td>
<td>15.6</td>
<td>5</td>
<td>-7.5</td>
<td>0.774</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>2 (35)</td>
<td>20.0</td>
<td>7</td>
<td>2 (18)</td>
<td>11.1</td>
<td>2</td>
<td>+8.9</td>
<td>0.711</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>3 (28)</td>
<td>50.0</td>
<td>14</td>
<td>3 (12)</td>
<td>8.3</td>
<td>1</td>
<td>-41.7</td>
<td>4.17</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td></td>
<td>4 (29)</td>
<td>18.2</td>
<td>6</td>
<td>4 (14)</td>
<td>31.3</td>
<td>4</td>
<td>+15.1</td>
<td>0.827</td>
<td>ns</td>
</tr>
<tr>
<td>Uses a range of teaching Strategies</td>
<td>1</td>
<td>21.2</td>
<td>11</td>
<td>1</td>
<td>18.8</td>
<td>6</td>
<td>-3.4%</td>
<td>.091</td>
<td>ns</td>
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<tr>
<td></td>
<td>2</td>
<td>22.9</td>
<td>8</td>
<td>2</td>
<td>22.2</td>
<td>4</td>
<td>-0.7%</td>
<td>.004</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>7.1</td>
<td>2</td>
<td>3</td>
<td>50.0</td>
<td>6</td>
<td>+42.9</td>
<td>31.1</td>
<td>ns</td>
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<tr>
<td></td>
<td>4</td>
<td>30.3</td>
<td>9</td>
<td>4</td>
<td>12.5</td>
<td>2</td>
<td>+17.8</td>
<td>1.18</td>
<td>ns</td>
</tr>
<tr>
<td>Plans lessons that are relevant to students</td>
<td>1</td>
<td>17.3</td>
<td>9</td>
<td>1</td>
<td>9.4</td>
<td>3</td>
<td>-7.9</td>
<td>1.16</td>
<td>ns</td>
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<td>2</td>
<td>8.6</td>
<td>3</td>
<td>2</td>
<td>22.2</td>
<td>4</td>
<td>+13.6</td>
<td>8.51</td>
<td>&lt;0.01</td>
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<td>14.3</td>
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<td>8.3</td>
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<td>-6</td>
<td>.301</td>
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<td>4</td>
<td>9.1</td>
<td>3</td>
<td>4</td>
<td>18.8</td>
<td>3</td>
<td>+9.7</td>
<td>2.36</td>
<td>ns</td>
</tr>
<tr>
<td>Adapts teaching to students’ learning styles</td>
<td>1</td>
<td>11.5</td>
<td>6</td>
<td>1</td>
<td>25.0</td>
<td>8</td>
<td>+13.5</td>
<td>5.07</td>
<td>&lt;0.05</td>
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<td>22.2</td>
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<td>+2.5</td>
<td>.131</td>
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<td>3</td>
<td>3.6</td>
<td>1</td>
<td>3</td>
<td>8.3</td>
<td>1</td>
<td>+11.9</td>
<td>.747</td>
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<td></td>
<td>4</td>
<td>15.2</td>
<td>4</td>
<td>4</td>
<td>0.0</td>
<td>&lt;1</td>
<td>-15.2</td>
<td>2.13</td>
<td>ns</td>
</tr>
<tr>
<td>Adapts teaching to their environment/context e.g. caters for special needs</td>
<td>1</td>
<td>0.0</td>
<td>&lt;1</td>
<td>1</td>
<td>6.3</td>
<td>2</td>
<td>+6.3</td>
<td>0.0</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>11.4</td>
<td>4</td>
<td>2</td>
<td>11.1</td>
<td>2</td>
<td>-0.3</td>
<td>.001</td>
<td>ns</td>
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<tr>
<td></td>
<td>3</td>
<td>3.6</td>
<td>1</td>
<td>3</td>
<td>0.0</td>
<td>&lt;1</td>
<td>-3.6</td>
<td>.432</td>
<td>ns</td>
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<td>9.1</td>
<td>2</td>
<td>4</td>
<td>6.3</td>
<td>&lt;1</td>
<td>+2.8</td>
<td>1.27</td>
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<tr>
<td>A student-centred approach</td>
<td>1</td>
<td>3.8</td>
<td>2</td>
<td>1</td>
<td>0.0</td>
<td>&lt;1</td>
<td>-3.8</td>
<td>1.22</td>
<td>ns</td>
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<tr>
<td></td>
<td>2</td>
<td>11.4</td>
<td>4</td>
<td>2</td>
<td>5.6</td>
<td>1</td>
<td>-5.8</td>
<td>0.540</td>
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<td>7.1</td>
<td>2</td>
<td>3</td>
<td>8.3</td>
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<td>+1.2</td>
<td>0.026</td>
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<tr>
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<td>4</td>
<td>0.0</td>
<td>&lt;1</td>
<td>4</td>
<td>12.5</td>
<td>2</td>
<td>+12.5</td>
<td>0.0</td>
<td>ns</td>
</tr>
</tbody>
</table>
Table 6.15

*Overall Comparison of Pedagogical Approaches Identified as Most Important at Time 1 and Time 2*

<table>
<thead>
<tr>
<th>Pedagogical approaches ranked most useful</th>
<th>Time 1 (%)</th>
<th>Time 2 (%)</th>
<th>% diff.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uses high-interest lessons—interactive, student interest high</td>
<td>26.4</td>
<td>16.7</td>
<td>−9.7</td>
</tr>
<tr>
<td>Uses a range of teaching strategies</td>
<td>20.9</td>
<td>23.1</td>
<td>+2.2</td>
</tr>
<tr>
<td>Plans lessons that are relevant to students</td>
<td>12.8</td>
<td>14.1</td>
<td>+1.3</td>
</tr>
<tr>
<td>Adapts teaching to students’ learning styles</td>
<td>10.1</td>
<td>14.1</td>
<td>+4</td>
</tr>
<tr>
<td>Communicates purpose/outcomes of the lesson</td>
<td>7.4</td>
<td>3.8</td>
<td>3.6</td>
</tr>
<tr>
<td>A student-centred approach</td>
<td>5.4</td>
<td>5.1</td>
<td>0.3</td>
</tr>
<tr>
<td>Adapts teaching to their environment/context e.g. caters for special needs</td>
<td>5.4</td>
<td>6.4</td>
<td>+1</td>
</tr>
<tr>
<td>Encourages students to take responsibility</td>
<td>2</td>
<td>11.5</td>
<td>+9.5</td>
</tr>
</tbody>
</table>

*Encourages students to take responsibility* was identified at both Time 1 and Time 2 as an important pedagogical approach. Even though it was not recognised at Time 1 in the top first-choice rankings, there was an increase from two per cent Time 1 to 11.5 per cent at Time 2. This indicated that for students in some years, this pedagogical approach had become more important (see Table 6.16).

Significant change was identified in the decrease in importance of *uses high-interest lessons* from 26.4 per cent at Time 1 to 16.7 per cent at Time 2. This suggests a growing confidence with lesson planning and a developing appreciation of other pedagogical considerations (see Table 6.16).

### 6.15 A Good Teacher Is …

Question 2a of the survey instrument asked students to rank from one to five those teacher qualities that believed was most important, from 20 possible choices.
There were five common first-choice rankings across the four years at Time 1 and Time 2 (see Tables 6.16 and 6.17). Large percentage differences within years are highlighted. At Time 2, an additional three first choices were identified. The five common first-choice ranking reminded consistent across the years. In specific years, certain qualities were identified as being most important: *understands students and makes their teaching relevant to students* Time 1, Year 2 and Time 2, Year 4; *uses a range of teaching and learning strategies* Time 2, Year 1; *has a thorough understanding of their subject matter* Time 1, Year 1 and Time 2, Year 1; and *is organised*, Time 1, Year 3.

Table 6.16

The Most Important Qualities of a Good Teacher at Time 1

<table>
<thead>
<tr>
<th>Time</th>
<th>A good teacher…</th>
<th>Overall %</th>
<th>Overall frequency</th>
<th>Within years %</th>
<th>Freq. Yr. 1–4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><em>Is confident,</em></td>
<td>62.7</td>
<td>69</td>
<td>1 62.9</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>energetic, and</td>
<td></td>
<td></td>
<td>2 50</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>relates well to</td>
<td></td>
<td></td>
<td>3 63.6</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>students</td>
<td></td>
<td></td>
<td>4 74.1</td>
<td>17</td>
</tr>
<tr>
<td>1</td>
<td><em>Understands</em></td>
<td>14.5</td>
<td>16</td>
<td>1 8.6</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>students and</td>
<td></td>
<td></td>
<td>2 42.3</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>makes their</td>
<td></td>
<td></td>
<td>3 0.0</td>
<td>&lt;1</td>
</tr>
<tr>
<td></td>
<td>teaching relevant to students</td>
<td></td>
<td></td>
<td>4 7.4</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td><em>Has a thorough</em></td>
<td>11.8</td>
<td>13</td>
<td>1 20</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>understanding of</td>
<td></td>
<td></td>
<td>2 3.8</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>their subject area</td>
<td></td>
<td></td>
<td>3 13.6</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 7.4</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td><em>Is organised</em></td>
<td>6.4</td>
<td>7</td>
<td>1 2.9</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>2 0.0</td>
<td>&lt;1</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td>3 18.2</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 7.4</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td><em>Enjoys students</em></td>
<td>4.5</td>
<td>5</td>
<td>1 5.7</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td><em>and makes lesson fun</em></td>
<td></td>
<td></td>
<td>2 3.8</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3 4.5</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 3.7</td>
<td>&lt;1</td>
</tr>
</tbody>
</table>
Table 6.17

The Most Important Qualities of a Good Teacher at Time 2

<table>
<thead>
<tr>
<th>Time</th>
<th>A good teacher is…</th>
<th>Overall %</th>
<th>Overall frequency</th>
<th>Within years</th>
<th>%</th>
<th>Freq. yrs 1–4</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td><em>Is confident, energetic, and relates well to students</em></td>
<td>43.5</td>
<td>37</td>
<td>1</td>
<td>48.6</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td>2</td>
<td>38.9</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td>3</td>
<td>50</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td>4</td>
<td>33.3</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td><em>Understands students and makes their teaching relevant to students</em></td>
<td>12.9</td>
<td>11</td>
<td>1</td>
<td>8.1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td>2</td>
<td>11.1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td>3</td>
<td>8.3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td>4</td>
<td>27.8</td>
<td>&lt;1</td>
</tr>
<tr>
<td>2</td>
<td><em>Is well planned and prepared</em></td>
<td>4.7</td>
<td>4</td>
<td>1</td>
<td>2.7</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td>2</td>
<td>0.0</td>
<td>&lt;1</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td>3</td>
<td>8.3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td>4</td>
<td>11.1</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td><em>Uses a range of teaching and learning strategies</em></td>
<td>4.7</td>
<td>4</td>
<td>1</td>
<td>10.8</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td>2</td>
<td>0.0</td>
<td>&lt;1</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td>3</td>
<td>0.0</td>
<td>&lt;1</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td>4</td>
<td>0.0</td>
<td>&lt;1</td>
</tr>
<tr>
<td>2</td>
<td><em>Is a good communication skills</em></td>
<td>4.7</td>
<td>4</td>
<td>1</td>
<td>5.4</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td>2</td>
<td>5.6</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td>3</td>
<td>0.0</td>
<td>&lt;1</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td>4</td>
<td>5.6</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td><em>Is a lifelong learner</em></td>
<td>3.5</td>
<td>3</td>
<td>1</td>
<td>0.0</td>
<td>&lt;1</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td>2</td>
<td>5.6</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td>3</td>
<td>8.3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td>4</td>
<td>5.6</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td><em>Is able to come down to students level and bring them up to theirs</em></td>
<td>3.5</td>
<td>3</td>
<td>1</td>
<td>2.7</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td>2</td>
<td>11.1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td>3</td>
<td>0.0</td>
<td>&lt;1</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td>4</td>
<td>0.0</td>
<td>&lt;1</td>
</tr>
<tr>
<td>2</td>
<td><em>Has a thorough understanding of their subject matter</em></td>
<td>3.5</td>
<td>3</td>
<td>1</td>
<td>8.1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td>2</td>
<td>0.0</td>
<td>&lt;1</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td>3</td>
<td>0.0</td>
<td>&lt;1</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td>4</td>
<td>0.0</td>
<td>&lt;1</td>
</tr>
</tbody>
</table>

A good teacher is *confident, energetic and relates well to students* was identified as the most important quality both at Time 1 and Time 2 occurred across all four years (see Tables 6.16 and 6.17).

There were two other qualities identified as important that were common at Time 1 and Time 2. They included *understands students and makes their teaching relevant to students* and *has a thorough understanding of their subject matter*. These qualities can be
related to the importance placed on teacher content in their degree and the interpersonal nature of the PDHPE teachers.

Looking across the years from Year 1 to Year 4, *is confident, energetic and relates well to students* tended to be consistent at both Time 1 and Time 2. The teaching quality *understands students and makes their teaching relevant to students* showed an increase in Year 2 at Time 2 and Year 4 at Time 1 (see Table 6.21). At Time 2, Year 2 students are undertaking their first professional experience they are trying out their teaching, watching others teach and questioning what is good teaching. *Understanding students and makes their teaching relevant to students* is an important quality at this time in their study. The increase in importance in Year 4 at Time 1 is linked to the need for pre-service teachers to be able to *understand students and makes their teaching relevant to students* in their final internship to prove themselves as good teachers.

The third common quality at both Time 1 and Time 2 is *has a thorough understanding of their subject area*. This was identified as more important and consistent over the four years in Time 1. At Time 2, it was only seen as important in Year 1. This quality was identified consistently as important in Time 1, yet not at Time 2, suggesting that Time 1 coursework (subject content) takes on a greater focus, while at the end of the year, Time 2, there is an increase awareness of other qualities needed for good teaching. The exception is in Year 1, where *understanding of their subject area* is identified as important at both Time 1 and Time 2.

Two other qualities, *is organised and enjoys students and makes lessons fun* were identified at Time 1 as being important. The focus group discussion suggests that these qualities were valued and may of originate from the pre-service teachers own experiences of schooling. At Time 2 there were a greater selection of differing qualities: *is well planned and prepared, uses a range of teaching and learning strategies, is a good communicator, is*
a lifelong learner, is able to come down to students level and bring them up to theirs. As students progress through the year and engage with coursework and professional experience, a broader range of qualities are seen as important for good teaching (see Table 6.20).

6.15.1 Test for independence or relatedness

Frequency Distributions (chi-square test) were used to test the overall difference in rankings (i.e. whether certain qualities were ranked consistently more important than others) (see Tables 6.18 and 6.19).

\[ \chi^2(63, N = 157) = 83.83, p < 0.05 \]

Is confident, energetic and relates well to students was consistently ranked first choice; other common first rankings include understands students and makes teaching relevant and has a thorough understanding of their subject area. They were identified at both Time 1 and Time 2 and showed a higher frequency than other qualities.

Table 6.18

Frequency Distribution of a Good Teacher at Time 1

<table>
<thead>
<tr>
<th>A good teacher is ...</th>
<th>Frequency</th>
<th>%</th>
<th>Valid %</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is confident, energetic and relates well to students</td>
<td>69</td>
<td>62.7</td>
<td>62.7</td>
<td>62.7</td>
</tr>
<tr>
<td>Is organised</td>
<td>7</td>
<td>6.4</td>
<td>6.4</td>
<td>69.1</td>
</tr>
<tr>
<td>Has a thorough understanding of their subject area</td>
<td>13</td>
<td>11.8</td>
<td>11.8</td>
<td>80.9</td>
</tr>
<tr>
<td>Enjoys students and makes lessons fun</td>
<td>5</td>
<td>4.5</td>
<td>4.5</td>
<td>85.5</td>
</tr>
<tr>
<td>Understands students and makes their teaching relevant</td>
<td>16</td>
<td>14.5</td>
<td>14.5</td>
<td>100.0</td>
</tr>
<tr>
<td>110</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 6.19

*Frequency Distribution of a Good Teacher at Time 2*

<table>
<thead>
<tr>
<th>A good teacher is ...</th>
<th>Frequency</th>
<th>%</th>
<th>Valid %</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is confident, energetic and relates well to students</td>
<td>37</td>
<td>21.9</td>
<td>43.5</td>
<td>43.5</td>
</tr>
<tr>
<td>Understands students and makes their teaching relevant to students</td>
<td>16</td>
<td>9.5</td>
<td>10.2</td>
<td>70.1</td>
</tr>
<tr>
<td>Is well planned and prepared</td>
<td>8</td>
<td>4.7</td>
<td>5.1</td>
<td>75.2</td>
</tr>
<tr>
<td>Uses a range of teaching and learning strategies</td>
<td>6</td>
<td>3.6</td>
<td>3.8</td>
<td>86.0</td>
</tr>
<tr>
<td>Has good communication skills</td>
<td>6</td>
<td>3.6</td>
<td>3.8</td>
<td>98.7</td>
</tr>
<tr>
<td>Is a lifelong learner</td>
<td>1</td>
<td>.6</td>
<td>.6</td>
<td>91.7</td>
</tr>
<tr>
<td>Is able to come down to students level and bring them up to their</td>
<td>1</td>
<td>.6</td>
<td>.6</td>
<td>82.2</td>
</tr>
<tr>
<td>Has a thorough understanding of their subject knowledge</td>
<td>13</td>
<td>7.7</td>
<td>8.3</td>
<td>56.7</td>
</tr>
</tbody>
</table>

The overall distribution of the first choices for a good teacher across the whole dataset from Years 1 to 4 at both Time 1 and Time 2 shows that the pre-service teacher valued qualities such as confidence, energy and the ability to relate to students (see Tables 6.18 and 6.19). *Is confident, energetic and relates well to students* remained valued across the whole dataset (see Figure 6.2). Other common first-choice rankings highlighted include *is organised, has a thorough understanding of their subject area, enjoys students and makes lessons fun* and *understands students and makes their teaching relevant* (see Figure 6.2)
6.15.2 Overall distribution of qualities.

A test was conducted to identify the overall distribution of rankings in Question 2 (see Appendix G), A good teacher is … across all four years at Time 1 and Time 2. The results from the crosstab test identified in all years that a good teacher is confident, energetic and relates well to students.

A chi-square was used to test the overall significance across the whole dataset at Time 1. (i.e. certain qualities ranked consistently as more important than others).

\[ \chi^2(51, N = 157) = 62.03, p = 0.138 \]

A chi-square was used to test the overall significance across the whole dataset at Time 2. (i.e. certain qualities ranked consistently as more important than others).
\[ \chi^2(42, N = 82) = 41.65, p = 0.486. \]

Overall, no significance was identified due to the test having 16 different teacher quality categories—the number of categories reduced the power to identify significance. The teacher quality *is confident, energetic and relates well to students* identified significantly as more important than the other qualities. There were other first-choice rankings identified at both Time 1 and Time 2 (see Table 6.21).

There was >10 per cent plus or minus difference from Time 1 to Time 2 in three of the five categories identified (see Table 6.20). This occurred in Year 3 or 4 in most cases. Changes across years can be contributed to students’ growing awareness of the importance of other teacher qualities as they progress through their degree.

The most significant teacher quality identified by the participants *is confident, energetic and relates well to students* did not significantly change from Time 1 to Time 2 across the years. In Year 4, there was a decrease of 13.2 per cent for this teacher quality due to the increase in importance of other identified qualities, rather than a loss of importance of their first choice (see Table 6.21).

Percentage changes identified across the years in relation to what was ranked first choice most often for a good teacher are identified (see Table 6.20).

<table>
<thead>
<tr>
<th>A good teacher is …</th>
<th>Changes in % in years …</th>
</tr>
</thead>
<tbody>
<tr>
<td>understands students and makes their teaching relevant.</td>
<td>A decrease of 18.6 in Year 2</td>
</tr>
<tr>
<td>understands students and makes their teaching relevant.</td>
<td>An increase of 23.1 in Year 4</td>
</tr>
<tr>
<td>has a thorough understanding of their subject area.</td>
<td>A decrease of 10.7 in Year 3</td>
</tr>
<tr>
<td>is organised</td>
<td>A decrease of 14.3 in Year 3</td>
</tr>
</tbody>
</table>
In Year 2, the decrease of 18.6 per cent in *understands students and makes their teaching relevant*, can be attributed to students own professional development as a pre-service teacher; this involves seeing themselves in the role of teacher rather than a student. This change is often apparent after students’ first professional experience in schools. Students start to view themselves in the role of ‘teacher’, hence other teacher qualities take on new importance at this time.

6.15.3 Test for significance.

A chi-square – $\chi^2$ test – $\chi^2 (O - E)^2 / E$ was used to test for significance from Time 1 to Time 2 over Years 1–4 (see Table 6.21). The quality *enjoys students and makes learning fun* was identified as being significant in Time 1 to Time 2 in Years 1, 2 and 4.

Years 1 $p < 0.001$, Year 2 $p < 0.001$ and Year 4 $p < 0.001$

In each case, the frequency increased from Time 1 to Time 2; this could be attributed to the importance students place on the real practical work of teaching. A good teacher engages with the students and what they are teaching. This becomes increasingly more relevant as they move through their degree.
Table 6.21

Comparison of Time 1 and Time 2, Years 1–4, the Good Teacher

<table>
<thead>
<tr>
<th>Most important teacher quality</th>
<th>Time 1—year (total)</th>
<th>%</th>
<th>Yearly freq.</th>
<th>Time 2—year (total)</th>
<th>%</th>
<th>% diff.</th>
<th>χ²</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Is confident, energetic and relates well to students</em></td>
<td>1 (49)</td>
<td>44.9</td>
<td>22</td>
<td>1 (37)</td>
<td>48.6</td>
<td>+ 3.7</td>
<td>.116</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>2 (37)</td>
<td>35.1</td>
<td>13</td>
<td>2 (18)</td>
<td>38.9</td>
<td>+ 3.8</td>
<td>.073</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>3 (28)</td>
<td>50.0</td>
<td>14</td>
<td>3 (12)</td>
<td>50.0</td>
<td>0</td>
<td>0.0</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>4 (38)</td>
<td>46.5</td>
<td>20</td>
<td>4 (16)</td>
<td>33.3</td>
<td>−13.2</td>
<td>.232</td>
<td>ns</td>
</tr>
<tr>
<td><em>Understands Students and makes their teaching relevant</em></td>
<td>1</td>
<td>6.1</td>
<td>3</td>
<td>1</td>
<td>8.1</td>
<td>+ 2</td>
<td>.242</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>29.7</td>
<td>11</td>
<td>2</td>
<td>11.1</td>
<td>−18.6</td>
<td>2.10</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>8.3</td>
<td>+ 8.3</td>
<td>0.0</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>4.7</td>
<td>2</td>
<td>4</td>
<td>27.8</td>
<td>+ 23.1</td>
<td>0.75</td>
<td>ns</td>
</tr>
<tr>
<td><em>Has a thorough understanding of their subject area</em></td>
<td>1</td>
<td>14.3</td>
<td>7</td>
<td>1</td>
<td>8.1</td>
<td>−6.2</td>
<td>.991</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2.7</td>
<td>0</td>
<td>2</td>
<td>.0</td>
<td>−2.7</td>
<td>0.49</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>10.7</td>
<td>3</td>
<td>3</td>
<td>.0</td>
<td>−10.7</td>
<td>1.28</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>4.7</td>
<td>2</td>
<td>4</td>
<td>.0</td>
<td>−4.7</td>
<td>0.75</td>
<td>ns</td>
</tr>
<tr>
<td><em>Is organised</em></td>
<td>1</td>
<td>2.0</td>
<td>1</td>
<td>1</td>
<td>.0</td>
<td>−2.0</td>
<td>0.74</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>5.6</td>
<td>+5.6</td>
<td>0.0</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>14.3</td>
<td>4</td>
<td>3</td>
<td>.0</td>
<td>−14.3</td>
<td>1.72</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>4.7</td>
<td>2</td>
<td>4</td>
<td>5.6</td>
<td>+ 9</td>
<td>.083</td>
<td>ns</td>
</tr>
<tr>
<td><em>Enjoys Students and makes lessons fun</em></td>
<td>1</td>
<td>4.1</td>
<td>2</td>
<td>1</td>
<td>.0</td>
<td>−4.1</td>
<td>19.75</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2.7</td>
<td>1</td>
<td>2</td>
<td>.0</td>
<td>−2.7</td>
<td>86.49</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3.6</td>
<td>1</td>
<td>3</td>
<td>8.3</td>
<td>+4.7</td>
<td>0.76</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>2.3</td>
<td>1</td>
<td>4</td>
<td>5.6</td>
<td>+3.3</td>
<td>118.8</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

6.16 Key Statistical Findings

The key statistical findings from this chapter are as follows.

Factor analysis

- The PCA identified six separate themes or factors in the factor analysis: views on **professional and interpersonal characteristics**; views on **pedagogical approaches**; student- or resource-centred views on **content knowledge**; the **views on pedagogical**
PERCEPTIONS OF TEACHER QUALITIES IN SECONDARY EDUCATION

professional practice; views on teacher knowledge; and views on the use of
textbooks and activity sheets.

Gender
- On average, males in the group viewed professional and interpersonal qualities as
  more important than did female participants.

Age
- On average, participants in the younger age group, 18–24 years, viewed
  pedagogical approaches (student-centred/resource-centred) as more important than
  the 25–29 year age group did.
- Similarly, participants in the 18–24 year age group viewed PPP as more important
  than did the 25–29 year age group.

Situation prior
- On average, students who were entering the course from work or other study
  identified teacher knowledge as more important than those who were currently in
  the course.
- There was no direct correlation to participants’ situation prior to staring the course
  and importance placed upon pedagogical factors and teacher knowledge.
- Participants’ specific situation prior to the start of the course (work, Year 12 or
  study) had a direct relationship to the importance placed upon teacher knowledge,
  interpersonal/professional characteristics and the importance of textbook/activity
  sheets.

Existing qualifications
- Participants in the study who had existing qualifications placed greater importance
  on PPP.
Pre- and post-testing against the six factors and development changes across the four years

- Participants placed equal importance on the value of interpersonal and professional characteristics, PPP, pedagogical approaches and the use of textbooks and activity sheets.

- Pedagogical professional practice was not viewed as replacing pedagogical approaches over time; similarly, teacher knowledge did not replace content knowledge.

- Equal importance was placed on the use of textbooks, activity sheets and pedagogical approaches.

- Equal importance was placed on the importance of teacher knowledge and content knowledge.

- Equal importance was place on the use of textbooks/activity sheets and professional pedagogical practices.

- Participants’ views on the importance of particular themes (teacher knowledge, use of textbooks and activity sheets and pedagogical approaches) changed over the four years.

- Participants’ belief in the importance of teacher knowledge decreased from Years 1 to 4.

- Participants’ belief in the importance of textbooks and activity sheets increased from Years 1 to 4.

- Overall, participants identified pedagogical approaches as more important at the beginning of the academic year than at the end of the academic year.
Uneven patterns occurred for participants on views of pedagogical approaches for Years 1–4, with highest percentages occurring in Years 1 and 3.

There was a changes in value (+ or −) across the years for specific interpersonal qualities. They include an increase in importance for helps students develop self-esteem in Year 2 and for employs knowledge to facilitate students’ learning in Year 4, and a decrease in importance in Year 2 for projects enthusiasm for teaching.

**Interpersonal qualities**

Participants identified five common interpersonal qualities viewed as most useful, they included challenges and encourages students, helps students develop self-esteem, employs knowledge of students to facilitate learning, projects enthusiasm for teaching, and sensitive to students’ needs and concerns.

Participants identified a broad range of interpersonal qualities as being most useful to a teacher. No one interpersonal quality was identified as significant across the four years.

In interpersonal qualities viewed as most useful, significance was identified for projects enthusiasm for teaching in Year 2 and sensitive to students’ needs and concerns in Year 4.

Nine interpersonal qualities were identified as most useful at Time 1 and/or Time 2, having a value greater than six per cent in Time 1, Time 2 or both. Two of the nine interpersonal qualities identified higher percentage increases or decreases within years. Was sensitive to students’ needs and concerns decreased from Time 1 to Time 2 by 8.8 per cent; shows and expects respect increased by 9.1 per cent from Time 1 to Time 2.
The interpersonal qualities, *projects enthusiasm for teaching* and *is sensitive to students needs and concerns* were identified as being significant in Time 1 to Time 2 in Years 2 and 4.

**Pedagogical approaches**

- There were six pedagogical approaches identified as important at both Time 1 and Time 2; they included *uses high-interest lessons*—interactive, student interest high, uses a range of teaching strategies, *plans lessons that are relevant to students*, *adapts teaching to students’ learning styles*, *adapts teaching to their environment/context* (for example, caters for special needs) and *uses a student-centred approach*.

- The six pedagogical approaches identified as most important at both Time 1 and Time tended to stay consistent with only minimal change over time (Time 1 to Time 2).

- Significance was identified in the following pedagogical approaches *uses high-interest lessons*—interactive, student interest high Year 3 $p < 0.05$, *plans lessons that are relevant to students* Year 2 $p < 0.01$ and *adapts teaching to their environment/context* (for example, caters for special needs) Year 1 $p < 0.05$.

- The pedagogical approach *encourages students to take responsibility* had an increase in percentage from two per cent at Time 1 to 11.5 per cent at Time 2.

- The pedagogical approach *uses high-interest lessons* decreased in importance from 26.4 per cent at Time 1 to 16.7 per cent at Time 2.
A good teacher is …

- Participants ranked *is confident, energetic and relates well to students* as most important in terms of what a good teacher is across the four years at both Time 1 (62.7 per cent) and Time 2 (43.5 per cent).

- The second top two first choices ranked by the participants for what a good teacher is *understands students and makes teaching relevant* (14.5 per cent T1 and 12.9 per cent T2) and *has a thorough understanding of their subject matter* (11.8 per cent T1 and 3.5 per cent T2).

- There were five common first-choice rankings for what a good teacher is at both Time 1 and Time 2, they include *is confident and relates well to students, understands students and makes their teaching relevant to students, has a thorough understanding of their subject matter, is organised and enjoys students and makes their learning fun*.

- There was an increase in selection of qualities (more choices were ticked) at Time 2 for what a good teacher is.

- Significance was identified for the quality *enjoys students and makes learning fun* for what a good teacher is from Time 1 to Time 2 in Years 1, 2 and 4. Year 1 \( p < 0.001 \), Year 2 \( p < 0.001 \) and Year 4 \( p < 0.001 \)

### 6.17 Conclusion

This chapter provided a statistical overview of the participants’ perceptions on a range of teacher qualities that includes their views on professional and interpersonal qualities, pedagogy, knowledge, interpersonal skills and their overall views on what constitutes a good teacher. These statistics constituted the main quantitative data collected in the mixed methodology in this study. The results were used to provide a context that
was viewed as a longitudinal snapshot of pre-service teachers’ perceptions of teacher qualities and changes to perceptions across years and within years in an undergraduate teaching education degree.

The statistical data in this chapter revealed a complex and uneven picture of changing and reforming of ideas, with some participants’ ideas remaining unchanged and consistently important over time. The PCA identified six separate themes or factors against which the bulk of the statistical results were tested. There is a significant view in the literature that supports the idea that pre-service teachers bring with them to teacher education firm ideas on what is good teaching and what are good teacher qualities. The results suggested that pre-service teachers’ perceptions and beliefs about teacher qualities are influenced to some degree by gender, age and situation prior to study. These beliefs were developed and repackaged over time, particularly in Years 2 and 3 in the area of pedagogical beliefs. The statistics showed trends and broadening of participants’ views on knowledge and pedagogy over time, running alongside originally held views on the importance of relevance, energy, enthusiasm and sensitivity to students’ needs; this was highlighted in the statistical data.

It is important to view the results of this chapter within the broader lens of the qualitative results (focus groups and teacher educators’ interviews), which are presented in Chapters 7 and 8. The following chapters assisted in framing a firmer understanding of the participants’ developing perceptions by outlining the quantitative data results through the use of quotations, themes and categories. Chapter 6 formed the foundation of the study, providing the main quantitative dataset. In Chapters 7 and 8, the results from the two qualitative datasets are outlined. This includes results from the focus groups and findings from the teacher educator interviews. The teacher educator interviews outline their held beliefs and understandings about teacher qualities, providing a useful lens for
understanding the pre-service teachers’ learning and subject outcomes (see Appendix N). It provides a picture of the teacher educators’ aspirations for the participants’ in the study. The teacher educators’ interview data are not directly connected to the pre-service teachers’ dataset, yet it provides an interesting frame from which to deconstruct the pre-service teachers’ ideas on teacher qualities.
Chapter 7: Pre-Service Teachers’ Perspectives on Teachers’ Qualities

7.1 Introduction

This section captures the categories (a general list of classifications) that occurred in qualitative data from the pre-service teachers’ focus groups. These data were initially used for the development of the survey instrument. The focus groups provided useful qualitative reflections on the participants’ perceptions of teacher qualities. Data from the two focus group reflections were compared, and patterns were identified. This provided a starting point for comparing capturing the developing ideas of the pre-service teachers as they progressed through their study (from Year 1 to Year 2 and so forth).

7.2 Patterns in the Focus Groups

Focus Group 1 (FG1), pre-service teachers Years 1 and 2, discussed the importance of content knowledge and skills, behaviour management, and being able to relate to and engage the students. They felt that being able to work as a team both within the class and as a staff member was important. Pedagogical skills such as being able to explain and demonstrate knowledge so students could understand the knowledge were emphasised. Being relevant to the pre-service teachers and having the opportunity to learn from other teachers were needed to be successful. They also felt it was important to develop a culture in the classroom that promoted learning.

In comparison, in Focus Group 2 (FG2), pre-service teachers from Years 3 and 4, placed greater emphasis on being adaptive, flexible and inclusive. The importance of engaging and motivating students was also discussed; however, this was viewed from a
student-centred hands-on approach. The key difference with the two cohorts was that FG1 referred more often to content and skill knowledge while for FG2, the emphasis was on pedagogy and interpersonal skills. Both groups were limited in their discussion of professionalism and being a reflective practitioner. Both groups discussed the importance of professional experiences and the role of the mentor in developing their ideas on teacher qualities.

In terms of how the participants developed their ideas about teacher qualities, the same responses were consistent for both groups, with participants discussing their ideas based on their own personal experience, both at university and professional experience. Participants believed that they were able to learn about teacher qualities from both good and bad examples. Participants discussed specific teacher qualities, often referring to a significant event or to individuals who helped to shape what they were thinking in terms of teacher qualities.

In the discussions on favoured teacher qualities, FG1 referred to the ability to relate to students, referent power, being accepting, supportive, and consistent in terms of how one handles discipline. FG2 discussed the importance of relevance and referred to being able to talk the students' language, motivate students and encourage them to participate in learning. They identified the importance of providing students with support and help, providing opportunities for the students to feel successful, and part of the group. FG2 also wanted to build rapport and show students they had an interest in them.

The focus groups identified a link between teacher qualities and effective teaching. In FG1, having effective teaching qualities involved having good interpersonal skills, the ability to motivate students, energy and a wide range of teaching techniques. For this focus group, the importance of relevance both in content and in materials was explored. The main difference in FG2 was that participants spoke from a position of experience, linking
their ideas to what they had seen on practicum or experienced in coursework, where they identified particular qualities they believed made them effective teachers. FG2 also discussed the importance of having sufficient content knowledge, skills in behaviour management, planning and curriculum interpretation skills, and having an understanding of inclusive education. For most, pedagogy was learnt on the job, although they did find presentation and planning skills developed at university useful.

Being able to relate to students was emphasised by both focus groups. This involved understanding the students, speaking their language, being interested in them as individuals, and encouraging and motivating them. FG1 identified this as gaining knowledge in content that was relevant and interesting for the students. Both focus groups discussed being inclusive and fair, and establishing the boundary between being a friend and a teacher. For FG2, there was a greater need to develop relationships and become involved with students outside of the classroom. This was viewed as important when relating to students, and was a common belief of pre-service teachers in the PDHPE teaching degree.

7.3 Categories Emerging from the Data

Categories emerging from the focus groups include subject content and education knowledge, interpersonal qualities, management and organisation, instructional techniques (pedagogy) and professionalism.

7.3.1 Subject content and knowledge.

The importance of being well grounded in subject content knowledge was particularly important to participants in FG1: ‘learning about different sports at uni is good before you go out. Having knowledge about sports is important’ (FG1#5). However, this group did believe that they would obtain a base knowledge and learn on the job once they
became a teacher: ‘when you get out to the schools you obviously learn more from teachers, teaching in different ways [and] contexts’ (#3). Relevance was seen as an important quality in terms of what one knows (basic knowledge) and the approaches taken for teaching, materials and content: ‘then if you have knowledge and skills to get students to understand what you are trying to teach them that makes a good teacher’(#4).

FG1 wanted knowledge on how to modify learning to engage and suit specific needs or gender and knowledge of content that interests students. They stressed the importance of knowing more than one’s students and being an energetic teacher: ‘you don’t want to be in a position where the kids know more than you … also knowing the content and being energetic about it’ (#2). For FG1, important knowledge included, communication skills and discipline strategies needed to avoid bad situations with students: ‘how you talk to kids I guess, communication skills, discipline, not getting yourself into a bad situation’ (#1). This group wanted knowledge about teaching from school teachers in different contexts as well as learning what teaching styles suited them as individuals: ‘it’s good to understand what you are good at, your teaching styles and look further into management styles’(#3). Knowledge about students, what is important to them and how to create boundaries with students and deal with parents was explored, ‘developing those social skills involving parents’(#3).

For participants in FG2, the relevance and usefulness of knowledge and complex theories in education was important: ‘I have some real issues with all the content they make us learn when in reality you have this much time … you don’t even teach it all … you don’t really need to know about that stuff’(FG2#6). Some of the coursework in education units was seen as common sense and often unrelated to practice; there was an identified need for knowledge to be relevant to the school context: ‘if it’s all out of a book
it’s got no real relevance when you walk out the door’ (#1). In both focus groups, expert content knowledge was seen as important, particularly in the beginning years of the degree.

The delivery of the content was seen as instrumental in effective teaching. The pre-service teachers wanted to have ‘knowledge and understandings [subject knowledge] that were more than superficial’ (#5). Showing that one is a learner, being relaxed and enjoying learning were most important: ‘you have to show kids that you are a learner also that you don’t know everything’ (#7), they believed it was necessary for the teacher to show students that he or she is human, with a passion and interest in teaching: ‘[to] think as a teacher you need to be human, you need to show you are human and not do things that are out of your range’ (#4). This group valued the knowledge needed to be an effective leader and to be able to relate to students. Participants identified the importance of developing good interpersonal and professional skills in the classroom: ‘you don’t have to be brilliant just a desire to teach—relate to student, interest and passionate’ (#2). Participants in FG2 were confident in what knowledge was needed to be a successful teacher.

### 7.3.2 Interpersonal qualities.

Participants in FG1 wanted to ‘learn from the students’ (FG1#2). They identified the importance of culture in the school and the need to encourage participation and enthusiasm: ‘effective teachers get involved, move around the class actually talk to each other, don’t just stand around—talk to them see what they are up to, ask what their ideas are’. It was important to engage with different students, different genders and international students and those who are not athletes. The ability to relate to students was seen as an important quality (referent power) in FG1: ‘one of the most powerful things I have seen in schools is the referent power’ (#6), this group also expressed the need to have an interest in individuals and a connection with the students: ‘you can relate to the student—you know you can ask them what they did on the weekend then you immediately have a connection
with that kid’ (#2). Participants wanted to be accepting and supporting of students, find
different ways to teach content and not give up on students. The participants felt it was
important to take time with individuals and to see the potential in all students:

Talking about good teachers my physics teacher in Year 11 and 12 was good. I
found this subject hard but the teacher was accepting and supportive. He didn’t put
me down or say hurry up just get the answer. He took the time to sit down with me
and talk about the content and organise extra tutorials after school, so instead of
just writing you off he took an interest in you, he didn’t write me off he saw that I
had the potential (#3).

FG1 identified those teachers who were positive, engaging and motivating as most
effective. For FG1, it was evident that good teachers love what they do and as a result, they
made lessons fun and became involved themselves: ‘students don’t realise they are
learning, they just do it’ (#6). Being a sensitive teacher was seen as important in FG1, as
was giving individuals attention to students: ‘make them feel they can do it … being fair,
encouraging confidence and success’(#1).

Participants in FG2 identified the importance of a teacher being willing to show
students that he or she is a learner, does not know everything and can laugh with them:
‘sense of humour—laugh at yourself if you are demonstrating to the kids. You know when
you are teaching a subject like health some things are sensitive so you have to have a sense
of humour laugh at yourself” (FG2#3). It was also seen as important for the teacher to have
the ability to come down to the students’ level and bring them up to his or hers, to speak
the language of the students, build rapport and show an interest in the students: ‘finding
their interests, knowledge of what they enjoy, rapport’(#2). It was important for
participants in FG2 to have an understanding of students’ background and the ability to
adapt to new situations: ‘begin able to build rapport with kids easily talk on their level,
have a sense of humour … understanding where they are coming from. A lot of the time it’s the best way to get through to them—coming down to their level’(#5).

FG2 identified the necessity of earning students’ respect by showing the desire to teach and demonstrating an interest in the subject being taught, beyond an interest in the content: ‘show an interest, respect opinions, talk AND listen … speak to them not at them, speak their language, laugh with them, be empathetic’(#1). For some participants, teaching involved wanting to work with young people and make a difference in their lives: ‘it’s quite corny but good teachers will often say I make a difference or I made a difference for one kid’ (#3).

7.3.3 Management and organisation.

Management and organisation were significant for participants in FG1. They identified good planning as a way of addressing misbehaviour in the classroom. Behaviour management was an important area for FG1, they identified knowledge in this area as relevant and necessary in providing them with skills to manage the classroom. They felt it was important not to be a harsh disciplinarian but saw that it was often difficult to develop that balance between friend and teacher. They identified the importance of using positive discipline techniques, being firm and the need for respect, ‘as a teacher you have positive but you also have to have discipline’(FG1#2). They identified the value of being consistent in terms of how you handle discipline and viewed this as a positive quality, ‘he was always consistent he had a three warning system, it didn’t matter who you were he treated everyone the same … everyone knew what was expected students never questioned it’(#1). They stressed the importance of clear expectations for students and wanted problems to be addressed in the class so they did not accelerate: ‘the thing with the teachers’ approach is that it stayed in the class the problem didn’t accelerate’ (#2).
In FG2, participant discussions on management were centred around the ability to adapt to new situations, considering things such as inclusive practice and the need to motivate and engage students: ‘willing to be open minded, different people have different learning styles … you have to cater so that students … get the most out of the lesson, you need to adapt to different situations’ (FG2#4). This group felt that effective teachers needed ‘people skills, management skills, communication skills planning skills, behavioural skills’ and a genuine desire to teach (#6).

7.3.4 Instructional techniques (pedagogy).

FG1 wanted to learn pedagogy from other teachers; observing and learning what they did was viewed as essential in developing effective pedagogical qualities:

Uni is about getting the basics of what you should know. When you get out to the schools you obviously learn more from teachers, teaching in different ways, contexts etc (FG1#3).

They discussed pedagogical approaches that provided relevance and engagement. For FG1, this involved learning how to teach but also how to modify teaching to suit a range of students: ‘make sure you do modified games and practice to suit students interests’(#1). The ability to teach what you know was important and involved being able to explain and demonstrate successfully. Having a range of teaching approaches was important for student engagement: ‘so when I am teaching swimming if a kid doesn’t get it right away I might think of another way to explain it’(#3). For FG1 participants, effective teachers were active and engaged with the learning: ‘effective teachers get involved… actually talk to them [students], asks what their ideas are’ (#2). They believed that effective teachers often used traditional methods but the hands-on tactile methods were viewed as most effective: ‘I really enjoyed it when teachers used tactile methods—using models, pulling them apart,
working with it, real like manipulating stuff. That’s work worked for me. I can get a full view understanding of it’ (#3). FG1 also valued interactive teaching strategies: ‘effective teachers use interactive style—group work, listen to students, others ideas, they don’t just have one approach one idea’ (#2).

For FG2, effective pedagogical practices involved the ability to adapt to new situations to motivate and engage students and to consider aspects such as inclusive practices. An inclusive teacher uses a broad range of teaching and learning strategies:

Willing to learn, open minded, different people have different styles. Like in the last idea different teachers have different styles and you have to cater so that students get used to a particular styles of teaching … so they get the most out of the lesson, you need to adapt to different situations (FG2#4).

They preferred a student-centred approach to teaching and learning, and wanted to involve students and encourage them to be active and engaged: ‘student-centred approach—that’s because of my PE [physical education] background where it’s important to get kids involved’ (#3). The participants in this group believed that good teachers are collaborative and are able to adapt their teaching to their environment and context:

‘collaborative more relaxed approach, it works a lot better than just saying you will do as I say, you will do this and this is how it’s going to be and they are not even allowed to interact—total silence’ (#5). They identified the importance of designing learning strategies that students saw as relevant: ‘I remember teaching SOSE I tried to make it as interactive as possible rather than just sit there working out of a textbook because students don’t respond’(#3). They believed it was it was important to view a range of teachers, teaching to observe and learn from and believed that they were able to learn things from good and bad teachers. FG2 participants also felt that effective pedagogy involved being flexible, having the ability to change teaching to suit the environment or context: ‘I think
you are more creative as you change you move either indoors or outdoors or in a
classroom. While other teachers are in a classroom and that’s it their environment doesn’t
change’ (#5).

7.3.5 Professional qualities.

For FG1, being professional involved team membership, the ability to work as a
member of staff, and sharing ideas and approaches. This belief aligns closely with
Mc Ber’s (2000) definition of professional qualities which includes: motivation, passion
and reflective practices. These were significant for PDHPE pre-service teachers: ‘having
the opportunity for staff to mix is important you learn from each other, share ideas that you
can take into your classes, work with specific kids who have problems and they can learn
from you’ (FG2#2). The need for teamwork involved collaboration both in the classroom
and in the staffroom. Professional attitudes were important, including how and what you
talk to students about was noted: ‘he saw me as a teacher, he wanted the professional
distance’ (#4). Professionalism involved developing positive relationships with students in
the class and in other situations, for example, on school trips: ‘these teachers have positive
relationships with kids are involved with bus trips, excursions etc.’ (#5). Professionalism
for participants in FG1 involved stepping away, not becoming too emotionally involved
with students and establishing a boundary between friendship and teaching: ‘you can’t get
too involved, emotionally … but sometimes I am too emotionally invested with a student,
OK I need to separate myself from what maybe going on at home and how this might be
causing them to breakdown’ (#3). Participants in FG1 developed professional ideas from
teachers they had at school and on practicum.

For FG2, professionalism involved stepping out of the comfort zone and being able
to work in different situations: ‘the PE teacher just seems to step into school roles,
excursion, year level coordinator they just seem to get on with it, what quality is that?’
In the classroom, professionalism involved being willing to be open minded, collaborative, having a relaxed approach and working as part of a team. These participants believed that the professional teacher is inclusive, sincere and honest: ‘students can see straight through you if you are not sincere’ (#5). A professional teacher is supportive of other staff and students, and ‘is open to students never stand over them or make out you are better’ (#7). A professional teacher demonstrates an interest and passion, and is inspiring: ‘I decided on teaching because teachers inspired me’ (#4).

In comparison, FG1 believed the professional teacher was knowledgeable. They wanted to relate well to students and cater for diverse needs, and yet still have an understanding of professional limitations and responsibilities as a classroom teacher: ‘how you talk to kids I guess, communication skills, and discipline’ (FG1#6). They wanted to learn from colleagues, particularly in terms of how to cater for students with problems: ‘opportunity to mix with other teachers … learn from each other ideas you can take into your class for specific kids who have problems’(#4). FG1 saw the professional teacher as being confident: ‘confidence to go into a school confidence to speak in front of a group of people’ (#2). They believed being able to relate to students would help them to know the parents: ‘I think that knowing the student help you then to know the parents’ (#2). For FG1, the professional teacher needed to have a balance between being supportive of students and developing professional distance: ‘I think it’s important for new teacher to know when to take a step back and when to stop being so emotionally involved with a child as it can wear you down’(#3).

7.4 Conclusion

Both focus groups valued interpersonal and professional knowledge. They valued the expert knowledge needed to be a successful teacher. Interpersonal qualities were viewed as necessary for engaging students. Participants stressed the importance of showing
an interest in the students, encouraging students, building rapport and understanding the students’ backgrounds. What was different for FG1 was that they felt it was important to ‘learn from the students’ (FG1#1), whereas for FG2, it was about working with the students, showing the students that you are also a learner. In terms of management, the distinct difference between the focus groups was that in FG1, management was about maintaining control over the classroom learning environment, particularly behaviour management, whereas FG2 participants had a broader concept of management with an increased focus on catering for the learning needs and interests of the students.

A range of pedagogical approaches was discussed in the focus groups, with particular emphasis placed on the student-centred, hands-on nature of the PDHPE course. Both focus groups valued the importance of inclusive practice, engaging students’ interest and modifying and adapting teaching to suit different contexts. The main difference was that in FG1 participants discussed how to learn and what to learn in terms of pedagogy, whereas FG2 referred to those pedagogical approaches that were most effective in their classes. Pedagogy in FG1 was explored within the context of their own schooling experiences, whereas in FG2, discussions about pedagogy were about the approaches they had tried as pre-service teachers.

In both FG1 and FG2, professionalism and professional behaviour were an important part of being an effective teacher. Teamwork was a common theme in the focus groups; this involved sharing and collaborating with other staff. In FG2, teamwork was extended to include the teacher, and student learning in the classroom in addition to a commitment and interest in extracurricular activities or higher duties. In FG1, participants were less confident in how to present as a professional and were concerned about appearing too emotionally involved or friendly to students: they believed it was important to maintain a professional distance. Chapter 8 continues with the perceptions of teacher
qualities. This chapter captures the aspirations that the teacher educators had for the pre-service teachers, the qualities they saw as most important for the pre-service teachers to acquire. The teacher educators’ perceptions of teacher qualities provide a valuable lens from which to understand the pre-service teachers’ developing ideas.
Chapter 8: Teacher Educators’ Perceptions of Teacher Qualities

8.1 Introduction

This chapter captures the views of three teacher educators who were directly involved with the preparation of the pre-service teachers surveyed. The quantitative data came from a series of semi-structured interviews that asked each of the teacher educators’ four questions on teacher qualities, similar to the questions asked in the pre-service teacher focus groups (see Appendix J). The data from the interviews was rich and detailed and provided significant understanding about the broader aspirational outcomes that the teacher educators had for the pre-service teachers in terms of their development as successful teachers. The rationale for including this dataset is in its value as an expert voice compared with the views of the pre-service teachers, providing a useful standard of comparison and contrast in the interpretation of valued teacher qualities. In considering the perceptions of pre-service teachers, the teacher educators were encouraged to respond based on their own experiences. This approach produced an open conversational dialogue and aligned with the constructivist research methodology as knowledge and understanding was being constructed from the participants’ experiences. The role the researcher played was as a passive participant in the discussion, seeking clarification where needed and acknowledging the participants’ comments and ideas.

This chapter provides an important frame of reference for helping to contextualise a broader understanding of the pre-service teachers’ perceptions about teaching qualities. The focus here is on the perceptions and practices of three teacher educators who are specialists in their areas, and who deliver significant components of the teaching and
learning experiences of the participants in the study. The teacher educators were interviewed to explore the how and why of their course design, but during these interviews, they also provided information on their beliefs about good teaching, what constituted good teacher qualities and how, in their specialisation, they strived to develop these attributes in their pre-service teachers.

The outcomes and aspirations explored by the teacher educators provide both similarities and contrasts with the pre-service teachers’ perceptions on teacher qualities and their belief of what is valuable to learn.

Three teacher educators’ interviews were conducted. They were asked four semi-structured questions (see Appendix J). Each participant represents an important content area in the PDHPE degree: sport specialist, sport scientist and health specialist.

The responses were reviewed using thematic analysis (Taylor & Bogdan, 1989, p. 131). The analysis sought to identify certain themes or patterns across the narrative data rather than within a data item (Braun & Clarke, 2006, p. 81). Similar themes to the pre-service teachers emerged in the teacher interviews on valued teacher qualities including: personal philosophy and values; the importance of authentic experiences and credibility; professionalism; pedagogy and content knowledge. In addition to these five themes, each interview revealed a theme in a participant’s response that differed from the response of their colleagues. These were:

- Network/team player—sports specialist
- Lifelong learner—health specialist
- Creativity—sports scientist
8.2 Patterns in the Teacher Educator Interviews

As outlined in the methodology chapter, a series of themes emerged from the thematic analysis of the teacher educator interviews. The role of the themes was to provide a frame or lens through which to view the quantitative data from the survey instrument and establish connections between the quantitative and qualitative results.

The themes and patterns that emerged shared areas of commonality, yet each teacher educator provided aspects unique to their context and personality.

The open-ended style of the questions provided the researcher with the opportunity to gather an understanding of the specific learning outcomes for their subject area in addition to gaining a deeper understanding of the broader aspirational outcomes (hidden curriculum) expressed by each teacher educator. This approach provided valuable insights into those teacher qualities that all of the educators valued, those that were unique to an area of study, and those that were similar to or contrast with the pre-service teachers.

A common strength in the course highlighted by all three teacher educators was the practical, real-life nature of the course. They believed this allowed the pre-service teachers to develop the strong interpersonal and communication skills needed for successful teaching.

Modelling professional practice or favoured pedagogical practices was one of the approaches shared by all of the teacher educators, as was the concept of encouraging student-centred learning in the classroom. This was viewed as a concept that pre-service teachers would adopt and develop as a strength in teaching.

The opportunity to build leadership and interpersonal skills was seen as a valuable strength in the course and was emphasised by each of the three interviewees. The teacher educators referred to developing expert power, in terms of a strong knowledge base. A
common thread for the teacher educators was the concept of building rapport and mutual respect with the pre-service teachers, having clear expectations of pre-service teachers, getting to know pre-service teachers and establishing accountability.

A constraint identified by teacher educators was the complexity of developing an assessment model that was useful in determining who would make a suitable teacher and who would not. There was agreement that in most cases, pre-service teachers’ self-select in terms of whether they are really suited to teaching. Time constraint was a common issue, particularly in terms of teaching practical skills that took longer than academic work. Having a balance of time spent on academic and skill development was a common challenge for the teacher educators, who believed this affected the amount of time available to provide opportunities for the pre-service teachers to link theory to practice, to make the necessary connections and to apply them to their teaching.

The organisation and discussion of the interview data has been separated into the common themes that emerged from the thematic analysis. The comments and reflections of each of the teacher educators will be discussed, as will the points of difference for the teacher educators. The next section provides a synthesis of the data patterns and an opportunity to hear the stories and aspirations of the key teacher educators who worked closely with the pre-service teachers in the study.

8.3 Themes Emerging from the Data

Five themes emerged in the teacher interviews on valued teacher: development of personal philosophy/values; the importance of authentic experience and credibility as a teacher; professionalism; pedagogy; and content knowledge. In addition to these common themes, the teacher educators also had personal teacher qualities for the pre-service teachers: networking, lifelong learning and creative thinking.
8.3.1 Development of a personal philosophy and values.

All three interviewees articulated the type of personal qualities or values that they believed were essential in the development of the qualities that make a good teacher. A personal philosophy and values system that encompassed interpersonal qualities such as rapport, and respect for was identified by the sports specialist as desirable for pre-service teachers. The pre-service teachers were encouraged to develop and demonstrate these qualities in their teaching practice: ‘building good rapport and expectation, having kids [sic] understand that you’ve got a certain level of expectation with regard to them … your respect for them’.

They also identified as important the ability to be perceptive, to develop good listening skills and strategies and to quickly identify and understand pre-service teachers’ needs. Being charismatic, having a firm presence, being confident, and listening to pre-service teachers were all identified as belonging to a particular personality type that was more effective in engaging pre-service teachers in learning: ‘the PE teachers are the hip and happening group’.

They valued this type of personality and encouraged pre-service teachers to develop these interpersonal qualities. Leadership skills, referent power and being the type of teacher that students want to follow where seen as essential to effective teaching: ‘the other part of it is being effective and being able to actually achieve goals, get kids to listen, get them to follow you, you’ve got to be the leader’. One significant aspect that came up in the interview for the sports specialist was the need to develop teachers that were capable and prepared to cater for individuals in the class ‘they’re really acutely aware of looking after the needs of the timid or the quite kids in their class’. Their own experiences in schools as a teacher and student significantly influenced their attitudes and beliefs about teacher qualities and effective teaching. For them, the focus was on catering for
individuals, fairness, allowing competition to be fun and purposeful and being aware of physical and psychological bullying or intimidation that can occur in school. Purposeful learning was about teaching pre-service teachers skills in a cooperative, fun environment, not using the ‘babysitting technique’. One of the values that they highlighted was the need for the pre-service teachers to love sport and physical activity. This was seen as important in terms of inspiring the students: ‘just to be someone who really loves being physical and loves to encourage other people’.

When interviewing the health specialist, the personal philosophy and values came through the interviewee’s personal stories, particularly in discussions on approaches to teaching and their own professional growth as a teacher educator. The interviewee’s ideas on what constituted desirable personal teacher qualities, were centred squarely in the need to make health education relevant and authentic both to the students and to the broader school community. The comfort level of the pre-service teacher in terms of delivering sensitive content was identified as being important.

The health specialist identified the need for encouraging personal awareness and professional sensitivity, and encouraged pre-service teachers to explore their own understandings and value systems. The health specialist suggested that ‘part of being a professional educator is that you are sensitive to student needs, families, [and] how they fit in’ and that the teacher educator’s role is ‘helping students personally [to] develop … [you] focus on students as young adults’. The health specialist stressed the need to develop pre-service teachers with a holistic approach to health education, so that they can be better informed health education teaching in schools and practice in the wider community: ‘an understanding that a holistic approach to health, not just the biomedical approach, but more the socio-cultural approach [is important] … to be able to get that across to schools, not just the students but their school community’.
A constraint in developing in the pre-service teachers understanding of health issues was whether the amount of socio-cultural content explored in the course was really unpacked and considered by the pre-service teacher: ‘we don’t seem to have a diverse cultural background here. We are seen to be white, Anglo and … English as our first language … in the classroom … students tell me you’ve got Vietnamese and … got Indigenous [students].’ One way of addressing this is to ‘get them to just analyse their own stereotypes … challenge these stereotypes as a way of developing them as teachers … if they haven’t unpacked them they can’t see how other people operate in the classroom … also their colleagues in the staffroom and the families’. However, the health specialist did acknowledge that sometimes it was difficult to evaluate how much of this content pre-service teacher could deal with: ‘I don’t know how we gauge how much of the cultural-social understandings they take on board’.

The need to be authentic and relevant was a significant aspect of their personal philosophy. The health specialist discussed the importance of health education and how it is often limited in schools. For example, an authentic experience such as a Gala Day helped to make health education relevant for pre-service teachers: ‘… working out how they are actually going to deliver the content or engage children’. They discussed the need to encourage pre-service teachers to share stories and experiences in class so they can unpack and understand personal health and health issues in the community: ‘I build on stories. I ask what did you see? What have you heard? And they tell me and I work on that … [it is] easy to link their stories and explain.’

The sports scientist used personal stories and specific case studies to illustrate the importance of developing relationships with the pre-service teachers, applying and testing knowledge, and engaging them in learning. The sport specialists experiences with pre-service teachers from different socio-economic and cultural groups helped in developing
firm ideas about what values and qualities that were important for secondary teachers, for example: ‘they’re very hands on and when they’re listening, they have a specific thing they want to listen to’. They particularly highlighted the importance of pre-service teachers developing interpersonal qualities that enabled them to be leaders as well as being able to ‘read’ students so learning experiences suited student needs. This was seen as particularly important in terms of student engagement and catering for students with specific needs.

They acknowledged the importance of appealing to students but felt that is was not always achievable: ‘they don’t have to have particular personalities, but they have to have certain leadership traits … a degree of confidence and loudness. They have to be a bit bubbly. If you don’t have those qualities you get drummed out within the first year or so … those first couple of pracs [are important]’. They mentioned that it was significant that students ‘actually get to see [their] teacher as a real person if [their] teacher is a PE person … you get to see your teacher wet and cold and unhappy’. They expressed the opinion that they ‘don’t think every teacher in their discipline has to feel guilty about the fact that they don’t connect with every kid, because you can’t do that … what you need to do—it’s the kids that are interested your discipline you have to connect with’.

The sports scientist’s approach to developing pre-service teachers professionally was to mix up the health and PE pre-service teachers with the sport science cohort to encourage diversity of thinking in the class. Authentic or real situations used as a base for situational practice was highlighted as valuable: ‘I don’t group by degree. I just mix them up and it all happens … when you think about it, if you’re working in the school, you’re going to work with a diverse range of people anyway … you’ve got to work with the food lady and the maths teacher’.
8.3.2 Importance of authentic experiences and credibility as a teacher.

This theme emerged from the analysis as significant for the teacher educators in terms of engaging the pre-service teachers in their specialisation, but also in modelling best practice in terms of classroom teaching and engagement.

For the sports scientist, professional experience was valued as the ‘real thing’, the authentic experience for the pre-service teachers. This was seen as important in developing teacher qualities. The sport scientists expressed concern about the subjective nature of assessment during professional experience: ‘we really need the schools to be able to stand up and say no, not good enough’. It was also acknowledged that the relationship with schools in terms of professional experiences was important in supporting and developing pre-service teachers’ professional qualities. The broad variation in professional experience contexts was another area of concern: ‘it’s so varied, it’s one of those professions where it’s really hard to know whether someone is going to be really good or not because the context varies so much’. They felt that the most authentic assessment model in terms of determining teacher suitability would be to expand the professional experience for the pre-service teacher: ‘the perfect assessment would be to have everyone out in the school for a year and you go and watch them for good length of time. At the end of the year they either get a contract to work or they don’t.’

Becoming involved in the community was seen as an important aspect of teacher credibility; someone who has expertise and skills relevant to students and the broader community will be recognised for this: ‘I’m always emphasising the importance of getting involved in community… building up their expertise’. Being good at specific sports and having skills transferable into teaching sport in schools enhanced a teacher’s credibility: ‘It gives you a bit of expert power if you can actually do it’. The authentic nature of the content and pedagogical approaches employed in professional experience and skills
acquisition subjects provided a sense of relevance and credibility: ‘the fact that they’re practical, so they’re doing the real thing. They’re doing the things that they’re going to be doing in the schools.’

Authenticity and credibility was one of the most important aspects for the health specialist, with activities such as the Gala Day and practicum considered vital in terms of linking theory to practice. The health specialist modelled an approach in which content and activities were overtly articulated: ‘why I am doing this and what I am doing?’ This allowed reflection on classroom practice. These authentic experiences were seen as opportunities for teacher educators ‘to explain what you’re doing and why you’re doing it … the background stuff they don’t always see as being valid when there are at uni … this is relevant, get on with it’. Their approach to teaching health was based on a socio-cultural, holistic approach so that links could be made with practice. This also enabled pre-service teachers to start thinking in a more global manner by providing pre-service teachers with relevant skills and knowledge to communicate health information and messages to young people and the wider community.

A significant outcome was encouraging pre-service teachers to become good education role models, and health educators in the school community. It is important to have a ‘community health focus—they’ve got heaps of great research and evidence-based stuff that we can apply to a school setting’. To be credible as a teacher the pre-service teachers need to become ‘really effective practitioners in the school, they need to understand how it all fits together to enact good health education in a school—so that they actually affect the whole school community, not just the kids in the classrooms’. They are ‘leaders in the school in this area by default, because other members of the school community, teachers, students and their families … [will give them] or assume that they will take that role up’.
As a teacher, the health specialist recognised that professional activities such as teamwork, networking, mentoring and sharing were key aspects of teacher practice. The health specialist felt it was important to make coursework for pre-service teachers as real as possible and reflective of professional practices in schools. For the health specialist it was important to identify specific qualities in terms of being authentic and relevant to students. These included being flexible, knowing the content area, being prepared to teach a range of content areas, learning to adapt, learning to find the information needed, and networking: ‘My belief is that they really need to be able to be flexible, know their content area … to be a professional educator they have to learn to adapt, be a bit chameleon-like’. The health specialists acknowledged that to be able to do this, a teacher needs to ‘search things. You find out. You make a network, you go to that professional association … and you read.’

For the sports scientist, authentic teaching both in terms of the pre-service teacher and also in terms of his or her own pedagogical practice was important: ‘I think a lot of the kids learn, particularly sporties, learn by episodic memory and by visual memory … so I try to teach very heavily episodic and visual because that’s the group that I work with … if they found success that way, then that’s the way they will teach’.

### 8.3.3 Professionalism.

The sports specialist emphasised that the developmental process of encouraging the pre-service teachers to start thinking like a teacher was an important aspect of both the methodology units and professional experience. The developmental process of shaping professionalism was seen as instrumental in guiding the professional practice of pre-service teachers: ‘the emphasis is more on them as a teacher rather than them as a student in the second half of their course’. The concept of professional capacity was viewed as a gradual developmental process, incorporating ethics and principles of professional teacher
theory into the practice of what teachers do and do not do on a daily basis: ‘the change is that I want them to have a really good understanding of the role of the teacher; that’s everything from the professional ethics of being a teacher to all the responsibilities of being a teacher’. The sport specialist modelled inclusive practice in terms of developing professional ethics in pre-service teachers: ‘I try to model that kind of professional ethic in terms of being inclusive and making sure everyone gets a fair go’. The professionalism in PE teaching was believed to have vastly improved, yet the sport specialist identified concern about poor practice: ‘I think on the whole, PE teachers have improved an incredible amount since I was at school but there are still pockets of pretty poor practice out there’. The importance of the professional relationship with schools was identified as crucial to the development of the pre-service teachers’ professional qualities.

The health specialist identified the development of professional qualities such as being knowledgeable in content areas and flexible so that teaching and approaches were relevant to students: ‘My belief [is] that they really need to be able to be flexible, know their content area’. The health specialists also referred to the need for sensitivity and awareness when teaching health education both to students and with their families: ‘that’s part of being a professional educator is that you are sensitive to students’ needs, families’ needs, how they fit in’. The health specialist emphasised the importance of lifelong learning, encouraging the pre-service teachers to continue to develop professionally, engaging with others in the health field and maintain and developing networks: ‘Keep in contact with the professional networks, learn change, adapt, do stuff well … then in the down time that’s when you go and you search for things. You find out, you make a network.’

For the sports scientist, professionalism came with the position whether it was as a coach, teacher or in the case of pre-service teachers, both roles: ‘I don’t know a Phys Ed
teacher that can get through a career without having to coach a school team, so in my mind, a Phys Ed teacher is a coach’. You don’t need a whistle’ Being prepared to do extracurricular work was also considered somewhat unique to the position” ‘There are not that many maths and English teachers and Spanish teachers that put their hands up and go ‘yeah, I’ll take the team to Wagga Wagga for the weekend”. Other aspects included attention to occupational health and safety (OHS) issues and showing a genuine interest in students and their teaching area: ‘I think once they start teaching, if they’re interested and good in their teaching, then they will want to interest their students and if they’re lazy teachers they will just deliver the minimum information and you regurgitate it back … which I think is pretty boring’.

8.3.4 The strong grounding in pedagogy.

Favoured pedagogical approaches identified by the sports specialist included the importance of modelling, demonstrating and performance in the degree, rather than just listening particularly in teaching of sports skills: ‘the importance of demonstration … recognising quality performance and demonstrating quality performance is really important’. Modelling of professional practice and inclusive attitudes was also discussed as pedagogical in nature and as important in quality teacher practice: ‘I always model respect for all pre-service teachers and respect for opinions and needs and those sorts of things. I’ll point out people’s strengths and I would never talk negatively about students or staff for that matter.’ The sport specialist also valued pre-service teachers’ learning how to plan, organise, evaluate and reflect on their lessons: ‘Those teaching skills, which help them plan, help them tailor activities to the needs of students, help them evaluate and reflect on their own experiences when they teach … good routine in terms of planning a lesson and a good routine in terms of implementing the lesson’. The sport specialists emphasised the importance of reflection and the ability to evaluate their own and others’ teaching as an
important pedagogical skill. The sport specialist also discussed teaching pre-service teachers how to think, how to work in teams and how to work cooperatively with other pre-service teachers:

They break the lesson into parts and they make sure that they’ve got the parts covered in terms of the different domains that we’re trying to work in, like a motor cognitive and effective domains so they make the kids think; they make the kids do the practical skills and they make the kids work with each other in sort of cooperative teams and the kids are aware and look after each other’s needs.

The health specialist identified pedagogical concepts or ideals needed to be a successful health teacher. These included using a range of approaches: ‘a range of pedagogy to use, depending on different situations in a classroom, different types of students and different types of content’. Being able to adapt and modify to suit individuals and cohorts and being flexible to students’ needs was viewed as necessary: ‘a different approach to teaching to get it across in a meaningful way to students, especially with adolescents and their different life stories … more inclusive and demonstrated a broader perspective’ and ‘to be discerning about what you teach and when you teach it and how you might teach it’. The health specialist stated that there is ‘a range of pedagogy to use, depending on different situations in a classroom, ‘you really need to be a very good, a very flexible adaptable teacher on the ground and on your feet’.

The health specialist suggested that it is important to be flexible and adaptive and to use a student-centred approach. The ability to scaffold students’ learning by unpacking information was identified as a pedagogical approach in teaching. The health specialist emphasised the importance of developing the ability to demonstrate a range of different pedagogical approaches in a single learning situation: ‘you’ll draw on eclectic styles in five minutes and then you’ll launch in to a more directive style and then you’ll move into a
more collaborative productive pedagogy … in 40 minutes you might use four different pedagogical approaches’. Further, it was stated that the pre-service teachers develop ‘skills of delivering information, but also [are] able to unpack information and experiences … to help school students … to also unpack’.

The health specialist focused on developing communication skills, particularly leading and generating discussions in the classrooms, and skills in debriefing. The health specialist encouraged the pre-service teachers to share and learn from each other’s teaching styles: ‘I am modelling a lesson plan … and I always have the productive pedagogy stuff … I say you are going to be teachers so we are going to start doing this … taking turns to present because teachers team teach … share your teaching style with someone else’. The health specialist wanted the pre-service teachers to develop techniques for managing, manipulating discussion and disclosures and to formulate skills in linking PE to health ‘how you stop conversations, how you manipulate a discussion with a group of teenagers. How you avoid them disclosing stuff in public.’

The health specialist valued clarification and building on pre-service teachers’ owns stories were seen as an important pedagogical skill: ‘the pre-service teachers always have stories and they always have questions. What do I do here? What if this happens? What do I do when … it’s a lot of value clarification … where they are coming from, their own experiences … I draw on that.’

They encouraged pre-service teacher to develop skills in research, as a way of scaffolding assessment for students, ‘…research skills, their reporting skills and their understanding of things and how those things were put together.’ They encouraged pre-service teacher to develop skills in modelling and modifying lessons to catering for different groups of student s, ‘…model some of the activities they can use in schools with different age groups…how you might adapt or change…to suit differ age groups and
things.’ Pre-service teachers were encouraged to practice group work and individual work in microteaching exercises: ‘a part of learning is learning how to learn, how to decipher, how to interpret … how to discuss and how to link things’.

Problem-based and enquiry learning skills was identified as important in developing creative, divergent thinking skills that can be used to modify and adapt to suit the situation: ‘coach Gennadi Touretski watched fish and frogs and went there’s a better way to swim and went outside the box. … Alex Popov holds world records for 14 years … and that was because his coach was able to take knowledge that he had and put it into another area and expand on it to go outside the box to get new territory to make a difference … you’ve got to know it well enough to build on it’.

This was seen a particularly important in teaching sport skills and demonstrated the pre-service teachers’ ability to link theory to practice: ‘teach them one or two basic skills just so they can get started and then play a game … it will fall apart very quickly. So you stop them and you go okay. Well this didn’t work and if we want to play the game we have to solve this problem … solve the problem and put them back in the game again.’

Pre-service teachers were encouraged to use a variety of techniques suited to the situation, cohort or the content being taught. Quality pedagogy involved developing skills such as transfer learning, practice distribution, memory, modelling and demonstrating: ‘we talk about things like transfer learning. We talk about practice distributions. We talk about motivation and how to store things in memory and how to get attention and where to put your arousal level for certain skills … I like them to take a skill or a small group of skills … use the various techniques’.

The sports scientist stressed the need for pre-service teachers to develop skills in independent learning and lifelong learning. There was a recognised need by the sports
Scientist to generate interest, motivation and thinking skills: ‘they learned the best was when they were tested … a blind practical … that they had an independent learning chance, so that when they actually go the information they were interested and excited about … those memories and that enjoyment wills say to them they’re actually doing the teaching’.

The sports scientist used peer teaching and required pre-service teachers to have a credible level of knowledge in sport science. The rest, according to the sports scientist depended on the type of personality that could engage and motivate schools students: ‘they have at least a creditable knowledge of information about anatomy and physiology … the rest is they’ve got a bubbly, sparkly personality that will make their teaching grab the kids … and get them involved … tied in … so I really look for that bubbly personality as being really, really important’.

The sports scientist noted that the approach of using ‘stories’ was an important pedagogical approach suited to the learning style of the PDHPE pre-service teachers:

And I have noticed that the biggest complaint I get with the Phys Ed-ers [sic] is when they go out on prac teaching and they miss the lecturers … and the most common thing I hear is yeah, well you know you put the notes up on web and stuff, but you don’t put up any of the stories.

8.3.5 Content knowledge.

The sports specialist identified the need to have pre-service teachers to work from a solid content basis first, then focus on specific teaching skills. This developmental model was identified as being the most effective in terms of quality teachers: ‘working from the content of the first two years we really start to hone in on what the actual knowledge of teaching is about and the things that make people effective and quality teachers’.
emphasis in the sports units was on rules, techniques and strategies and having a thorough practical understanding of a broad range of sports and physical activities that the pre-service teacher will be required to teach in schools: ‘a good understanding of the all the activities that they’re likely to be teaching … some practice, physical practice…we try to get them to know rules and techniques and coaching strategies with regard to sport, gym and dance’. One of the strengths was the practical nature and hands-on approach to the content: ‘the strength of the units is that’s it’s about the actual practical task of teaching health or teaching PE. Therefore, there’s not a lot of theory; the only theory is the theory on how to be effective at getting results when you do it.’

A pressing issue was the time constraint, establishing a balance in the course in terms of content and academic and practical units: ‘there is a balance with fitting everything into their course … a balance between the academic and the practical as well’. The health specialist identified the first couple of units as being very content driven, providing a foundation upon which pre-service teachers could then build. This scaffolding was seen as important and sequential: ‘scaffolding and learning, that’s what we’re doing … if you go outside that order … this one first then that one there … you stuff up the order’.

The tutorial program was structured to encourage pre-service teachers to participate in value clarification and exploration of the content: ‘the lecture material is quite content driven and based on the textbook, then the tutorials … value clarification and exploring content’. The teacher educators believed that some pre-service teachers did not see the health content as being important, and viewed the content as something they could obtain as they needed in teaching: ‘they could get it on the web. You just Google it next time, it’s not a problem, you read it in magazines, it’s always there, it’s always accessible.’ The linking of educational content (curriculum/syllabus), to specific health content was
considered pivotal: ‘looking at curriculum and planning units of work and how to enact the curricula material, the stuff you’re expected to teach’.

The health specialist stressed the importance of creating links for the pre-service teachers between the content in PE and the content in health, particularly as there tended to be more of a focus in school on sport than health: ‘I do make the point of getting them to dig out how their health classes actually relate to the PE classes’. It was important to challenge pre-service teachers’ knowledge and understanding around sensitive health areas, particularly in the area of gender stereotypes: ‘challenging their knowledge and understandings in content areas; especially like drugs, sex and sexual health … get them to analyse their own stereotypes’.

Content in the health units needed to be broad and related to the pre-service teachers’ experiences. This was seen as vital for pre-service teacher engagement and for creating links to other aspects of their course: ‘they need to have a broad understanding of social health … that ability to then bring it around and link directly back to lectures and their course material’.

Managing assessment of the pre-service teacher in the time available was challenging especially given the need to assess content as well as attitudes and understandings in health: ‘I just can’t see educationally how … two pieces of assessment is sufficient … you’ve got four different types of … knowledge, skills, attitudes and understandings for teacher qualities … it’s just not appropriate modelling of assessment processes’. One of the strengths of the course was having the final health unit delivered by community health specialists. This partnership was important in developing a community health focus and providing pre-service teachers with evidence-based content: ‘the community education lecturers have got a real strength—they’re community health focus,
they’ve got heaps of great research and evidence-based stuff that we can apply to a school setting’.

The sports science content was biomedical and this provided a challenge in terms of application to practical situations. The importance of a strong content foundation and strong conceptual base upon which pre-service teachers could build knowledge and apply in different situations was important: ‘I want to lay down a foundation that the biomechanics, the physiology of exercise, the motor control, the psychology … the sports medicine … their knowledge base to be a strong enough knowledge base that other areas of concepts, ideas can be laid on top without the foundation collapsing’. The sport scientist identified the foundation units of anatomy and physiology as being the main content focus:

My really big goal I guess, anatomy and physiology…the main skill that I am always after is if you’ve heard about it, you should be able to look it up and refresh it.

The sports scientist identified the need for pre-service teachers to develop a willingness to ask for help or advice in terms of content knowledge and to develop ability to take content and modify it or adapt or expand for new situations: ‘she had all the knowledge, but she was afraid to call for help, afraid to ask for help, afraid to tell anybody to do anything’. The sports scientist suggested that a good knowledge base would enable pre-service teachers to be responsive to new ideas and changes in sport. The ability to be progressive or think innovatively was seen as particularly important for future teachers: ‘I want them to have a strong enough conceptual base that they can broaden … you can then apply the principles … confident enough that you can take your skills and you can go outside the box’.
Challenges for the sports scientist included large numbers of pre-service teachers that inhibited practical work and the heavy focus on sport skills in the schools in contrast to sport science:

The big problem in my program is there are too many of them — they spend more time sitting listening to me then they spend with me out there doing. And that is a huge constraint.

The sport scientist suggested that there was often not enough time for pre-service teachers to process new skills and to assess whether pre-service teachers have acquired them: ‘the constraints are that perhaps there is not enough time to develop that processing skill, or to test they actually have it’. The sport scientist identified that unless a good understanding of key concepts in the content was acquired as a graduate teacher their duty of care would be lacking: ‘if they don’t have a good concept, then their duty of care is going to be very, very lacking.’

8.3.6 Networking, lifelong learning and creative thinking.

The sports specialist referred to the importance of working as a team member with other PE staff, sharing teaching responsibilities and areas of expertise and confidence, but noted that ‘if a colleague is really good … and has a really fantastic [approach that] engages them, let them do it and you trade it. You might go and do something else in exchange with them.’ Mentoring and sharing of knowledge and practice were seen as an important role, and a contrast between school and university: ‘they get mentoring in a different way in the schools … the mentoring teachers share their secrets and their views and perhaps their dismay with university’.

The health specialist had a strong emphasis on being a learner both as a pre-service teacher and as a professional teacher: ‘then in the down time that’s when you go and search
for things. You find out, you make a network, you go to the relevant professional
association … and you read the journals.’ This belief was strongly influenced by their own
teaching experiences and the need to be flexible, prepared to take on new learning
challenges and to do them well. For the health specialist, lifelong learning included setting
up and establishing professional networks, as well as reading and researching: ‘keep in
contact with the professional networks, learn, change, adapt, and do stuff well. Whatever
you do try and do it well.’

The sports scientist wanted to develop pre-service teachers’ ability to problem
solve, and to be divergent, creative thinkers. The sport scientist felt this was necessary to
engage students and be responsive to changes in sport and sport science:

I give a lecture very early on in motor control about left brain and right brain and
the fact that we tend to be so logical and we really do need to get a lot more
creative … encourage them to start the game, when things fall apart, tidy up a
couple of skills, put it back together … we need to modify this. What should we
take out? Where shall we change the rule?

8.4 The Teacher Educators Themes and Course Outcomes

When exploring the teacher educators’ perceptions on teacher qualities that they
value and aspire to develop in the pre-service teachers, it is also useful to consider
correlations with formal course outcomes and syllabi. It is important to note whether
similar aspirations, such as leadership, professionalism, authentic and credible practice,
lifelong learning, values, philosophy development and networking are evident in this
material. What is interesting to note is that course documentation (outcomes and syllabi)
tends to focus on knowledge outcomes with some references to teaching, teaching practice
and professional values. When referring to teaching or teaching pedagogy, the syllabi or
outcomes tend to be theoretical in nature, listing content and identifying higher-order learning, for example, ‘pre-service teachers will be required to participate in practical and theoretical workshops to develop the necessary skills to be able to demonstrate, analyse and create learning programs for secondary school pre-service teachers’ (University of Canberra, Faculty of Education Handbook, 2007). However, there was reference to developing skills in differentiation: ‘pre-service teachers will observe and practice skills in planning individualised training programs to improve skills and learn to modify their teaching practice and content to include special interest groups or students with special needs’. Some of the course material referenced the school context and schools syllabus as well as the role of the teacher, for example, ‘the foundation skills for participation in these activities and an understanding of current modes of teaching, and state and territory curriculum requirements’.

Working collaboratively in authentic settings and the role of the teacher in the broader school community was also mentioned in the syllabi: ‘pre-service teachers will gain practical experience in tasks relating to sports administration and outdoor leadership under the … working with school staff … with professional and experiential links to be created between pre-service teachers and local secondary schools’. In addition to references made about professionalism, attitudinal, holistic learning was mentioned, for example, ‘pre-service teachers will have developed skills that will enable them to build programs that enhance resilience, self-esteem and promote the general well-being of students within the school community’.

8.5 Conclusion

The data from the teacher educator interviews provided a valuable frame of reference from which to view the perceptions of the pre-service teachers on the teacher qualities viewed as most important. The shared themes that emerged from the teacher
educators’ interviews included development of a personal philosophy and values, the importance of authentic experience and credibility as a teacher, professionalism, pedagogy and knowledge. Many of the observations highlighted by the teacher educators are supported by the literature on teacher development and teacher education. Each of the teacher educators had points of difference that were linked to their own personal beliefs systems. For the sports specialist, it was the importance of networking and being a team player, the need to have skills and a desire to be a lifelong learner. For the health specialist and the sports scientist, the importance of creative divergent thinking skills was emphasised. Each of the teacher educators was responsible for achievements of formal outcomes for their courses, but what was evident in the interviews was the emphasis placed upon the personal aspirations that each of the educators had for the pre-service teachers.

Formal syllabi and outcomes in the units delivered by the teacher educators did refer to some aspects of the aspirational learning identified by the teacher educators; however, they tended to be limited to specific units and theoretical in nature. Not all units referred to teaching and the teaching context and most references made tended to be more pedagogical in nature rather than professional or holistic. This suggests that the professional ethical values of teacher education are personal and subjective in nature and influence by the personal histories and experiences of the individual academics.

In the development of the pre-service teachers’ personal philosophy and values about teaching, personal characteristics portrayed by the pre-service teachers was considered important. The teacher educators recognised interpersonal and professional qualities as a strength of the pre-service teachers in the PDHPE education course. Each of the interviewees used stories and narratives from their own experience to illustrate the personal philosophies and values that were most important to them. These perspectives were also reflected in the philosophical framework they developed for their pre-service
teacher cohorts. Teacher educators discussed the need for pre-service teachers to have confidence and networking skills, and the ability to encourage pre-service teachers to listen, follow and be able to engage with peers was discussed. They focused on confidence and the ability to deal with new situations, to show ‘professional responsibility, a bit of loudness, and a bubbly personality’.

Authentic and credible experiences were centred on best practice, professional, real practice and experiences. Specific experiences such as professional experience and Gala Days were highlighted as being opportunities for students to engage in real professional practice. Episodic memory and visual cues were identified as the most authentic and relevant pedagogical practices suited to how the pre-service teacher learnt best. Activities and approaches that engaged pre-service teachers were highlighted as being authentic and credible. The articulation of content and approaches were seen as a credible approach that teacher educators modelled to the pre-service teachers.

There was recognition by all three teacher educators of the importance pre-service teachers being engaging individuals that are seen as professionals in the broader school community. Being able to encourage young people to do physical activity, to ignite their passion or ‘love of sport’, to teach them ‘solid skills’ and be a positive presence in the school were highly valued. They recognised that pre-service teachers responded to hands on, practical opportunities and were generally able to relate well to young people.

The development of professional qualities was viewed as a developmental process with strong ties to methodology and professional experience units. There was a recognised need to develop professional capacity in linking theory to actual practice. Developing relationships with schools and the need to be a lifelong learner were identified. Skills in networking were seen as desirable professional capabilities. A professional role as a coach in addition to the role of classroom teacher was valued. Professionalism was also seen as
the willingness of pre-service teachers to engage in extracurricular activities and the demonstration of genuine interest in students and their subject areas.

Pedagogical qualities that were seen as desirable by the sports scientist included lesson, unit planning and implementation, and the ability to evaluate and reflect on teaching. There was an identified need to teach and model to pre-service teachers how to develop routines and to how to think quickly and work cooperatively as part of team. The health specialist identified skills in being adaptive and being able to modify and demonstrate a range of pedagogical approaches to suit the situation. Having a student-centred approach and skills in leading, generating, debriefing and unpacking discussions were seen as important pedagogical skills in health education.

For the sports scientist, problem-based and enquiry learning encourages the pre-service teachers to be creative, divergent thinking, problem solvers. The sports scientist used the technique of peer teaching and encouraged independent learning. Skills in lifelong learning were seen as important in generating motivation and thinking skills. All of the teacher educators identified the need to build a solid content foundation. For the health specialist, this was needed to explore values, attitudes and understandings in health. While for the other teacher educators, it was about the successful and safe application of the knowledge to practical situations. The sports scientist particularly wanted the pre-service teachers’ to think innovatively and become progressive with their practice in schools. For the sports scientist and the sports specialist, one of the most important components of teaching the content was the practical, nature of the subject. For the health scientist, the strength was in being able to relate the content to the pre-service teachers’ own lives.

The findings from the teacher educator interviews provide a useful lens for the research on pre-service teachers’ own perceptions, which will be discussed in Chapter 9. Connecting the overlapping themes from the teacher educators to the pre-service data
offers the opportunity to explore the potential strengths, similarities, differences and
tensions from the aligned and contrasting perceptions; it provides credibility and the
transferability of key constructs and conclusions.
Chapter 9: Teacher Qualities: A New Perspective

9.1 Introduction

This chapter considers the pre-service teachers perceptions of teacher qualities. The 6 factors identified in the factor analysis can be summarised under three broad areas: knowledge; pedagogy; and professional and interpersonal qualities. Then the impacts, if any, of demographic variables on these perceptions across course years is considered, as is the impact of course year (taken as Years 1 and 2, Years 3 and 4).

9.2 Justification of Methodology

The mixed methodology was seen as a way of providing a broader understanding of the research problem, credibility to the research findings and transferability of the key conclusion.

The results from the survey instrument were connected with the quantitative data from the original focus groups, which served to provide a more meaningful understanding to the pre-service teachers’ responses. The qualitative teacher educators’ interviews provided an overarching perspective from which to view the results from both the pre-service teachers’ focus groups and survey instrument and assisted in the clarification of subtleties and transferability of the findings. To ensure validity of the results, issues of quantitative and qualitative methodology were addressed. These included using a large sample size for the quantitative and a smaller sample size for the qualitative analysis; using different individuals for the teacher interviews; and using the same individuals for the quantitative trial and the pre- and post-survey instrument (Creswell & Plano Clark, 2007).
As a group, the participants they appeared quite homogenous with the majority coming from similar cultural backgrounds and age groups. There was an equal balance of males at Time 1 (45.7 per cent) and at Time 2 (46.5 per cent), and females at Time 1 (53.3 per cent) and at Time 2 (53.5 per cent) in the course. Anecdotally, graduate teachers were viewed as successful teachers in the school systems. The course itself was well established and remained consistent over the four years of the study. The course was popular and the consequent demand meant that students tended to be high achieving, successful students. The broad homogeneity of the study group provided a degree of consistency for the study and was the main reason for using this group.

This chapter provides an overview of the quantitative data collected from pre-service teachers’ perceptions of teacher qualities. The quantitative data have been connected to the qualitative data from focus groups and will be explored in Chapters 9, 10 and 11. The teacher educator interviews are analysed and discussed in Chapter 12, providing a lens through which to interpret the findings of the pre-service teachers. The discussion section of this study connects themes from the quantitative and qualitative datasets to establish the discussion ideas. The discussion in Chapters 9 through to 12 covers the following three key sections: the pre-service teachers’ perceptions of teacher qualities; the perceptions of the teacher educators on desirable teacher qualities; and external drivers and the pre-service teachers’ perceptions of teacher qualities.

9.3 About the Pre-service Teachers (Factor Analysis)

The factor analysis was useful in reducing the large number of variables in the dataset to a smaller set of underlying factors that summarise the essential information on students’ perceptions of teacher qualities (see Appendix K). It provided a reliable summary of the structure of the variables that occurred across the quantitative dataset (Coakes et al., 2009). In the discussion, the factors are explored in connection to the qualitative data.
collected from the two focus groups. There were six distinct factors or components identified as the pre-service teachers’ views on teacher qualities. These factors represent the pre-service teachers’ views across the four years at Time 1 and are labelled as follows:

1. professional and interpersonal qualities
2. Pedagogical approaches: students/resource-centred
3. content knowledge
4. pedagogical professional practice
5. teacher knowledge
6. use of textbooks and activity sheets.

The discussion of the underlying factors is centred on three broad areas of construct: interpersonal and professional qualities, knowledge qualities and pedagogical qualities.

9.3.1 Professional and interpersonal qualities.

The first factor identified in the factor analysis was views on professional and interpersonal characteristics. For the pre-service teachers, this included good communication, becoming a lifelong learner, being a positive member of staff, engaging professional teacher roles, being collaborative and a reflective practitioner. Pre-service teachers identified a positive relationship between interpersonal or professional qualities and pedagogical approaches, and a negative relationship between interpersonal or professional qualities, teacher knowledge and content knowledge (see Table 6.2). The results suggest that that for the participants in this study, having effective interpersonal skills was important in developing effective pedagogical skills, hence the positive correlation. It is interesting to note that pre-service teachers did not necessarily view the
same relationship between interpersonal and professional qualities and the knowledge areas.

Opinion is divided on the extent of the influence that interpersonal and professional qualities play in contributing to teacher effectiveness. However, there is agreement in current research that interpersonal and professional qualities are important factors for teachers and that they contribute to teacher effectiveness. Established research supports the research findings on the value of interpersonal and professional qualities, suggesting that teacher effectiveness is linked to a combination of professional characteristics, classroom climate and teaching skills (McBer, 2000). Similarly, effective teachers place a high value on personal growth, are lifelong learners and include an element of care and respect in their teaching (Brighouse & Woods, 2000; Collinson et al., 1999). As such, it is plausible to imply that interpersonal skills and enthusiasm for teaching can directly influence teacher effectiveness and student outcomes (Darling-Hammond et al., 2006b).

In the early years of the degree (FG1), Years 1 and 2 had a definite view on the role of communication and interpersonal qualities for effective teacher practice. They argued that ‘effective teachers get involved, actually talk to the group’. Providing attention to individuals was important in Years 1 and 2, based on their own personal learning experiences: ‘the teacher got me to go down the back and give them attention and they ended up being one of the best in the class. Giving them attention it makes them know that they belong.’ Engaging students’ interests was important and viewed as necessary for effective teaching practice in this group: ‘even if you have a quiet word with them find out what subjects they are interested in try to relate to them and their interests’. The pre-service teachers believed in the importance of developing interpersonal and professional qualities for student engagement; however, at this stage, they still questioned the mechanisms of the process.
In comparison, in the later years (Years 3 and 4), views were more student-centric, and their responses revealed a sense of collaboration, maturity and confidence with their interpersonal, professional skills and their pedagogical practice. Pre-service teachers in this group believed:

Collaborative more relaxed approach, works a lot better than just saying you will do as I say—you will do this and this, I show how it is going to be and they are not even allowed to interact—total silence … you don’t need to be brilliant just a desire to teach—interest and passion (FG2).

Years 3 and 4 felt that effective teachers needed to show that they had an interest, passion in teaching and could relate to students. They valued knowledge; however, they believed that knowledge alone was not enough to be an effective teacher, effective teaching involved, ‘finding students’ interests, knowledge they enjoy, and developing rapport’. For the pre-service teachers in the later years (FG2), this involved developing effective interpersonal and professional relationships that engaged the learner.

Participants across all years discussed the importance of teachers having interpersonal and professional qualities similar to those outlined by Moyles (2007). These include: empathy, respect, positive outlook, attitude, approachability and sense of humour. Professional attributes also included organisation skills and developing professional relationships.

For the pre-service teachers in the beginning years, personal attributes involved relating to students and developing the ability to ‘learn from the students’. They wanted ‘the ability to relate to kids say[sic]—if the teacher has no interest in what you do then you will not show an interest in what they are teaching you’. For this group, being relevant was essential to students engagement; they believed that ‘teachers need to be positive,
motivated, have fun, make fools of themselves ... you have to show you are prepared to give it a try’. They wanted to be ‘sensitive to students’ needs, and encourage confidence and success, to be fair’. Using humour and developing positive relationships was seen as a way to build connections with students, gain their trust, provide attention and build friendships. What was distinct for Years 1 and 2 was that interpersonal and professional qualities involved ‘learning from the students’, suggesting that in the early years of the degree, the pre-service teachers were basing their ideas on their own schooling experiences, rather than what they were learning at university and as such, tended to be more teacher-centred in their thinking.

The distinction for Years 3 and 4 was that interpersonal and professional qualities were more collaborative, student-centred and less teacher directed compared to the earlier beliefs in Years 1 and 2, where teaching was still very much about the pre-service teachers’ personal style. This suggests a deepening in understanding of the importance of interpersonal and professional teacher qualities as students reached the end of their degree. Participants in the later years identified interpersonal and professional teacher qualities as the ability to be adaptive and inclusive, ‘show an interest, respect opinions, talk and listen’. They wanted to motivate and engage students, to show students that they were a learner. The pre-service teachers in the later years wanted to earn students’ respect, ‘speak to them, not at them, speak their language, laugh with them and be empathetic’. This group felt it was necessary to have a genuine desire to teach and an interest in what is being taught. Being able to speak the language of the students was identified as important in building rapport and showing an interest in the students. For some pre-service teachers, interpersonal and professional qualities included working with young people to make a difference in their lives: ‘It’s quite corny but good teachers will often say I make a difference or I made a difference for one kid’.
The view that teaching is more than technical expertise and that good teachers’ are passionate and connected to their students and have effective interpersonal and professional qualities is reinforced by Hargreaves (1998) who states that:

Good teaching is charged with positive emotion. It is not just a matter of knowing one’s subject being efficient having the correct competences, or learning all the right techniques. Good teachers are not just well oiled machines. They are emotional, passionate, beings who connect with their students and fill their work and their classes with pleasure, creativity, challenges and joy. (p. 834)

What was important to the pre-service teachers, particularly in Years 3 and 4, was the idea that good teachers had effective pedagogical skills and emotional commitment, as well as an ability to make judgements and build relationships. Similarly, both focus groups identified the value in ethical and emotional commitments. Effective teachers they believed needed to understand their students and make their teaching relevant. In making teaching relevant, the pre-service teachers valued particular personal attributes such as confidence, being energetic and being relaxed. Participants believed that these personal attributes contributed to the classroom climate and demonstrated their passion and interest in their students and their subject area. It was this passion and interest that the pre-service teachers believed helped them to gain trust and establish connections with their students.

9.3.2 Pedagogical qualities.

The second and fourth factors identified in the factor analysis included the two categories concerned with pedagogy: views on pedagogical approaches: student and resource-centred and views on pedagogical professional practice. The sixth factor, also a pedagogical approach, is views on the use of textbooks and activity sheets. Limited items emerged from the data for the sixth factor; however, it did appear as a separate category in
the factor analysis. For the purpose of this study, it will be referred to in this section. For participants, pedagogical approaches included instructional techniques (for example, discussion and problems solving), for PPP, it involved the structure of interactions (for example, routines, policies, procedures and practices) and for the sixth factor, it listed the use of textbooks and activity sheets. The two pedagogy factors labelled views on pedagogical approaches and views on pedagogical professional practice are defined as follows.

Pedagogical approaches are skills or practices that are instructional techniques. The pedagogical approaches were student-centred strategies or resource-centred strategies, such as group work, practical work, demonstrations and teacher direct discussions.

PPP is a combination of pedagogical ideas loosely called the art of teaching (Gage, 1978). This art of teaching includes, firstly understanding and knowledge of specific pedagogical approaches and strategies deemed most appropriate to specific subject content (Ball, 1993; Grossman et al., 1989; Wineburg & Wilson, 1998). Shulman (1987) refers to this as PCK. He describes this as knowledge that is distinct from general teaching methods, suggesting that PCK is the cognitive roadmap that guides pedagogy. Korthagen et al. (2001) describe PPP as propositional knowledge, consisting of general assertions that apply to different situations and problems in teacher education. The second subset of PPP is what the pre-service teachers refer to as professional and interpersonal pedagogical decision making. This process involves selecting the most appropriate interpersonal pedagogical approach to suit the lesson context. This refers to interpersonal and professional decisions, knowledge, dialogue or interpersonal approaches deemed most appropriate to the teaching situation. Pedagogical interpersonal knowledge (PIK) was viewed as different to PCK, aligning more with Korthagen et al.’s (2001) ideas of propositional knowledge.
Data produced from the focus groups support the different categories of pedagogy. The pre-service teachers in all years referred to teacher approaches (pedagogical approaches) that they believed were most effective: ‘I really enjoyed it when teachers used tactile methods—using models, pulling them apart, working with it, real like manipulating stuff’. The focus groups also highlighted the PPP that they believed were needed for effective pedagogy: ‘It’s about participation, I am coming down to their level and bringing them up to mine so it’s a level playing field’. The pre-service teachers in all years believed that they would learn pedagogy on the job (professional experience), although they did find the presentation and planning practice in the coursework useful.

The difference between Years 1 and 2, and Years 3 and 4 was that in the initial years the pre-service teachers discussed ‘how’ to learn and ‘what’ to learn in terms of pedagogy, whereas in the later years, they discussed the ‘use’ of pedagogical approaches in their classes. Professional pedagogical practices in Years 1 and 2 were limited to the context of their own schooling experiences:

A student-centred approach, involving students, get them active and involved [and] the ability to teach what you know was important being able to explain and demonstrate successfully … well some teachers use approaches and materials that are so out-dated it’s not relevant. (FG1)

In contrast, for pre-service teachers in the later years, pedagogy was based upon their own teaching experiences as pre-service teachers: ‘I think you are more creative as you move either indoors or outdoors or in a classroom, because the environment changes oval, gym, classroom requires different approaches’.

Discussion relating to pedagogy practices can be categorised into the different areas of pedagogical approaches and PPP. The majority of the discussion around pedagogy in the
later years was centred on PPP, pre-service teachers refer to knowledge that underpins the selection of subject-specific teaching strategies (PCK): ‘with PE I suppose you could say that it’s not like something like Maths or English where there is a certain way of doing things. It’s broader … so you need a range of strategies and approaches’.

An example of the second category, Pedagogical Interpersonal Knowledge (PIK), is when the pre-service teachers referred to interpersonal qualities most suited to teaching a subject area or specific group of students. For example, it was important in Years 3 and 4 to be ‘willing to learn, be open minded, different people have different styles’. Participants in the later years referred to their own experience in the teaching role, suggesting that:

Different teachers have different styles and you have to cater so that students used to a particular style of teaching are catered too, so they get the most out of the lesson you need to adapt to different situations. (FG2)

Pedagogical interpersonal knowledge was discussed. For example, there was the belief that ‘effective teachers get involved’, engage the students, find their interests and know how to be supportive and encouraging. Garritz (2010) suggests that Shulman’s (1987) concept of PCK should be extended to include the component of emotional understanding. Such components included: emotional beliefs, goal orientation beliefs, interests and values beliefs. Garritz’s (2010) emotional understandings support the pre-service teachers’ belief in the link between effective pedagogical approaches and the teachers’ interpersonal characteristics, which they believe influences decision making and impacts on student engagement. The pre-service teachers want to be relevant, understand students, speak their language and show interest in them as individuals; they want to engage with the art of teaching. Professional language, learning from the expertise of colleagues, reflecting on teaching, and creating links between theory and practice is referred to as ‘congruent teaching’ (Swennen et al., 2008, p.351). The idea of congruent
teaching can be considered in relation to the language of the student, which was identified by the pre-service teachers as important. In Years 3 and 4 pre-service teachers wanted to motivate their students. This they believed they could do by understanding the language of the students, enabling them to provide creative and innovative ways to engage students in learning. The belief that teaching can be both an art and science is outlined by Gage (1978):

As a practical art teaching must be recognised as a process that calls for intuition, creativity, improvisation and expressiveness; a process that leaves room for departures from what is implied by rules, formulas and algorithms. This need for artistry, is in the choice and use of motivational devices, clarifying definitions and examples, pace, redundancy and the like. (p. 15)

The analogy of teaching as both an art and science supports the different categories of pedagogy, suggesting that teachers need to acquire interpersonal skills such as judgement, intuition and insight when engaged in pedagogical practices.

The sixth and final pedagogical factor, identified by the pre-service teachers, use of textbooks and activity sheets appeared separated from the pedagogical categories in the factor analysis. This variation is interesting to note and can be linked to the subject area of PDHPE, which places greater emphasis on practical modelling and demonstration than on textbooks or activity sheets. However, the pre-service teachers in this study were required to be qualified in a second teaching area, so even though it was not a preferred approach for the physical development of PDHPE, it was still considered useful in their second teaching area or in the theory area of health and personal development. Therefore, even though pre-service teachers were more hands-on and practical in terms of pedagogical style, they did not dismiss the idea of using textbooks and activity sheets as a pedagogical approach: ‘you still need to use some old style traditional methods—text notes, lectures’.
However, they did not necessarily view this as a technique they would rely on in teaching: ‘I remember teaching social science, I tried to make it as interactive as possible rather than just sit there working out of a textbook because students don’t respond’. The pre-service teachers were confident that they could take the hands-on practical approach to teaching PDHPE and use this style effectively in other teaching areas: ‘often PE teachers take good quality PE teaching into other teaching areas … he is probably the best maths teacher in that school just because the kids love him’.

The pre-service teachers believed that effective pedagogy was very much linked to interpersonal and professional qualities and approaches, initially of the teacher and later on as members of a collaborative team working in the classroom.

### 9.3.3 Knowledge qualities.

The third and fifth factors identified in the factor analysis were the two knowledge areas: **views on content knowledge** and **views on teacher knowledge**. For pre-service teachers, **content knowledge** included areas such as social health, teaching and learning, curriculum, sport skills and student engagement. **Teacher knowledge** included theories of education and learning, behaviour management, inclusive education, instructional techniques, sport science and learning theory. The two content areas will be defined as follows.

Content knowledge is specific knowledge prescribed in the PDHPE teacher education degree. This includes social health, sport science, sports skills, teaching and learning, curriculum and student engagement.

Teacher knowledge is defined in this study as the knowledge and understanding needed to be effective in teaching and in the delivery of the social health, sport science and sports skills components of the program. This included knowledge and understanding on
the theories of education and learning, of behaviour management, inclusive education and the knowledge of learning theory.

The two knowledge areas was identified in the data. Content knowledge is seen as foundational knowledge or information for teaching PDHPE, for example, social health issues, sports skills and curriculum. In comparison, teacher knowledge was seen as information specific to the profession of teaching, such as behaviour management, inclusive education and learning theories. Consistent with the factors identified in the quantitative data, the focus groups discussed and distinguished both content knowledge and teacher knowledge.

Students in all years saw the value of being an expert in content knowledge and Years 1 and 2 referred to the importance of being knowledgeable as a PDHPE teacher: ‘learning about different sports at uni is good before you go out. Having knowledge about sports is important.’ In contrast, Years 3 and 4 believed an expert involved having deep understanding and learning in their subject area: ‘knowing and understanding more than superficial.’ The factor analysis sorted the knowledge areas into two disconnected sections of learning. This division was also apparent in the focus groups, with pre-service teachers placing a higher importance on content in the beginning years. However, both knowledge areas were valued by the pre-service teachers, if not always equally or initially. Hurwitz and Hurwitz (2005) refer to the art of teaching as something more than content knowledge. This art or teacher knowledge became more important for the pre-service teachers in the later years of the course.

Participants in the beginning years discussed the importance of having a strong knowledge base particularly in sport skills, sport science and social health: ‘as you go through uni you get a knowledge base’. Having the content knowledge was seen as part of the teachers’ power in the classroom: ‘you don’t want to be in a position where the kids
know more than you’. French and Raven (1960) refer to this as expert power: having the knowledge and skill that someone else requires.

The Years 3 and 4 pre-service teachers wanted to be knowledgeable in their subject content, yet they also saw the value in other forms of teacher knowledge, which they identified as essential for effective teaching. Having the knowledge about how to encourage student participation was an example of this: ‘I like it if you show the kids you are not [always the best—the star] generally excellent you will get greater participation’. Student participation in learning was important to this group and being an expert in subject content, although important, did not always ensure participation. Effective teachers, according to the pre-service teachers, need to be able to motivate and inspire students. The concept of acquiring foundational knowledge is supported in US national studies on educational reform that argue that knowledge should frame teacher education and directly inform teacher practice (Carnegie Task Force on Teaching as a Profession, 1986; The Holmes Group, 1986).

In Years 1 and 2, teacher knowledge was viewed as more technical in nature and included aspects such as communication and selecting discipline strategies: ‘how you talk to kids I guess, communication skills, discipline, try to learn things’. In comparison, pre-service teachers in Years 3 and 4 viewed teacher knowledge as more complex and more subtle involving interpersonal skills, practical wisdom and emotional intelligence. The pre-service teachers in the final years wanted to do more than just pass on knowledge. It was important to them that they showed students that they were human, that they were not perfect: ‘I think as a teacher you need to be human, you need to show you are human and not do things that are out of your range’. They wanted to engage and encourage students in learning, show them that they had a passion and interest in teaching and that they valued
knowledge: ‘you have to show kids that you are a learner also that you don’t know everything’.

The importance of developing a broad knowledge base and acquiring knowledge that deals with the purpose of education as well as the methods and strategies of education is seen as important in teacher education (Shulman, 1987). The value of knowledge has long been documented in teacher education research as being the foundational component in education degrees. Porter-Magee (2004) refers to the need for teachers to demonstrate content knowledge mastery, Evertson et al. (1985) propose that more emphasis should be placed on developing subject matter expertise, while Ferguson and Womcak (1993) suggest teacher preparation programs are too heavily weighted with educational methodology at the expense of subject knowledge.

In all years, content knowledge and teacher knowledge were identified as distinct from each other. However, in the later years, greater importance was placed on developing and being able to apply teacher knowledge, rather than just gaining content knowledge. There have been very few studies that have sought the views of pre-service teachers on what they think they need to know and to what extent coursework and teaching experience contributes to the development of expert knowledge (Jegede et al., 2000). This research has provided data to fill this gap by highlighting the views of the pre-service teachers on the type of knowledge they value.

9.4 Demographic Factors that Influence Students’ Perceptions

There were 164 available participants in this study. At Time 1, 161 responded to the survey (97 per cent) and at Time 2, 87 responded (53 per cent). There was a slightly higher proportion of female to males in the study; however, this was not considered significant as neither gender was over-represented. The 45.7 per cent males and 54.3 per
cent females at Time 1 and the 46.5 per cent males and 53.5 per cent females at Time 2 represented a reasonable balance of genders, providing a valid representation of both males and females in the quantitative data results (see Tables 9.1 and 9.2).

The results reflected that males identified professional and interpersonal attributes of higher importance than did female pre-service teachers; significance was identified in the teacher quality views on professional and interpersonal characteristics.

Male: 9.0492; Females: 17.5875

\[ t(139) = 2.09, p = 0.039 \]

This result conflicts with Hamachek (1999), and Holahan and Sears (1995) on gender and the intellectual characteristics of effective teachers. Hamachek’s (1999) research identified that females placed greater emphasis on personal–social relationships, personality and intelligence than males did in the study.

Interpersonal skills and the ability to connect with students are seen as an important aspect of good teachers regardless of gender (Hargreaves, 1998). The effective teacher has good interpersonal characteristics, is charismatic, optimistic, has a need to improve, is sincere about teaching, technically able, confident and is a bit of a performer (Brighouse & Woods, 2000).
Table 9.1

**Percentage of Males and Females at Time 1**

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Table 9.1

**Percentage of Males and Females at Time 2**

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<td></td>
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9.4.1 Age.

Students’ perceptions of the importance of pedagogy varied with their age and whether the participant had prior qualifications on entering the degree; significance was identified in the categories of age and prior qualifications. It is important to note that the majority of participants in the study were in the 18–24 age group (78.5 per cent at T1 and 76.7 per cent at T2) (see Tables 9.3 and 9.4).
Table 9.3

Percentages in Age Groups at Time 1

<table>
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</tbody>
</table>

Table 9.4

Percentages in Age Groups at Time 2

<table>
<thead>
<tr>
<th>Frequency</th>
<th>%</th>
<th>Valid %</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18–24</td>
<td>40</td>
<td>23.7</td>
<td>46.5</td>
</tr>
<tr>
<td>25–29</td>
<td>43</td>
<td>27.2</td>
<td>53.5</td>
</tr>
<tr>
<td>30+</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>83</td>
<td>50.9</td>
<td>100.0</td>
</tr>
<tr>
<td>Missing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System</td>
<td>86</td>
<td>49.1</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>169</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

9.4.1 Significance against age.

Students within the age group of 18–24 years identified pedagogical approaches and PPP as significant. Participants who had existing qualifications identified PPP as significant.

\[ t(136) = 2.38, \ p = 0.019 \]
\[ t(142) = 3.58, \ p < 0.01 \]
9.4.2 Existing qualifications.

A t-test was conducted to identify whether pre-service teachers’ existing qualifications influenced their perceptions on teacher qualities. This test compared the mean of two groups: one group with existing qualifications (9.14 per cent Time 1, 27.9 per cent of participants at Time 2) and the other with no existing qualifications. The two groups (those with existing qualifications and those without) were compared against the six themes identified in the factor analysis. The results suggest a significant mean difference in the responses of participants’ views on pedagogical professional practice. Group 1, with existing qualifications, had a mean of 10.64. Group 2, with no existing qualifications, had a mean of 9.84. Significance was identified on views on PPP \( F(1,146) = 4.71, p = 0.032 \).

Those pre-service teachers with previous qualifications tended to place a higher value on PPP, having already been involved in post-school work or study. These participants identified the value of professional practices in the workplace or university and technical and further education (such as Technical and Further Education [TAFE]) more highly, than the pre-service teachers with no prior qualifications. Professional practices such as policies, procedures, planning, routines and rules tended to be more important to pre-service teachers who have had first-hand experience of these functions in a work or learning environment. In comparison, those pre-service teachers with no previous experience of work or university professional practices had yet to develop a concept of their function or importance.

No specific data from the focus groups referred to age or existing qualifications as significant in terms of pedagogy. However, there was recognition of the broader role of many of the pre-service teachers’ experience as elite athletes, coaches, personal trainers and key health educators both as pre-service teachers and as future teachers.
Pedagogy was identified as significant with younger participants in the 18–24 age group. It is interesting to note that the majority of the students in the course viewed pedagogy as separate from subject content and an essential component of effective teaching. Fenstermacher’s (1978, 1994) supports the importance of professional pedagogical thinking and argues that the role of education is not to indoctrinate or train teachers to behave in prescribed ways but to educate teachers to reason soundly about their teaching and perform skilfully.

An interesting observation from the data is that pre-service teachers’ prior learning or existing qualifications was identified as influential in shaping the beliefs and values of PPP. Pedagogical content knowledge and PIK can be acquired from a variety of sources. This includes subject matter knowledge, apprenticeship or observations. Teacher education coursework contributes to the pre-service teachers’ rethinking about disciplinary knowledge from a pedagogical perspective (Grossman, 1989).

9.4.3 Situation prior.

The context of the pre-service teachers before this study includes: Year 12, working, post-school study or within a degree. The test items reflected significance in participants’ views on teacher knowledge ($F(4, 143) = 6.1, p < 0.01$). On average, the items reflected that students currently in the course identified teacher knowledge as being less important than students who had just entered the course from Year 12 and post-school, study or work. A possible explanation for the differing level of importance placed on teacher knowledge between groups is that students coming from Year 12, post-school study or work place a higher level of importance on the unknown teacher knowledge (e.g. of inclusive education, behaviour management, theories of teaching and learning), compared to those who were engaging with the content. It could be argued that the concept of ‘knowledge’ specific to a profession is not unknown, particularly with teaching, where everyone has had experience
in education and schooling. The participants knew there was specific knowledge that they would need to have and they believed this knowledge was going to be important.

Conversely, those pre-service teachers in the degree, having already gained experience and some confidence with teacher knowledge, had started to recognise additional qualities needed to be an effective teacher such as interpersonal qualities and pedagogical qualities.

The focus group data suggests that prior experience, personal histories and existing qualifications have a definite role to play in developing pre-service teachers’ perceptions of teacher qualities and teaching. This supports the ideas raised in the quantitative data. Both genders provided mixed views on their own schooling, either positive or negative, with many of the pre-service teachers identifying as having existing qualifications and prior work experiences that have contributed to the shaping of their beliefs in the study. The follow extracts have been taken from pre-service teachers in Years 3 and 4. There is a representation of both male and female participants. Participants present their views on what influenced their ideas on teaching qualities and teaching generally:

The first thing that comes to mind is that obviously the teacher I have had. I had a positive experience at school. (Female)

What influenced me were the crap teachers I had a school I have seen teacher on professional experiences their lessons don’t work. I don’t want to be like them. (Male)

It was at one of those sport and rec [sic] camps that I became an instructor, a swimming instructor. I enjoy coaching/teaching the new skills learning new things every day in those areas. (Male)
Teachers inspired me. When I was in college the career advisor looked at my score and said you are not going to uni [sic] and gave me no other options—no TAFE no nothing so in Year 13 I doubled my score then moved into coaching course, which all led up to getting into uni [sic] to teaching. (Female)

I really just wanted to finish school, didn’t really want to go to uni [sic] finish I wanted to get my level 2 skiing instructor until my parents started on me … what is your back up plan what’s going to happen when you are 40, so I sat down thought about it and finished my level 2 skiing and teaching and I have both four years later. (Female)

The role of prior experience in shaping pre-service teachers beliefs is noted by Knowles (1992), who states that ‘pre-service teachers thinking about teaching and their classrooms practice is partially shaped by their prior experience’ (p.101). Pre-service teachers enter teaching with skills and the mechanics, processes and rules of the workplace, that influence their understanding in the classrooms. Knowles (1992) even suggests that personal predispositions and student years are central to the reasons for becoming a teacher and that pedagogical learning does not seem to fundamentally alter earlier views of teaching. Interpersonal traits or professional identity of pre-service teachers is influenced by society’s perception and expectations as well as the pre-service teachers’ past experiences, personal background and professional work lives (Tickle, 2000). Research on pre-service teachers’ ability to change thinking and classroom practice are partially shaped and linked to prior experiences and are often difficult to change (Clark, 1988; Crow, 1987; Fuller & Brown, 1975; Goodman, 1985; Knowles, 1992).

Teacher effectiveness, personality and practice is considered important only within specific contexts, rather than focusing on factors such as demographics or specific organisational decision making, which are outside the teacher’s control (Strong, 2002). In
contrast, teacher effectiveness is often linked to demographics such as years of teaching or formal education, race or sex, the use of pedagogical techniques, and teacher behaviour or student achievement (Murname & Phillips, 1981). However, what is in agreement in the research is the importance of personal biographies and personal socio-histories influencing views and perceptions on teaching (Goodson, 1995, 1981; Knowles, 1992; Lortie, 1975; Zeichner, 2007).

9.5 Testing before and after against the Six Factors

9.5.1 Shifts in the importance of teacher knowledge and pedagogy.

This study revealed two key results that supported the idea that pre-service teachers’ views changed over time. The first idea was that pre-service teachers’ views on the importance of teacher knowledge across the four years changed. This was supported with a significant mean difference in the responses \( F (3, 144) = 2.69 \) \( p < 0.05 \). Pre-service teachers who were currently in the course identified teacher knowledge as less important than did students who had just entered the course from Year 12 or post-school study \( F (4, 143) = 6.1, p < 0.01 \). In essence, teacher knowledge was more important to pre-service teachers entering the degree rather than those in the degree.

The second idea revealed was that pre-service teachers tended to become less focused on knowledge as they progressed through their degree and placed more importance on specific pedagogy. A comparison of the mean of each factor over four years, identified a significant mean difference for views on teacher knowledge \( F (3, 144) = 2.69 \) \( p < 0.05 \) and views on the use of pedagogical approaches \( F (3, 137) = 2.76, p < 0.05 \) (see Section 6.12). This result suggests that pre-service teachers’ perceptions changed from the importance of knowledge to the importance of pedagogy. Teacher knowledge
decreased from Years 1 to Years 4. This could be attributed to the growing confidence in coursework and an increased demand for PCK, particularly during professional experience.

Supporting the idea that pre-service teachers’ views changed over time was the negative correlations that occurred in both categories of knowledge against other factors such as pedagogical or professional and interpersonal qualities at different times throughout the degree (see Tables 9.5 and 9.6). This result provides support for the idea that pre-service teachers’ views of knowledge were not stable or fixed and that knowledge was sometimes viewed as the most important quality. This result is not surprising and can be linked to the changing demands of theory and practice in professional education degrees.

Table 9.5

*Negative Correlations on Views on Content Knowledge*

<table>
<thead>
<tr>
<th>Views on content knowledge</th>
<th>Negative correlations</th>
<th>Relationship to …</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>−0.298</td>
<td>Views on PPP</td>
</tr>
<tr>
<td></td>
<td>−0.142</td>
<td>Views on the use of textbooks and activity sheets</td>
</tr>
<tr>
<td></td>
<td>−0.298</td>
<td>Views on professional and interpersonal characteristics</td>
</tr>
<tr>
<td></td>
<td>−0.317</td>
<td>Views on pedagogical approaches</td>
</tr>
</tbody>
</table>
Table 9.6

Negative Correlations on Views on Teacher Knowledge

<table>
<thead>
<tr>
<th>Views on teacher knowledge</th>
<th>Negative correlations</th>
<th>Relationship to ...</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>−0.212</td>
<td>Views on PPP</td>
</tr>
<tr>
<td></td>
<td>−0.206</td>
<td>Views on the use of textbooks and activity sheets</td>
</tr>
<tr>
<td></td>
<td>−0.460</td>
<td>Views on professional and interpersonal characteristics</td>
</tr>
<tr>
<td></td>
<td>−0.267</td>
<td>Views on pedagogical approaches</td>
</tr>
</tbody>
</table>

The shifting understanding in the importance of knowledge, how it is gained and how it is used in teaching was evident when comparing the views of pre-service teachers in Years 1 and 2 with Years 3 and 4. In the beginning years, the pre-service teachers wanted to gain knowledge about teaching from school teachers in different contexts: ‘when you get out to the schools you obviously learn more from teachers, teaching in different ways, contexts etc., as well as learning what teaching styles most suited them as individuals; ‘it’s good to understand what you are good at, your teaching styles and look further into management styles’. In comparison, pre-service teachers in the later years saw knowledge as something you continue to gain as a teacher, that as a teacher you need to show you are prepared to learn, and that being relaxed and enjoying learning was most important: ‘they love laughing at me in AFL—in theory this is how you do it in practice this not how you do it—oh ok miss you are alright’.

Pre-service teachers in Years 1 and 2 wanted to gain knowledge on students, about what was important to them and how to ‘create the boundary between friendship and being the teacher’. For pre-service teachers in Years 3 and 4, it was not so much about gaining knowledge but rather using the knowledge they had gained to teach students. It was important for this group to be knowledgeable, to be passionate and interested in teaching
and learning: ‘you have to show kids that you are a learner also’. The importance of developing a broad knowledge base and acquiring knowledge that deals with the purpose of education as well as the methods and strategies of education is seen as important in teacher education (Shulman, 1987). For pre-service teachers, having a strong foundational knowledge was an important way of engaging students and establishing positive relationships with them.

Pre-service teachers in the beginning years wanted knowledge on how to adapt to new situations, how to be a good teacher:

We are taught how to take a lesson so if someone hands us a lesson we are unfamiliar with—we know what to do to make it successful… then if you have knowledge and skills to get students to understand what you are trying to teach them that makes a good teacher. (FG1)

Conversely, for pre-service teachers in the later years, knowledge and expertise were valued as a way of relating to their students: ‘a desire to teach—interest and passion … having interpersonal and professional skills, in people, management, communications, planning and behaviour’. Teacher knowledge was of greater importance to pre-service teachers when entering the course, whether from Year 12 or post-school study. As students progressed in the course, they gained confidence in teacher knowledge and formed links between theory and practice. In Years 1 and 2, discussion was about gaining teacher knowledge, but in Years 3 and 4, the discussion had shifted to using knowledge to engage and motivate students. There is a growing body of research literature and current views held in policy documents and key professional literature about the importance of teachers professional knowledge and their knowledge of practice (Australian Association of Mathematics Teachers, 2002; Australian National Council for Teachers of Mathematics, 2009; Bobis, 2007; NSWIT, 2007, 2009). The distinct change that occurred across the
years was not that knowledge became less important for the pre-service teachers; it was not that knowledge became less important for the pre-service teachers; it was that by the later years, they had started looking for knowledge beyond coursework. This group had gained confidence in their own knowledge base and had begun shaping their beliefs about the role of knowledge in teaching.

Initially, the pre-service teachers’ beliefs about knowledge were that it was something tangible that could be obtained from coursework or mentor teachers and delivered to students. By the end of the degree the belief had shifted to understanding that acquiring knowledge was something that would be a lifelong process, learnt in a collaborative and supportive context and that it had to be relevant to students’ learning. For the pre-service teachers, the required knowledge had moved from being facts and figures needed for teaching to knowledge on how to engage and support students’ interests in learning. An appreciation of the importance of pedagogical knowledge, professional knowledge and a broader understanding of pedagogical practices became evident in participants in Years 3 and 4. It is suggested that that knowledge and expertise of teachers needs to go beyond the foundational subject-specific content for effective teaching and learning (Shulman, 1987).

Shulman’s (1987) research supports differing types or levels of knowledge. These types can be organised into seven distinct categories: content, pedagogy, pedagogical content, curriculum (tools of the trade), knowledge of learners, educational contexts, and educational purposes and goals. Garritz (2010) discusses PCK as being as the ‘instructional conditions necessary … important components of pedagogical understanding of subject matter’ (p. 2). The intersection of content knowledge and pedagogical understanding was identified in the quantitative data. The results support the idea that pre-service teachers gained a greater understanding of the importance of the relationship between knowledge and pedagogy, theory and practice as they progress through the degree.
As pre-service teachers progressed through the degree, the role of knowledge changed. The pre-service teachers in the beginning years wanted knowledge so that they were considered an expert in their content area. This was valued and recognised as source of power in the classroom and viewed as good teaching. Chase and Simon (as cited in Anders Ericsson & Smith, 1991) argue that the main difference between experts and pre-service teachers is the availability and access to relevant knowledge, being relevant and having a sound knowledge base was an important teacher quality for the pre-service teacher.

As the pre-service teachers progressed through their degree, their level of expertise and insight increased. They gained more knowledge and practice as teachers, specifically in relation to problem solving. In addition, for Years 3 and 4, the concept of what knowledge was relevant and important had developed and changed. Pre-service teachers had started to identify the importance of needing to be able to teach. As the pre-service teachers gained confidence with teacher knowledge, they started to place value on pedagogy. This idea of foundational content knowledge is supported by Darling-Hammond (2000), who states that subject matter preparation is the most crucial foundation for good teaching practice. Pre-service teachers in Years 3 and 4 discussed the ‘how’ of teaching compared to Years 1 and 2, where it was about the gaining of knowledge from school teachers, lecturers or units. Renyi (1998) suggests that pre-service teachers recognise the need to gain high-level competence with subject content knowledge. The teacher educators referred to quality teachers as being able to demonstrate, model and show teaching skills, and how one teaches, applies and uses these skills. The action of teaching was seen as following on from the establishment of a solid content base upon which to build pedagogical expertise. This result is supported by the idea of tacit knowledge; knowledge
that is needed in the attainment of outcomes, which increases with experience (Korthagen et al., 2001; Shulman, 1987; Sternberg & Horvath, 1995).

Pre-service teachers in Years 1 and 2 placed a high importance on demonstrated skills in teaching subject content knowledge. Whereas, in Years 3 and 4 the pre-service teachers consider it important to have demonstrated skills in pedagogical, teacher and subject content knowledge particularly for the successful completion of professional experience.

9.5.2 Shifts in the importance of specific pedagogical approaches.

Significance was identified in both pedagogical approaches and PPP categories at Time 1 and Time 2; however, there was an uneven distribution across time (Year 1 to 4) in terms of importance. The pre-service teachers’ perceptions of pedagogy changed from Time 1 to Time 2. This distribution remained inconsistent over the course of the degree. The pre-service teachers’ views on pedagogical approaches were more important at Time 1 than Time 2 (see Table 9.7). This result indicates that pre-service teachers’ ideas on the importance of pedagogy developed as they moved across the year as well as from Years 1 to 4. At the beginning of the academic year, pre-service teachers were less confident with pedagogy, hence it was viewed as most important. As they gained experience through coursework and professional experience, their confidence with pedagogical approaches increased. Pedagogy did not become less important over time for pre-service teachers, it just became less of an unknown.
Table 9.7

Participants’ Views on Pedagogical Approaches

<table>
<thead>
<tr>
<th>Time</th>
<th>Views on pedagogical approaches</th>
<th>Mean</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (pre-test)</td>
<td></td>
<td>T1 –16.72</td>
<td>t(58) = 2.67, p = 0.01</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T2 –15.35</td>
<td></td>
</tr>
</tbody>
</table>

Pre-service teachers’ perceptions on the importance of pedagogy changed from Time 1 to Time 2. Their understandings of particular pedagogical approaches also changed as pre-service teachers moved through the course. This became evident with the different years selecting one category of pedagogy over the other. This result indicates that pre-service teachers’ perceptions on pedagogy were not static and that as they moved through the course, specific demands or experiences in coursework and professional experience influenced their thinking on specific aspect of pedagogy. It is interesting to note that no specific pedagogical approaches were identified as significant for Year 4, suggesting that this group valued a broader range of approaches than did earlier years, where specific approaches such as high-interest lessons, planning and adapting teaching were identified as important (see Section 6.14).

Table 9.8

Pedagogical Teacher Qualities Viewed as Most Important at Time 2 in Years 1–4

<table>
<thead>
<tr>
<th>Year</th>
<th>Time</th>
<th>Viewed as most important</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>T2</td>
<td>high-interest lessons became more important</td>
</tr>
<tr>
<td>2</td>
<td>T2</td>
<td>planning lessons that are relevant to student become more important</td>
</tr>
<tr>
<td>1</td>
<td>T2</td>
<td>adapts teaching to their students’ learning environment</td>
</tr>
</tbody>
</table>

Significant mean difference was identified in views on the use of pedagogical approaches over the four-year period. Pre-service teachers in Years 1 and 4 identified
pedagogical approaches as being significantly more important than did pre-service teachers in Year 2 and Year 3 of the degree (see Table 9.8). The uneven distribution highlights changing requirements of teaching degrees across the Years (1-4) and that pre-service teachers’ changed their perceptions about pedagogy across those years as a result. In Year 1, pedagogy was viewed as the unknown, yet-to-be-learnt requirements for successful teaching. By Year 4, students had gained confidence and knowledge of pedagogical practices and as such, other factors become important. This result suggests that it is in Year 2 and 3 of the teaching degree that the majority of pedagogical learning occurs (see Section 6.14.3 and Figure 6.1)

Table 9.9

One-way ANOVA Results for Views on the Use of Pedagogical Approaches

<table>
<thead>
<tr>
<th>Factor</th>
<th>One-way ANOVA</th>
<th>P = Mean difference divided by standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Views on the use of pedagogical approaches</td>
<td>T1, F (3, 137) = 2.76, p &lt; 0.05</td>
<td>Year 1 and Year 4 p = 2.48</td>
</tr>
</tbody>
</table>

There were four common pedagogy strategies identified at both Time 1 and Time 2: uses a range of teaching strategies; uses high interest lessons; plans lessons that are relevant to students and adapts teaching to students learning styles, with a percentage value greater than 10 per cent (see Table 9.10). The importance of the four common approaches varied across the four years. Significance was identified in three out of the four common pedagogical approaches in Years 1, 2 and 3. It is in Year 4 that no significance for a specific pedagogical approach was identified (see Table 9.10). This suggests that pre-service teachers had gained a deeper understanding and a more extensive repertoire of pedagogical approaches by this stage.
Table 9.10

Common Pedagogical Approaches across Years 1–4

<table>
<thead>
<tr>
<th>Four common pedagogical approaches</th>
<th>Year</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uses high-interest lessons</td>
<td>3</td>
<td>p &lt; 0.05</td>
</tr>
<tr>
<td>Uses a range of teaching strategies</td>
<td>3 and 4</td>
<td>No significant however high % recorded: T1 Year 3 50% T2 Year 4 31.3%</td>
</tr>
<tr>
<td>Plans lessons that are relevant to students</td>
<td>2</td>
<td>p &lt;0.01</td>
</tr>
<tr>
<td>Adapts teaching to students’ learning styles</td>
<td>1</td>
<td>p 0.05</td>
</tr>
</tbody>
</table>

The packaging and reconstructing of pedagogical understandings identified in the quantitative results is supported by the ideas from the focus groups, which suggests that pre-service teachers’ ideas on pedagogy continue to change throughout the degree. Pre-service teachers in Years 1 and 2 wanted to develop pedagogical skills to be able to explain and demonstrate something successfully. The focus was on learning how to develop effective pedagogical practices through observing other teachers:

Even if you don’t do any professional experience, you learn stuff from watching other teachers, dealing with kids. Uni is about getting the basics of what you should know. When you get out to the school you obviously learn more from teachers, teaching in different ways, contents etc. (FG1)

Engaging students was important in Years 1 and 2; they discussed the importance of being taught how to use different strategies for varying situations, and they wanted to be adaptable. The ability to teach what one knows, and being able to explain and demonstrate successfully were seen as essential.
In comparison, for pre-service teachers in Years 3 and 4, the pedagogical focus was on being able to adapt pedagogy to new situations, considering things such as inclusive practice and demonstrate an ability to motivate and engage students. In the later years, effective pedagogy involved using a range of teaching and learning strategies. Good teachers were those who were able to adapt their teaching to the environment and context:

Willing to learn open minded, different people have different styles … so that students used to a particular styles of teaching are catered to so they get the most out of the lesson you need to adapt to different situations. (FG2)

The four common pedagogical approaches identified in the quantitative data occurred unevenly in the discussions across the years; however, the concept of relevance remained constant. Relevance was seen as an important quality including relevant knowledge and relevant pedagogical approaches. In Years 3 and 4, effective pedagogy was about being able to talk the students’ language, motivate students and encourage all to participate:

One of the things I found on internship was that Year 10 girls, they felt that they were uncoordinated and it wasn’t that they were uncoordinated it was that they were not at the same level and I kept saying to them I don’t care how good you are it’s your participation that matters to me. Providing support and helping students feel they were successful, and part of the group was stressed. (FG2)

By the end of the course, pre-service teachers in Years 3 and 4 had developed a deeper understanding of the idea of making sure their teaching approaches were relevant to the needs of all the students in their classes. Relevance for Year 3 and 4 went beyond being able to explain and demonstrate successfully. They included aspects such as building rapport, showing an interest and understanding the students, which they believed
encouraged student participation in learning: ‘it’s about participation I am coming down to their level and bringing them up to mine so it’s a level playing field’. This compares to the earlier views in the beginning years, where the view was that employing a range of teaching strategies would ensure participation.

It is suggested by Jones (1999) that if relevant student learning and classroom practice are to occur, then the professional knowledge of pre-service teachers must include both a strong pedagogical knowledge base and a content base in the relevant content areas. Effective teachers with a strong pedagogical knowledge base need to have the ability to discover pedagogical techniques most appropriate to the needs of the students in their classes (Murnane & Phillips, 1981).

Observing and learning from other teachers was seen as instrumental in developing pedagogical skills in both focus groups. For pre-service teachers, pedagogy was learnt on the job by professional experience, although they did acknowledge the important of the knowledge base acquired through coursework: ‘as you go through uni you get a base knowledge, what you should know, you learn as you go through your course.

Effective pedagogy involved student-centred approaches: ‘student-centred approach—that’s because of my PE background where it’s important to get kids involved’. The shift from learning about pedagogy to becoming a pre-service teacher of pedagogy was evident in the discussion in Years 3 and 4. This group discussed what worked for them as pre-service teachers or what they saw working during professional experience. For participants in the later years, effective pedagogical practices included being adaptable, flexible and being able to link theory to practice, ‘yes—you have to have different teaching approaches—I don’t know about you guys but I really found that, environmental changes—oval, gym, classroom requires different approaches’. The pre-service teachers
were able to identify that the need to use different pedagogy approaches for changes to contexts as well as the changing needs of their students.

Pre-service teachers in Years 3 and 4 had developed a broader view of pedagogy than they had in beginning years. This view involved more than just their personal performances, their ability to explain, demonstrate, interest and manage the class. It involved working collaboratively with students and understanding the students and the differing contexts. What pre-service teachers most valued in terms of pedagogy was being relevant, engaging, energetic and adaptable to student needs and different contexts. It is important that subject matter and pedagogy is considered in the context of the uniqueness of each classroom, and that the teacher recognises the needs of students and views school as a complex social setting (Brophy & Good, 1986). Brophy and Good (1986) suggest that effective teachers need to have the ability to think critically and adapt to the particular contexts within which they teach.

Pre-service teachers’ views on pedagogical approaches changed as they moved through their degree both across the year and over the four-year period. This development suggests that specific learning experiences from professional experiences and coursework had affected pre-service teachers’ developing perceptions of pedagogy. There is extensive research to support the benefits of learning experiences on pedagogical development in teacher education degrees (Evertson et al., 1985; Ferguson & Womcak, 1993; Hurwitz & Hurwitz, 2005; Rice, 2003; Woolfolk, 2000). In Years 2 and 3, pedagogy was identified as most important, whereas in Year 4, there was less emphasis on any one type of pedagogical approach. In Year 4, pre-service teachers had acquired knowledge and confidence in terms of pedagogy, in contrast to Years 1, 2 or 3, where ideas were still being developed or in the case of Year 1, not yet formed. Edwards (1995) reference to Vygotsky’s (1978) model of teaching and learning illustrates pre-service teachers’ shifting
understandings from half-understood procedures and observations through to a process of clarification and reconstruction. This developmental process supports the idea that pre-service teachers continue to construct their ideas of pedagogy over the course of the degree. By Year 4, the pre-service teacher has used experiences, reflected on practice and built confidence with pedagogy. This development is described as the process whereby ‘teachers start with what is to be learned and then progress to how it is to be taught’ (Shulman, 1987, p.7).

Pre-service teachers in Year 4 had developed a deeper understanding of professional pedagogical practices, both PCK and PIK. They had selected not to value any one particular pedagogical approach over another; their focus was on student-centred pedagogy, the differing student needs and teaching contexts. Year 4, teaching was not so much about their own performance as about their students’ learning. The foundation in teacher education is for student teachers to achieve related pedagogical competency. This includes planning for students’ interests and ways of learning. The process of acquiring these pedagogical competences is progressive and starts with the ‘student teacher having fixed conceptions about teaching and learning and as a rule are not willing to take on alternative conceptions unless they have experienced failure when using their own ideas’ (Fischler, 1999, p. 174).

Consistently, pre-service teachers viewed pedagogy as something they would learn on the job via professional experience. This belief was common for all years and remained constant, suggesting the importance of professional experiences in developing students’ perceptions of quality teaching. Consistent with Bullough, (2005) the research demonstrated that many pre-serviced teachers viewed field experiences as the most relevant of the course. A significant means difference occurred in the data, with pedagogy viewed as most important in Years 1 and 4. Pedagogical approaches were viewed as less
important in Years 2 and 3, where a strong focus on pedagogy occurred in coursework and on professional experiences. These results suggest a growing confidence in pedagogical understandings and development of a repertoire at this time. Fenstermacher (1994) discusses the importance of developing confidence and skills in reasoning in the development of high-level pedagogical skills.

In Year 1, pre-service teachers viewed pedagogy as being able to demonstrate or explain content successfully, as skills they needed to learn and acquire. In contrast, in Year 4, the emphasis was on pedagogical understandings and using a range of strategies to suit individuals and differing contexts. More broadly, the pre-service teachers packaged and repacked pedagogical ideas over the four years. By the end of the course, the pre-service teachers identified relevance, student-centred approaches and inclusive practice as being most important. This finding is consistent with that of Paris et al. (2010), whose definition of effective pedagogy includes the ability to enhance the relevance of new learning (MCEETYA, 2008). For the pre-service teachers in this degree, enhancing the relevance of new learning involved established learning environments that were engaging, energetic and relevant.

9.5.3 Relationship between factors.

Positive correlations existed for views on professional and interpersonal characteristics and views on pedagogical approaches ($r = 0.549, p < 0.01$), similar to views on pedagogical professional practice ($r = 0.450, p < 0.01$). The positive relationship between interpersonal and professional and pedagogical qualities suggests a consistent level of importance between these factors. This relationship implies that pre-service teachers viewed interpersonal and professional qualities as being most important.
In contrast, the data identified a negative correlation in views on professional and interpersonal characteristics and views on content knowledge ($r = -0.298$, $p < 0.01$) and views on teacher knowledge ($r = -0.272$, $p = 0.002$). This suggests that being knowledgeable did not necessarily imply good interpersonal or professional qualities or similarly that limited interpersonal and professional skills’ did not suggest limited knowledge. Pre-service teachers did not view interpersonal and professional qualities in the same light as they viewed knowledge (see Table 6.2).

The data suggest that students entered the course with an established sense of the importance of interpersonal and professional qualities needed by the classroom teacher. Pre-service teachers had the capacity to judge whether something is working or not, but only in the sense that they were able to identify what is working for them as individuals. This idea is evident as pre-service teachers overwhelmingly identified ‘a good teacher as confident, energetic and relaxed’ consistently across the four years at both Time 1 and Time 2. The addition of other first-choice qualities as pre-service teachers progressed from Year 1 to Year 4 reinforced the idea that they make judgements on what qualities are important to them as pre-service teachers. Interpersonal and professional qualities are seen as strengths of the pre-service teachers in PDHPE teaching degrees, which tend to attract the ‘big’ extravert personalities commonly associated with sport. The graduates from this degree were popular teachers with many of them going on to hold leadership positions within local schools.

There was evidence of an expanding of the interpersonal and professional factors as the pre-service teachers progressed through the degree (see Tables 6.7 and 6.9). Pre-service teachers placed importance on interpersonal and professional qualities, particularly being confident, energetic and relating well to students (Figure 6.2).
The focus groups discussions support the idea that the pre-service teachers placed a high value on interpersonal and professional qualities and on the relationship between pedagogy and interpersonal and professional skills. Year 1 and 2 pre-service teachers explored the importance of professional and interpersonal practices combined with teaching approaches: ‘I find it difficult you have a lesson plan and stuff you want to get through, get things done and you have to balance it with being not being a Nazi [sic] to kids. How do I balance this?’ This group referred to their own interpersonal and professional skills, often questioning their own abilities. In Years 3 and 4, there was a definite move towards a sense of confidence in their interpersonal and professional skills and the impact this had on effective pedagogy and teaching in general. This group felt it was important to use their interpersonal and professional skills to encourage student learning. They stated that it was ‘your participation that matters to me’.

For pre-service teachers in Years 3 and 4, effective pedagogy involved good collaboration and interpersonal processes:

Collaborative more relaxed approach, it works a lot better than just saying you will do as I say—you will do this and this is how it’s going to be and there are not even allowed to interact—total silence. (FG2)

Pre-service teachers in Years 1 and 2 had a definite view on the role of communication and interpersonal qualities for effective teacher practice: ‘effective teachers get involved—talk to [students] sees what they are up to, asks what their ideas are’. The need to provide attention to individuals was important and based on their own personal learning experiences: ‘the teacher got me to go down the back and gave me attention and I ended up being on the best in the class’. Being able to engage students’ interests was important and viewed as necessary for effective teaching practice in this group: ‘even if you have a quite word with them find out what subjects they are interested
in try to relate to them and their interests’. Pre-service teachers believed in the importance of developing interpersonal and professional qualities for student engagement in learning; however, during Year 1 and 2, they were still questioning and developing the mechanisms of how to make it work. In comparison, Years 3 and 4 had become more student focused in their views; there was a sense of collaboration, maturity and confidence with their interpersonal and professional skills and their pedagogical practice.

In terms of the relationship between knowledge and interpersonal and professional qualities, Years 1 and 2 wanted to gain the content knowledge needed to be effective as they progressed through the degree: ‘as you go through university you get a knowledge base … having knowledge about sports is an important’. This group saw it as their professional responsibility to make sure the student understood the content: ‘if you have knowledge and skill to get students to understand what you are trying to teach them that makes a good teacher’.

Interpersonal qualities were still important in Years 3 and 4, who believed that ‘if it’s all out of the book it’s got not real relevance when you walk out the door’. This group felt that effective teachers needed to show that they had an interest and passion and could relate knowledge to students’ lives. However, by Years 3 and 4, knowledge alone was not seen by pre-service teachers as being enough to be an effective teacher. It was important to develop effective interpersonal and professional relationships that motivated the student to want to learn.

9.6 Conclusion

Chapter 9 explored the pre-service teachers’ perceptions of teachers’ qualities, grouped under of construct: interpersonal and professional qualities, knowledge and pedagogical qualities. What was also considered in the discussion were the demographic
factors influencing these views across each year. These included: age, gender, situation prior to commencing the course and existing qualifications. Statistical tests against the six factors identified in the factor analysis revealed shifts in importance of teacher knowledge and pedagogy and a lessening of importance of content knowledge over time. What was also revealed was the uneven distribution of valued pedagogical approaches across the years and an increase in choice of favoured professional and interpersonal qualities. A close relationship between these two factors was also identified. What follows in Chapter 10 is the discussion about the pre-service teachers’ ability to gauge what they believed to be the important teacher qualities of the good teacher.
Chapter 10: Teacher Qualities: The Good Teacher

10.1 Pre-service Teachers’ Assessment of the Good Teacher Qualities

Pre-service teachers in this study held certain views on what they judged to be a good teacher. Some of these views remained consistent while others changed as participants progressed through the degree. Pre-service teachers were asked to rank a series of 16 different statements identifying qualities of a good teacher. They identified a good teacher as someone who is confident, energetic, relaxed and relates well to students. This was an overwhelming response from pre-service teachers for this particular interpersonal quality, with 62.7 per cent at Time 1 and 43.5 per cent at Time 2. Pre-service teachers identified qualities (see Tables 10.1 and 10.2) that include:

- understands students and makes their teaching relevant to students
- has a thorough understanding of their subject area
- is organised
- enjoys students and makes lesson fun
- is well planned and prepared
- uses a range of teaching and learning strategies
- good communication skills.

Pre-service teachers’ selections of qualities changed and broadened as they progressed through the degree, particularly at Time 2, where they selected more varied qualities (see Table 6.6). A test for dependence of overall differences in rankings (i.e. were certain qualities ranked consistently more important than others) ($\chi^2(63,N = 157) = 83.83$, $p < 05$) identified as the first choices, is confident, energetic, relaxed and relates well to
PERCEPTIONS OF TEACHER QUALITIES IN SECONDARY EDUCATION

students’. Additional results revealed the five other first choices for Time 1 and Time 2. Interestingly, only one other quality was common at both Time 1 and Time 2: understands students and makes their teaching relevant to students (see Table 6.20).

Table 10.1

Qualities of a Good Teacher Ranked First Choice at Time 1

<table>
<thead>
<tr>
<th>A good teacher is …</th>
<th>Time</th>
<th>Overall %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is confident, energetic, and relates well to students</td>
<td>1</td>
<td>62.7</td>
</tr>
<tr>
<td>Understands students and makes their teaching relevant to students</td>
<td>1</td>
<td>14.5</td>
</tr>
<tr>
<td>Has a thorough understanding of their subject area</td>
<td>1</td>
<td>11.8</td>
</tr>
<tr>
<td>Is organised</td>
<td>1</td>
<td>6.4</td>
</tr>
<tr>
<td>Enjoys students and makes lesson fun</td>
<td>1</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Table 10.2

Qualities of a Good Teacher Ranked First Choice at Time 2

<table>
<thead>
<tr>
<th>A good teacher is …</th>
<th>Time</th>
<th>Overall %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is confident, energetic, and relates well to students</td>
<td>2</td>
<td>43.5</td>
</tr>
<tr>
<td>Understands students and makes their teaching relevant to students</td>
<td>2</td>
<td>12.9</td>
</tr>
<tr>
<td>Is well planned and prepared</td>
<td>2</td>
<td>4.7</td>
</tr>
<tr>
<td>Uses a range of teaching and learning strategies</td>
<td>2</td>
<td>4.7</td>
</tr>
<tr>
<td>Good communication skills</td>
<td>2</td>
<td>4.7</td>
</tr>
</tbody>
</table>

Pre-service teachers selected a wide variety of choices across the years with differences at Time 1 compared to Time 2 in each year. This shows pre-service teachers’ ability to identity what qualities they believe are important for good teaching at specific points in time. Research by Combs et al. (1978) suggests that good teaching is about a unique personality and good teaching is uniquely personal. Pre-service teachers in the study were confident in their own personal belief of what constituted good teaching. This
was to evolve and change at particular points in the degree. It is suggested that participants’ perceptions may have been influenced by changing priorities and demands in the course at this time. This process of personal discovery demonstrated pre-service teachers’ capacity for forming judgements, as they adopted different or more professional and interpersonal qualities needed at the time, linking new beliefs to existing frameworks.

In the overall distribution of rankings, the most important professional and interpersonal quality across all four years at Time 1 and Time 2 was that a good teacher is confident, energetic and relates well to students. However, it was more important at Time 1 as pre-service teachers selected more ‘other’ first choices at Time 2 (see Figure 6.2 and Table 6.20).

![Comparison of % at T1 & T2 over Years 1-4](image)

*Figure 10.1. Comparison of Time 1 and Time 2 first choice—A Good teacher is confident, energetic and relates well to students.*

This teacher quality was consistently identified as important in each year both at Time 1 and Time 2. Significance was not identified, because the pre-service teachers selected many other professional and interpersonal teacher qualities, and this spread of the data reduced the power to identify statistical significance (see Table 10.1). Two important
qualities were: *enjoys students* and *makes learning fun*. This quality was particularly important in Years 1, 2 and 4. Wanting to *enjoy students* and *have fun* highlights a common trait in the cohort as a whole, as participants tended to be confident and energetic (qualities they valued) and tended to have a positive outlook towards schooling. In most cases, they had enjoyed schooling, experienced success and were committed to providing the same experience as teachers. Consistent with Briscoe (1996) whose research suggests that in practice, teachers’ knowledge constructions are both practical and context bound, tested against the perceived reality of school experiences, the pre-service teachers perceptions are also tested on professional experience.

Pre-service teachers entered teaching confident in their belief that teaching should be enjoyable both for the teacher and the students. It was important that learning should be a positive experience. The positive experience that participants brought from their own schooling infers a capacity to judge what they believed would work for them as pre-service teachers. One such judgement was the belief that a good teacher needs to *understand students and make teaching relevant*. It is suggested that good teaching is a complex process that cannot be answered in a simple way (Korthagen, 2004). Good teaching is a lifetime process involving the collection and alignment of personal beliefs, professional competencies and the establishment of professional identity and mission. Therefore, it can be stated that for the pre-service teachers in this study, judgements were being based upon their belief that learning should be enjoyable, relevant and that teachers can do this by understanding their students (Korthagen, 2004).

The pre-service teachers adopted other ideas and added them to their overall views on what makes good teachers as they progressed through the degree. This is reflected as an increase in first-choice options, particularly at Time 2. Participants did make judgements, and those judgements changed across the year and in particular years, suggesting that pre-
service teachers selected as favoured teacher qualities of a good teacher at specific points in the degree. In Year 3, particularly, pre-service teachers were involved in the process of collecting and aligning their personal beliefs around pedagogical practices. The focus at this time was on technical expertise rather than on interpersonal skills. They continued to widen their selection of interpersonal qualities over the course of the four years. It is interesting to note that the originally held interpersonal beliefs remained relatively constant. Consistent with this belief is the research that changing pre-service teachers thinking and classroom practice are partially shaped and linked to prior experiences and are often difficult to change (Clark, 1988; Crow, 1987; Fuller & Brown, 1975; Goodman, 1985; Knowles, 1992).

The ability to gauge those qualities viewed as important occurred in the beginning years. Pre-service teachers referred to the ability to ‘learn from the students [stating] you have to learn from the kids as well’. They wanted to be a sensitive teacher, show genuine interest, to be fair and to encourage confidence and success. For pre-service teachers in Years 1 and 2, it was important to develop positive relationships with students both in the class and in other situations such as school trips: ‘these are teachers that have positive relationships with kids are involved bus trips, excursions etc.’. A good teacher was someone who was seen as well planned and having a strong knowledge base.

In comparison, for pre-service teachers in the later years, good teaching had shifted to incorporate their own experiences as pre-service teachers. For some, it was about making a difference in young people’s lives. Pre-service teachers in Years 3 and 4 believed it was important to present the real human face and human imperfections. Good teachers were those that had the ability to speak the language of the students, build rapport and show an interest in the students. It was important to understand where students were coming from: ‘finding their interests, knowledge they enjoy, [have a] rapport’.
A part of appearing human and showing an ability to relate to students involved having and sharing a sense of humour, and this was noted in Years 3 and 4. Being energetic was stated directly in Years 1 and 2, and ‘knowing the content and being energetic about it’, whereas in Years 3 and 4, it was just one of a few qualities mentioned, such as ‘energy, enthusiasm and passion, sense of humour’. This suggests a subtle shift in thinking for pre-service teachers in the later years as they become less fixated with their need to be energetic and more interested in the output of that energy. Being relaxed was mentioned only in Years 3 and 4, in relation to ‘a collaborative more relaxed approach’. This implies a sense of maturity: ‘I know what I am doing and what I need to do to be a good teacher and I can involve the students in this learning’. There was a subtle change in comments in pre-service teachers in the later years towards a more mature, confident approach in terms of what was viewed as important for the good teacher. This highlights the growing professionalism of the pre-service teachers.

### 10.2 Interpersonal Qualities Identified by Pre-service teachers as Most Useful

A broad range of interpersonal qualities was identified as useful at Time 1 and Time 2 and include:

1. *challenges and encourage students*

2. *helps students develop self-esteem*

3. *employs knowledge of students to facilitate learning*

4. *projects enthusiasm for teaching*

5. *is sensitive to students’ needs and concerns.*
Significance was identified from Time 1 to Time 2 in Years 1–4 for projects enthusiasm for teaching in Year 2 (p < 0.01) and sensitive to students’ needs and concerns in Year 4 (p < 0.001). These interpersonal qualities identified as most useful by the pre-service teachers in this study are also identified as important in the current discourse on desirable personal and professional characteristics for classroom teachers. Moyles (2007) refers to personal attributes such as empathy, respect, positive outlook and attitude, approachability, sense of humour, organisation skills, expertise in professional relationships and appreciation of others skills. Pre-service teachers in all years discussed the importance of teachers having personal and professional qualities similar to those outlined by Moyles (2007).

Pre-service teachers in Years 1 and 2 referred to the importance of relating to the students and developing the ability to ‘learn from the students’, and ‘the ability to relate to kids say—if the teacher has no interest in what you do then you will show and interest in what they are teaching you’. For this group, it was important to engage students, be accepting supporting and positive: ‘teachers need to be positive, motivated, have fun make fools of themselves (like when you are teaching dance) have a go’. It was seen as important to be sensitive, to encourage confidence and success, to be fair, develop positive relationships and connections with students, build trust, give attention and build friendships: ‘if you can relate to the student—you know you can ask them what they did on the weekend then you immediately have a connection with that kids’. The group valued authentic learning experiences and viewed it as a way of generating relevance for the students and as a strategy for linking theory to practice. Weinstein (1989) states that:

Students tend to engage in ‘unrealistic optimism and to demonstrate self-serving biases, perceiving as important for teaching those attributes that they themselves
possess. When describing a really good teacher, students emphasize interpersonal and affective variables and downplay academic dimensions of teaching. (p. 55)

Pre-service teachers in Years 3 and 4 referred to personal and professional teacher qualities and discussed the ability to be adaptive, demonstrate inclusive practice, ‘show an interest, respect opinions, talk and listen’. The ability to motivate and engage students involved the teacher being willing to show students that he or she is a learner and does not know everything. The importance of earning students’ respect so that they want to be involved was noted: ‘speak to them not at them, speak their language, laugh with them, be empathetic’. It is significant to point out that the pre-service teachers in this course tended to be outgoing, successful students, with many of their perceptions being influenced by their own positive experiences. The theory of Perceptual Bases of Behaviour suggests that simple exposure to subject content or teaching methods will not necessarily change originally held beliefs that students bring with them to a course (Combs et al., 1978). Pre-service teachers in this course held pre-established beliefs that school was fun and interesting, and that relationships and teamwork were important. There was a maturation of the pre-service teachers’ perceptions in the latter years, with a noted shift from viewing themselves as the student to the pre-service teacher. In turn, they became more student-centred and aware of their professional responsibilities. Interestingly, many of the egocentric qualities of the pre-service teachers remained constant; this is not necessarily negative, as it contributed to their positive and optimistic attitude towards teaching.

Pre-service teachers in Years 3 and 4 felt it was necessary to have a genuine desire to teach and an interest in the content. The ability to speak the language of the students, build rapport and show an interest in the students was important in terms of relating to students and developing personal power: ‘understand where they are coming from. A lot of the time it’s the best way to get through to them—coming down to their level.’ According
to Reynolds (1992), good teaching involves having pre-service teachers who enter teaching with dispositions to find out about their students and who have analytical skills to cater to their learning needs. The distinction for pre-service teachers in Years 3 and 4 was that desirable teacher qualities were collaborative, more student-centred and less teacher directed: ‘… you have to teach them to be out there, involved in physical activity. If you are kinda [sic] “dull” just saying eat this… [It doesn’t work]’. Pre-service teachers in Years 1 and 2, viewed teaching as very much about ‘my’ personal style. This suggested a development in personal and professional teacher qualities as students reached the end of their degree.

This study suggests that pre-service teachers’ most useful interpersonal qualities aligned with the qualities identified as most desirable to a good classroom teacher. The requirements of teachers today include deep subject knowledge, the ability to manage and monitor students, demonstrated reflective practice, being a member of the broader community, and commitment to their students’ learning (Mitchell et al., 2001, p. 22). Mitchell et al. (2001) define teaching as collegial professional activity whereby professional teachers respond to considerations of subjects, context and students. The pre-service teachers were strong advocates for collegial working relationships, often referring to the need for teamwork in the focus groups (Mitchell et al., 2001). They were aware of the needs of their students, the requirements of their subject and the differing requirements of school environments.

The actions of teachers cannot be separated from their personal socio-historical past. As such, participants in this study cannot be separated from the passion, energy and enthusiasm they bring to teaching (Goodson, 1981). In the discourse around professional teacher characteristics, the qualities of effective teachers include being, autonomous, self-directed and responsible persons (Combs et al., 1978). A model for professional
characteristics involves the broad areas of professionalism, thinking, planning, setting expectations, leading and relating to others, approaching new situations flexibly and to continuing to learn (Hatano and Inagaki, 1986; McBer, 2000; Moyles, 2007). The pre-service teachers in this course were recognised as potential leaders; they were self-directed and demonstrated a sense of responsibility towards their students.

10.3 Conclusion

The pre-service teachers were encouraged to take on leadership roles, to make links with the community and parents, and to be leaders in their fields. The pre-service teachers were changing their perceptions; this process of theorising involves the ongoing learning from experiences in which pre-service teachers engage. The pre-service teachers were recognising what teacher qualities they need, what changes they needed to make and were making efforts to revise, this is consistent with Brown’ et al., (1983) research on metacognition. The pre-service teachers were changing their perceptions on teacher qualities across years and from year to year, this is evident in the data. This process aligns with the metacognitive process that pre-service teacher undergo (Brown 1980, 1982; Brown, Bransford, Ferrara, & Campione, 1983; Brown & Campion, 1996; Flavell, 1985, 1991& Posner et al., 1982). This learning process for individual teachers is central to their professionalism (Eraut, 1995). Gunstone and Northfield (1994) refers to this learning as ‘reconstruction’, involving conceptual change in ideas about teaching and learning, discipline knowledge and beliefs about themselves.

Pre-service teachers in this study engaged in the process of theorising as they reflected on what worked and what did not as a classroom teacher and through this process, recognised key interpersonal qualities as central to their professional identity as teachers. The research of Beijaard et al.’s (2004) on the theories of professional identity, identifies
four key features of: ongoing process of interpretation and re-interpretation of experiences; adoption of professional characteristics and attitudes prescribed; different contexts and relationships; and agency. Pre-service teachers in this study were engaged in the reconstructing and development of professional ideas. They readily prescribed to the requirements of the PDHPE teachers. They were conscious of differing student needs and the importance of interpersonal relationships, and they valued energy and agency as most important. In research on quality teachers, Solmon et al. (2004) identify the four characteristics, similar to those of McBer (2000), but also include the importance of being self-critical. McBer (2000) believed that high-quality teachers were more critical of their performance, more inclined to be reflective practitioners and have high levels of energy, passion and motivation. Pre-service teachers in this study were reflective, they made judgements, were motivated to engage students in learning, and were passionate about teaching. Chapter 11 continues to explore the pre-service teachers’ beliefs with a focus on how their belief systems change and developed over time.
Chapter 11: The Developmental Story: Egocentric to Student-centric?

11.1 Introduction

Data from the survey instrument highlights the evolving perceptions of the pre-service teachers as they progress from an egocentric stage at the beginning of their degree to a more student-centric stage in the later years of their course. Schommer (1990) refers to research by Perry (1968) on pre-service teachers’ developing beliefs stating that:

Students pass through stages of development in their epistemological beliefs. In the early stages of tertiary education, many students see ‘knowledge’ as being either ‘right’ or ‘wrong’ and believe that authority figures know the answers. When students reach the later stages of development, they realise there are multiple possibilities of knowledge and personal interpretations. (p. 499)

For the pre-service teachers in this study, developmental changes occurred in three distinct areas. The first area involved their interpersonal and professional qualities, where there was a shift in focus from ‘my’ performance as a pre-service teacher and ‘my’ interpersonal skills to ‘our’ performance, and the teaching and learning experiences in the classroom. The second area of development involved the pre-service teachers’ thinking beyond simplistic, technical skills, techniques or strategies for engagement, sometimes referred to as a ‘bag of tricks’ mentality, to a more sophisticated thinking involving ethical and personal responsibility of the teacher. The third development for the pre-service teachers was the shift in practice from simply engaging students in subject content to motivating students in deeper, purposeful learning.
11.2 A Shift from ‘Me’ to ‘Me and Them’

Over the four years of the degree, pre-service teachers in the study shifted their perceptions from viewing quality teaching as being about their performance in the classroom to a more reflective practice that involved the pre-service teacher considering the needs of their students. A series of tests were conducted to identify significance and changing patterns in the factors identified as views on interpersonal and professional characteristics. The results from the quantitative data revealed changing patterns in the interpersonal and professional qualities selected as most important across each year and over the four years.

At both Time 1 and Time 2, pre-service teachers consistently identified a good teacher as confident, energetic and relaxed. This interpersonal and professional quality remained consistent across each year and over the years. Other first-choice options became important in the latter years, suggesting a change in students’ thinking about their own interpersonal approaches to teaching and learning as they moved through the degree. The overwhelming response of a good teacher is confident, energetic and relaxed to the question of what a good teacher is suggests that as a cohort, PDHPE students tended to be and continued to be somewhat egocentric. This is not necessarily a negative finding. A transition or reconstructing of views from egocentric to student-centric still existed for the students. This was evident as other first choices were selected for interpersonal and professional qualities, particularly at Time 2 and in Years 3 and 4. Anecdotal evidence points to the pre-service teachers’ ongoing trialling and reflection on their perceptions of effective teaching both during coursework and especially as a result of their professional experiences.

The results identified relevant changes in the pre-service teachers’ perceptions of interpersonal and professional qualities, with six of the interpersonal and professional
qualities identified as significant or showing higher than average percentage changes at either Time 2 or Years 3 and 4 (see Table 11.1). The only exception to this was with the quality *enjoys students and makes learning fun*. This was identified as significant in each year except in Year 3. Year 3 was a point of change for the pre-service teachers studied with an increased emphasis on pedagogical qualities and competing priorities and expectations of professional practice at this time. The fluctuations suggest changes were transitory in nature for pre-service teachers in Year 3. This pinpoints the emergence of a new phase involving a change of thinking about teacher qualities. In this instance, the first phase can be loosely aligned with Years 1 and 2, characterised by an emphasis on the participants’ own personal learning and reflections on teaching. The importance of constructing a continuum of learning that encourages teachers’ professional growth is of significance in teacher education (see Table 11.1) (Lieberman, 1995).

Table 11.1

*Identified Significance or Percentage Changes to Interpersonal and Professional Qualities*

<table>
<thead>
<tr>
<th>Interpersonal/professional qualities</th>
<th>Year/Time</th>
<th>Significance/+ or – change</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Understands students and makes their teaching relevant</em></td>
<td>Year 4/Time 2</td>
<td>+23.1</td>
</tr>
<tr>
<td><em>Has a thorough knowledge of understanding of subject matter</em></td>
<td>Year 3/Time 2</td>
<td>−10.7</td>
</tr>
<tr>
<td><em>Shows and expects respect</em></td>
<td>Time 1 to Time 2</td>
<td>+9.1%</td>
</tr>
<tr>
<td><em>Sensitive to students needs and concerns</em></td>
<td>Time 1 to Time 2</td>
<td>+8.8</td>
</tr>
<tr>
<td><em>Enjoys students and makes learning fun</em></td>
<td>Year 1</td>
<td>P &lt; 0.001</td>
</tr>
<tr>
<td></td>
<td>Year 2</td>
<td>P &lt; 0.001</td>
</tr>
<tr>
<td></td>
<td>Year 4</td>
<td>P &lt; 0.001</td>
</tr>
<tr>
<td><em>Sensitive to students needs and concerns</em></td>
<td>Year 4</td>
<td>P &lt; 0.001</td>
</tr>
</tbody>
</table>

(see Tables 6.7 and 6.9)
A difference in thinking occurred between the two focus groups, from individual (me) in Years 1 and 2, to group thinking (me and my) in Years 3 and 4. Qualities such as confidence, energy and being relaxed were mentioned three times more often in Years 1 and 2 (FG1) than they were in the later years (FG2). There was a shift in thinking from interpersonal qualities that focused on personal performance (‘my confidence’, ‘my energy’) in Years 1 and 2, ‘my ability to relate to kids, say—if the teacher has no interest in what you do then you show an interested in what they are teaching you’, to more student-centred ideas on teaching by Years 3 and 4, ‘to understand where they are coming from. A lot of the time it’s the best way to get through to them—coming down to their level.’ This change in thinking can be attributed to the pre-service teachers’ developing understanding about teaching and their growing confidence within the broader role of teaching, which is particularly evident after professional experience.

Interpersonal and professional qualities such as confidence, energy or being relaxed did not necessarily become less important in the later years. Rather, there was a shift in focus to include interpersonal and professional qualities that considered the needs of the students and to thinking more deeply about how to engage students in the teaching and learning. The concept of stages of development in pre-service teacher thinking has been well documented in research (Fuller, 1969; Burn et al. 2003, 2000, Furlong & Maynard, 1995; Gal’Perin, 1970 & Kagan, 1992), this research showed that teacher development did occur. The pre-service teachers perceptions on teacher qualities changed, they became more student focused and less focused on their performance as they progress through their degree.
11.3 From Functional (‘Bag of Tricks’) to Personal and Ethical Responsibilities

The development of the pre-service teacher from working at a functional level towards an increased focus on ethical and professional responsibility was identified in changes from Time 1 to Time 2 and across Years 1–4. Pre-service teachers’ perceptions changed in terms of what teacher qualities were identified as most important, indicating a progression from working and thinking at a functional level to working and thinking as a professional teacher. The assumption is that participants did change their views, becoming more focused on their professional and ethical responsibilities in Years 3 and 4, compared to Years 1 and 2. To illustrate this change, it is important to look at the changes that occurred in two of the factors identified in quantitative data. This includes the changes that occurred to pedagogical factors and the changes that occurred in interpersonal and professional factors.

There are three main sources of evidence in the data to support the idea of change in participants’ perceptions from functional to professional and ethical over time. They include:

- A positive correlation between professional and interpersonal qualities, pedagogical approaches and professional pedagogical approaches was identified in the quantitative data (see Table 6.2). Pre-service teachers viewed these two factors as of similar importance; they were not viewed in opposition to each other. This is important, as their perceptions of the value of these factors remained consistently positive or negative in both areas over the four years; they were not viewed as one negative the other positive or vice versa.
• Changes in pedagogy
  
  ▪ in Years 1 and 2, adapts teaching to students’ learning styles \((P < 0.01)\) and plans lesson that are relevant \((P < 0.05)\) were identified as significant
  
  ▪ by Year 3, significance was identified for uses high-interest lessons \((P < 0.05)\).
  
  The above changes in significance suggest a reconstruction of ideas about pedagogy (Gunstone and Northfield, 1994). Having a range of pedagogical approaches that cater for individuals was still important but was not the most important quality for pre-service teachers by Years 3 and 4. In Year 3, it was more important to involve students in meaningful learning. In Year 4, no specific pedagogical approach was most important. This suggests broader ideas of pedagogy beyond the ‘bag of tricks’. In addition, there was a significant mean difference of \(P = 2.48\) between Year 1 and Year 4, indicating that by the time pre-service teachers were in their fourth year, their views on pedagogical approach had shifted, and other ethical and professional factors were becoming important to this cohort.

  Participants’ ideas on the importance of particular interpersonal and professional qualities changed over time. The data identified five common professional and interpersonal qualities ranked as first choice most often (see Table 6.7).
PERCEPTIONS OF TEACHER QUALITIES IN SECONDARY EDUCATION

Figure 11.1. Comparison of Years 1–4 at Time 1 and Time 2, frequency of first ranking of quality ‘is confident, energetic and relates well to students.’

The first quality, a good teacher *is confident, energetic and relaxed* was important in all years and most important in Years 1 and 4 at Time 1 (see Figure 11.1). This quality was most important at the beginning of the year in all years, highlighting the optimism common to the pre-service teachers in this degree. This quality became less important in Year 2 and Year 3, which suggests that other demands were becoming more pressing at this time (for example, pedagogy). There was a consistency in the importance of this particular quality for pre-service teachers’; however the selection of other qualities over time point to developing changes in perceptions. By the end of Year 1, the focus had started to shift from their own performance to a more reflective view of what else might be needed as a professional teacher. Interestingly, in Year 4 at Time 1, participants had a renewed interest in this quality, which is more of a reflection of the participants’ optimistic and outgoing personalities than a shift back to original ideas, for example, ‘it’s my final year I need to be confident, energetic and relaxed’.
Figure 11.2. Comparison of Years 1–4 at Time 1 and Time 2, frequency of first ranking of quality, ‘understands students and makes their teaching relevant.’

The second quality, *understands students and makes their teaching relevant* in the early years of the degree was of low importance. This increased dramatically at the beginning of Year 2 (see Figure 11.2). Pre-service teachers in Years 1 and 2 were acquiring a growing sense of importance of the need to *understanding students and to be relevant* as a pre-service teacher. This quality is perhaps indicative of their learning experiences as both a school student and university student. The dramatic drop in importance in Year 3 suggests changing priorities of the course at this time and the subsequent need for the pre-service teachers to acquire pedagogical expertise. By Year 3, they had gained some experience and confidence in teaching students so *understands students and makes their teaching relevant* was something they believed they could do. By Year 4, this quality had gradually started to regain its original level of importance. The pre-service teachers were again seeing the *need to understand students and be relevant* if they were to become effective professional teachers as they progressed to graduate teacher.
Figure 11.3. Comparison of Years 1–4 at Time 1 and Time 2, frequency of first ranking of quality, ‘enjoys students and makes lessons fun.’

The third quality, *enjoys students and makes learning fun* had become very important by the end of Year 1 for the pre-service teachers (see Figure 11.3). This belief continued through to Year 2 and re-emerged as important for the pre-service teachers in the final year. The changing patterns highlighted in Year 3 are indicative of the demands of other (pedagogical) qualities at this time. Pre-service teachers entered the course with the belief in *enjoying students and making learning fun* and even as they were linking new ideas to their frameworks over time, this teaching quality remained important to them. For pre-service teachers in Year 3, enjoying teaching students and making it fun was not the priority; however, they believed the importance of student-centred learning and the need to enjoy teaching and make it fun were not only important for their own students but for themselves as professional teachers.
In Years 1, having a thorough understanding of subject content was important. This belief declined in Year 2; however, by Year 3 and 4, content knowledge had regained a level of importance (see Figure 11.4). The pre-service teachers in this degree did value content knowledge; however, as they progressed through the course, the demands for other qualities became more pressing. In addition, they started to widen their view on other forms of knowledge (for example, professional knowledge) needed. The pre-service teachers experienced increasing demands and emphasis on practical and pedagogical learning in Years 2 and 3. This, coupled with the necessity of linking theory to practice during professional experiences, meant that gaining content knowledge was not the priority for participants. By Year 4, pre-service teachers had gained a level of confidence with the content knowledge of their subject areas, and anecdotally, viewed knowledge as something they could obtain as needed as a professional teacher and lifelong learner.
The fifth quality that highlights the development from the functional to the professional is the necessity for the pre-service teacher to be organised (see Figure 11.5). This quality was less important for pre-service teachers as they started the course, yet by Year 2 and Year 3, it had become an important teaching quality. The need to be organised reflected the demands of the course, particularly in Year 3 and 4, where pre-service teachers were required to balance the requirements of coursework, professional experience and a second teaching area. By Year 4 the pre-service teachers had shifted towards a gradual realisation that being organised was not only useful as a pre-service teacher but a requirement of a professional classroom teacher.

Many of the pre-service teachers’ perceptions early in the course were about their own performance as a teacher, about having the knowledge and skills to be successful in the classroom. Many of the pre-service teachers’ understandings were based on their own schooling experiences. Kagan (1992) suggests that ‘pre-service teachers enter programs of teacher education with personal beliefs about teaching and images of good teachers, images of self as teachers and memories of themselves as pupils in classrooms’ (p.142).
The idea that pre-service teachers bring with them images of self as a teacher, that gradually change as connections are made with new ideas is significant, particularly in terms of developing new perceptions about teacher qualities. It is also important to understand the influence of learning and teaching experiences on those new perceptions as they progress through the degree. According to Wubbels (1992), it is the pre-service teacher’s own image of self that functions as filter for knowledge and experiences in teacher education. This is noted, however, that by Year 4, this quality was again important. This supports the idea that pre-service teachers in the study experienced a shift in perceptions from valuing the ‘bag of tricks’ (functional purpose of teaching) to an increased importance in personal and ethical responsibilities in teaching. Changes in the pre-service teachers’ views on teacher qualities highlight their personal growth from a functional, skill-based view of teaching to a more holistic, ethical view of teaching required of the profession teacher. Researchers in teacher education stress the importance of the ethical and professional development of teachers and propose a range of ethical frameworks to guide the teachers’ professional practice. These include Bayles (1989), Beauchamp and Childress (1989), the ethical activist professional by Crawford and O’Neil (2009), the ethics of social justice by Noddings (1992), the ethics of care by Gewirtz et al. (2009), and trust, discretion and competency for the professional teacher practice and professional and personal attributes of a good teacher Moyles (2007).

In the study, pre-service teachers were progressing and developing from a functional to ethical position in teaching. In Years 1 and 2, they wanted to gain the knowledge and skills needed to provide good lessons: ‘if you have the skills to demonstrate the right actions and how to do it—then you have the knowledge and skills to get students to understand what you are trying to teach them and that makes a good teacher’. Pre-service teachers in the beginning years wanted to be able to relate to the students and
manage student behaviour: ‘you have a lesson plan and stuff you want to get through, get things done and you have to balance it’. This group’s ideas were based on their own schooling experiences both positive and negative: ‘[the teacher] has a quite word with them to find out what subjects they are interested in and try to relate to their interests’. The ability to be relevant in terms of content knowledge, teaching approaches and the ability to relate to students was seen as important professional teacher qualities. For this group, professional teaching was centred on their own ability to function as an effective teacher: ‘make sure you do modified games and practices to suit students’ interests’. They wanted to ensure their teaching was relevant and successful.

In contrast, pre-service teachers in Years 3 and 4 discussed the requirements of going beyond engaging students at the purely functional or technical level. They believed it was their professional and ethical responsibility to inspire and create interest for students: ‘I kept saying to them it’s your participation that matters to me’. Pre-service teachers discussed how to make the lessons more interesting or engaging for all students, which involved understanding their students and their interests. For pre-service teachers in the later years, it was important to be passionate, knowledgeable and creative teachers.

For pre-service teachers in Years 3 and 4, relevance was as important as content or strategies. It was about being able to talk the students’ language, motivate them, and encourage them to participate. In the discussions, participants in Years 3 and 4 had shifted their thinking to consider such things as the ethical obligations of teachers to support and help all students feel they are successful and one of the group.

11.4 From Engagement to Motivation

For pre-service teachers in this study, there was a conceptual shift in their understanding from viewing teaching in the short term as lesson engagement to the long-
In Years 1 and 2, pre-service teachers identified student engagement as essential for quality teaching, compared to the Years 3 and 4, where they demonstrated a deeper, more reflective level of thinking that considered aspects such as student motivation and student-centred teaching and learning. It is useful to look at the patterns and trends that occurred in the descriptive results in the following two areas:

- most common interpersonal and professional qualities at Time 1 and Time 2, Years 1–4 (see Table 6.7)
- most common pedagogical approaches at Time 1 and Time 2, Years 1–4 (see Table 6.13).

The descriptive results from the quantitative data provided useful evidence in demonstrating shifts in pre-service teachers’ perceptions on many of the qualities identified as most significant or common in both areas. Participants recorded higher percentages levels in Years 3 and above, choosing interpersonal and professional and pedagogical approaches as first choice by Year 4. Year 3 was identified as an important point in time where pre-service teachers were reconstructing their ideas particularly in relation to pedagogical approaches.

11.4.1 Pedagogical approaches.

Participants identified pedagogical approaches as useful in engaging and motivating students in learning. The patterns in the six approaches identified as first choice pinpointed the highest percentages in Year 2 and in Year 3. At this time pre-service teachers were required to link the learnt theory to practice through lesson planning and lesson delivery. They were starting to view pedagogical approaches both as useful to engage students and through careful selection, some approaches could provide longer-term
student engagement. Some pedagogical approaches, for example, adapt to students’ learning styles and uses a range of strategies, were identified as more important at Time 2 or Time 1 in the following year. This suggests a growing confidence with different pedagogical approaches and recognition of the connection between a particular approach and increasing student motivation in teaching and learning. The fluctuation in results over the four years illustrates the reconstruction of pedagogical beliefs, particularly in Year 3 and the consolidation of ideas by Years 4. For pre-service teachers in Year 4, the majority of the pedagogical approaches had taken on a renewed importance in terms of effective teaching. This implies that by the end of the degree, pre-service teachers had acquired deeper knowledge and expertise with pedagogy and an understanding of its impact on student motivation. Generally, Year 1 and Year 2 recorded lower levels of importance for pedagogical approaches, the only exception was adapting to suit students’ needs or contexts, which recorded higher importance at Years 1 and 2. This variation has more to do with the pre-service teachers’ own experiences of learning and the emphasis of foundational subject knowledge in the first two years of the degree. Common first choice pedagogical approaches include: uses high-interest lessons, uses a range of strategies, adapting teaching to cater for students’ need, adapting teaching to the environment and the context and a student-centred approach.
The pedagogical approach *uses high-interest lessons* was important in all years, with Year 3 identifying this quality as very important, particularly in the beginning of that year (see Figure 11.6). This pattern corresponds with the changes to other teacher qualities, supporting the idea that Year 3 was an important time in the degree for pre-service teachers as they packaged and repackaged their ideas on teaching. By the end of Year 3, pre-service teachers had gained experience and confidence in lesson planning and pedagogy, this growing confidence and experience supported their understanding and belief, that interesting lessons are more likely to motivate student learning.

*Figure 11.6. Comparison of Years 1–4 at Time 1 and Time 2, frequency of first ranking of quality, ‘uses high-interest lessons.’*
Figure 11.7. Comparison of Years 1–4 at Time 1 and Time 2 frequency of first ranking of quality ‘uses a range of strategies.’

The pedagogical approach *uses a range of strategies* revealed a similar pattern to *uses high-interest lessons*. The only difference for this teaching quality was that the increase in importance occurred at the end, rather than the beginning of Year 3 (see Figure 11.7). The pre-service teachers in Year 3 were focusing on teaching practice, establishing new beliefs around teaching in response to the demands of their professional experience. The participants’ by this time had recognised the value of developing a broad range of teaching strategies needed for student motivation beyond just keeping them engaged. The importance of *using a range of strategies* continued into Year 4.

![Comparison of Years 1-4 at T1 & T2](chart.png)

Figure 11.8. Comparison of Years 1–4 at Time 1 and Time 2, frequency of first ranking of quality, ‘plans lessons that are relevant to students.’

The pre-service teachers in the study wanted their teaching to be relevant. As such, *planning relevant lessons* was consistently identified as an important pedagogical approach for initially engaging students in the lesson and ultimately to motivate them in purposeful learning (see Figure 11.8). It was in Years 2 and 3 that the majority of the pre-service teaching pedagogical learning occurred. Planning is a key pedagogical skill for the pre-service teacher; its importance was viewed as essential in motivating students. There was a
particular emphasis on planning relevant lessons in Year 2 and Year 4: key points in the degree where participants need to demonstrate the success of careful planning during professional experience.

*Figure 11.9. Comparison of Years 1–4 at Time 1 and Time 2, frequency of first ranking of quality, ‘adapts teaching to students’ learning styles.’*

*Adapting teaching to cater for students’ need* was most important in Year 1 at Time 2. This reflects the pre-service teachers’ inexperience in pedagogy and early concerns about being able to cater for all students prior to undertaking their first professional experience (see Figure 11.9). The need to adapt teaching, to suit students continued to be important in subsequent years, with a particular emphasis in Year 4, prior to their final professional experiences. Pre-service teachers undertook coursework in special needs in Year 3, thus Year 4 was about putting theory into practice. The professional experiences opportunities and coursework in Year 3 provided the pre-service teacher with knowledge and experience on how to adapt their teaching for individuals. By Year 4, the pre-service teacher had developed from the view that catering for difference was about engaging all students in a class activity to the broader view that inclusion was about motivating all students to learn regardless of their specific needs.
Adapting teaching to the environment and the context was important across all years, particularly in Year 2 and Year 4 (see Figure 11.10). It is in Year 2 that pre-service teachers are first introduced to their second teaching area. The concern for the pre-service teachers at this time is twofold: one involves teaching in a second teaching area (different context); the other is the requirement to complete a variety of professional teaching experiences in an environment that they may not be familiar with (i.e. different to the school they attended). By Year 4, this pedagogical approach had regained importance as pre-service teachers’ confidence with teaching increased. By Year 4, there was the recognition that effective teachers are able to adapt to different environments and contexts and that this pedagogical skill is needed if student engagement and motivation is to occur. This belief was shaped by prior learning experiences and the expectations and requirement of the final internship.
Figure 11.11. Comparison of Years 1–4 at Time 1 and Time 2, frequency of first ranking of quality, ‘a student-centred approach.’

For participants in this, having a *student-centred approach* to their teaching was identified as increasingly important, particularly in Years 2 through to Year 4 (see Figure 11.11). It is interesting to note that this approach to teaching showed limited importance at Year 1, Time 2 and in Year 4, Time 1. The development from egocentric to student-centric teaching is clearly reflected in this pattern. In Year 1 at Time 1, the pre-service teachers were preoccupied with their own teaching performance. This is repeated in Year 4, prior to the final professional experiences with the return of the focus on individual performance. By Year 4, Time 2, this view had changed. The pre-service teacher had completed their final internship with the student-centred approach to teaching being identifying as an important pedagogical approach in motivation student learning.

### 11.4.2 Interpersonal and professional qualities.

One of two distinct patterns occurred for *interpersonal and professional qualities*, either an increase in importance for the quality from Years 1–4 or increased fluctuations in Years 2 and 3. However, for all of the *interpersonal and professional qualities* identified as first choice by Year 4, their importance had consistently returned to starting level or
higher. This result shows that pre-service teachers valued interpersonal and professional qualities such as student-centred approach, sensitive to students’ needs and projects enthusiasm for teaching and viewed these qualities as instrumental for student engagement and by the later years had increased in value. They not only engaged students in lessons but could be useful in motivating students in long-term learning.

As with the pedagogical approaches a similar reconstruction of perceptions occurred for interpersonal and professional qualities. This was evident in the fluctuations that occurred in Years 2 and Year 3 for challenges and encourage students, help students develop self-esteem and employs knowledge of students to facilitate learning. This result reinforces the idea that Years 2–3 are an important point in time for pre-service teachers’ redevelopment of beliefs and ideas about teaching, with consolidated of views occurring in Year 4. It can be surmised that by Year 4, pre-service teachers’ views on interpersonal and professional qualities had broadened, they could now see the value of interpersonal skills in motivating students in learning, in contrast to the narrower view held in earlier years of seeing these qualities as a personality type that is useful to engage students in subject content. First-choice interpersonal and professional qualities include: sensitive to students’ needs and concerns, challenging and encouraging students, help students to develop self-esteem, employ knowledge of students to facilitate learning and projects enthusiasm for teaching.
For the pre-service teachers, it was consistently importantly to be sensitive to students’ needs and concerns (see Figure 11.12). The emphasis on being sensitive to students’ needs and concerns at Time 2 indicates that the learning experiences that were occurring for the pre-service teachers across each year were affecting the participants’ belief that being sensitive to students needs was essential to student learning and motivation.

Figure 11.12. Comparison of Years 1–4 at Time 1 and Time 2, frequency of first ranking of quality, ‘sensitive to students’ needs and concerns.’
Figure 11.13. Comparison of Years 1–4 at Time 1 and Time 2, frequency of first ranking of quality, ‘challenges and encourages students.’

The professional and interpersonal quality *challenging and encouraging students* was identified as important in all years, with particular importance in Years 2 and 3, when pre-service teachers were developing and reconstructing their ideas around pedagogy (see Figure 11.13). The increase in importance of *challenging and encouraging students* in Years 2 and 3 reinforces the ideas of a close relationship existing between interpersonal and pedagogical qualities and the influence on student learning and motivation. The lower percentages recorded at Time 2, Year 4 highlight the pre-service teachers’ growing confidence with being able to *challenge and encourage students* at the completion of their final professional experiences, and their growing maturity as a teacher.

Figure 11.14. Comparison of Years 1–4 at Time 1 and Time 2, frequency of first ranking of quality, ‘helps students to develop self-esteem.’

The pre-service teachers wanted to *help students to develop self-esteem*. They believed it was essential for class participation, particularly in practical classes. This professional and interpersonal quality was consistently viewed as important in all years, particularly in Years 2 and 3, where the pre-service teacher were repositioning and
reconstructing their beliefs about pedagogical practices and student motivation (see Figure 11.14). The importance of this quality demonstrated the participants’ growing belief in role that the teacher plays in supporting student confidence with learning. The pre-service teachers believed that if they could develop confidence in their students, (engagement) would occur, and this would build self-esteem and increase motivation.

![Comparison of Years 1-4 at T1 & T2](image)

*Figure 11.15. Comparison of Years 1–4 at Time 1 and Time 2, frequency of first ranking of quality, ‘employs knowledge of students to facilitate learning.’*

The pre-service teachers believed it was important to *employ knowledge of students to facilitate learning.* This belief increased in importance from Year 1 to Year 3 (see Figure 11.15). Having knowledge of students allowed the pre-service teachers to plan relevant lessons and ensured that their teaching engaged the class and motivated individuals. A slight decline in importance in Year 4 at Time, this corresponds with the egocentric focus of the pre-service teachers prior to their final professional experience; however, *employing knowledge of students to facilitate learning* was again identified as important by the end of Year 4.
The pre-service teachers tended to be positive and have outgoing personalities and this is reflected in the pattern identified for *projects enthusiasm for teaching*, which showed a general increase in importance from Year 1 to Year 4 (see Figure 11.16). In Year 3, participants recorded the lowest percentages. The pre-service teachers were at this stage engaged in the repositioning and reconstruction of beliefs around teaching, particularly as they engaged in professional experience. Pre-service teachers believed it was important to show they are passionate about teaching and felt this contributed to student motivation and encouraged learning. They viewed this as an important *interpersonal and professional quality*: one of the qualities that had inspired them to become a teacher.

### 11.5 Conclusion

The conceptual shift from engagement to motivation was evident in the discussions in the focus groups. Students in Years 1 and 2 discussed having the knowledge and skills needed to provide high standard lessons. They wanted to be able to relate to the students, get on well with students and manage misbehaviour. This group felt it was important to engage and encourage students but were often unsure of how to do this. For pre-service
teachers in the early years, it was important to have interpersonal skills and positive attitudes, and this contributed to the teachers’ ability to build relationships. This group valued traditional methods of teaching and the benefit of hands-on, creative strategies: ‘I really enjoy it when the teacher used tactile methods—using models, pulling them apart, and working with it, real like manipulating stuff’.

The pre-service teachers in the later years wanted to motivate students, using both their own interpersonal abilities and in using specific strategies to inspire and interest students: ‘I think you are more creative as the environment changes from either indoor or outdoor or in a classroom’. The pre-service teachers discussed modifying games to make the lesson more interesting or engaging for all students. This group talked about understanding the students and their interests.

The pre-service teachers wanted to be passionate, knowledgeable and creative and this was seen as important in making lessons interesting and motivating for students. This involved using a range of teaching and learning strategies that were inclusive and responsive to the students and to the context. Pre-service teachers in Years 3 and 4 wanted to be able to design learning strategies that students saw as relevant and catering to the individual needs in the classroom. There was a shift to a more student-centred approach in the later years, with a focus on getting students actively involved in learning.

Pre-service teachers in the early years of the course were focused on their own performance and interpersonal skills. They stated ‘being well planned will help you out, I don’t plan enough, as a pre-service teacher you have to be really well planned’. While in the later years of the program, the emphasis had shifted to the importance of encouraging the students to do well and to engage in deep purposeful learning ‘… show an interest, respect opinions, talk and listen.’
A significant shift in thinking occurred around Years 2–3. This involved the repositioning and reconstructing ideas about teaching (Fischler, 1999; Gunstone & Northfield, 1994; Hand & Treagust, 1994). Fischler’s (1999) research refers to a point in teacher education where pre-service teachers’ conceptions change as they accept the ideas and the positive benefits of teaching and learning that is orientated towards the school students’ conceptions. This is referred to as a point of critical reflection, suggesting that pre-service teachers let go of misconceptions and gain perspectives on what it means to be a teacher, a shift from being a student of teaching to becoming a pre-service teacher (Brown 1980, 1982; Brown, Bransford, Ferrara, & Campione, 1983; Brown & Campion, 1996; Flavell, 1985, 1991 & Posner et al., 1982; Witt, 2009). Years 2–3 is an important time for the pre-service teachers, as they discarded earlier ideas of what was important and adopted alternative views of teaching (Briscoe, 1996; Shaw et al., 1990; Tobin & Jakubowski, 1990). Pre-service teachers started to develop more student-centred ideas and approaches and were exploring what it meant to be inclusive and relevant. This phase saw a shift away from the personal focus to a more ethical and professional role for the pre-service teacher. Pre-service teachers wanted to make a difference, cater for all students, and be effective, inclusive teachers. This has been referred to as acquiring an ethics of care (Collinson et al., 1999). Ethical learning for the pre-service teacher is as important as gaining sound content knowledge and pedagogical knowledge in addition to being instrumental if teachers were to bring out the best in their students.

Years 4 was where pre-service teachers consolidated their ideas and even though they still wanted to have fun, be energetic and relaxed. They also wanted to inspire and motivate their students. For pre-service teachers in Year 4, it was important to do more than have busy classrooms. They wanted purposeful learning and they were beginning to see themselves as professional teachers. Ayers (2001) states that ‘good teachers are not
always fun; good teachers should aim always for authentic engagement with students’ (p. 26). By the end of Year 4, the pre-service teachers wanted to be teachers that were learner-centred, relevant, authentic and actively engaged their students in deep and meaningful learning. It was important to be more responsive and respective of the different needs in their classrooms (Dunn & Rakes, 2010).

The shift in pre-service teachers’ perceptions from egocentric to more student-centric view were influenced with exposure to coursework and professional experience during the four years of the degree. This resulted in the pre-service teachers rethinking their ideas about specific teacher qualities, particularly in Years 3 and 4. Witt (2009) emphasises that becoming a teacher involves more than the acquisition of pedagogical content and refers to a transformation involving unlearning and learning new ideas and challenging ideas about teaching. The results presented in this research reflect this transformation especially in Years 2–3.

As pre-service teachers moved through the degree, there was a shift from viewing teaching as a set of skills to be acquired to the broader concept of teaching as professional ‘art’. By Year 3, there was less focus on the acquisition of content knowledge. Edwards (1995) refers to the changing ideas of pre-service teachers as a zigzagging action between discussion of learning situations and reflective explications that leads to a growing sophistication of students’ cognitive abilities, in terms of understandings learning and teaching situations. In Year 3, the focus was on motivating and engaging students in high-interest lessons, being organised, planning well and demonstrating that you could adapt teaching and learning to suit specific contexts and individuals. The importance of student motivation is linked to the relationship between teacher enjoyment and confidence (Martin, 2006).
Catering for individuals had moved from being about their own successful performance to what was ethically expected of the professional teacher. Research supports the importance of linking theory to practice and the ability of pre-service teachers to conceptualise theories in connection with student teacher practices (Korthagen, Kessels, Koster, Lagerwerf & Wubbels, 2001). For the pre-service teacher, it was now important to demonstrate not just knowledge of the theories of how to cater for difference, but to ethically demonstrate a commitment to it. This implies that theoretical knowledge and skills need to be linked to expertise in practice and that to do this, pre-service teachers need to acquire professional language and understandings (Swennen et al., 2008).

The fluctuations in interpersonal and professional qualities in Years 2 and 3 highlight a crucial point in the degree when pre-service teachers reconstructed their ideas and gained professional language and understandings. Increased professionalism was demonstrated in Years 3 and 4 by participants placing greater importance on being able to challenge students, develop students’ self-esteem and employ knowledge of students to improve teaching and learning. Pre-service teachers wanted to be sensitive to students’ needs and understood the importance in projecting enthusiasm for the students and teaching.

Although interpersonal and professional qualities in Year 4 had lower percentages than the year prior, there was still a positive trend upwards overall. This can be viewed as a period of consolidation for the pre-service teachers as they move towards a more student-centric professional outlook towards the end of the degree. Korthagen et al.’s (2006) highlights the need for pre-service teachers to learn from experience to build professional knowledge and understandings. The results suggest that in this study, pre-service teachers had built upon knowledge and experience and had shifted their thinking to the view that ‘teaching is an interactive practice that begins and ends with seeing the student’ (Ayers, 2001, p. 25).

Data from the survey instrument and the reflections from the focus groups highlight the
evolving perceptions of the pre-service teachers explored in this Chapter. This
development from egocentric to student-centric occurred over the course of the four year
degree in three distinct areas. The first was the pre-service teachers shift in thinking about
teacher qualities that initially focused on their individual performance to the shift to greater
student-centred understandings and approaches. The second area was a shift from working
at a functional level to an increase in focus on ethical and professional responsibilities. The
final shift for the pre-service teachers was a conceptual change in thinking and
understanding from viewing teaching in the short-term, as lesson engagement, to the longer
term view of motivating students in purposeful learning. The pre-service teachers used
what they had learned, during the course to continually questioned and reflected on their
level of expertise reconstructing ideas and perceptions. They questioned their current levels
of expertise and attempted to learn and build upon them; they wanted to do things better.
Crucial to reconstruction for the pre-service teachers was their personal perception of
valuable teacher qualities.

Chapter 11 discussed the pre-service teachers’ shifting ideas, in Chapter 12 the
focus is on the influences on their developing views through the lens of the teacher
educators and the external drivers.
Chapter 12: Teacher Qualities: The Influence of the Teacher Educators

12.1 Introduction

The teacher educators’ perceptions provide a valuable lens through which to consider the views and the beliefs of the pre-service teachers, with many of the differences mirroring the contrast between the expert and the pre-service teacher. It is also useful to consider the role the teacher educators may have played in terms of influencing the pre-service teachers’ perceptions. Simultaneously, the teacher educators’ personal aspirations for the pre-service teachers alongside the syllabi or outcomes expressed in their units of study were reviewed in order to identify if the aspirations are reflected in the stated learning outcomes for the pre-service teachers. This discussion will follow a similar exploration of the three broad constructs covered in the data derived from the pre-service teachers: knowledge, pedagogy and interpersonal and professional qualities. Additionally, the developmental view of the pre-service teachers’ learning will also be considered from the viewpoint of the teacher educators. This review will encompass what was similar, any differences and points of tensions or contrast between the different teacher educators.

12.2 Knowledge Qualities

The teacher educators’ interviews referred to different forms of knowledge, illustrating similar ideas to those expressed by the pre-service teachers. There was an emphasis on the need for pre-service teachers to establish a solid understanding of subject content and then progress to the more complex teacher knowledge. Having other
knowledge, particularly professional knowledge and expertise, was equally valued and included knowledge on how to link theory to practice, being able to balance demands, manage time and the ability to adapt, modify and use new knowledge. In attempting to define effective teacher qualities, it is necessary to consider that it involves more than a sound grasp of the content knowledge and skilful use of pedagogy (Duffy, 2009).

The sports specialists identified the need to have pre-service teachers work from a solid content basis first, then focus on specific teaching skills. The emphasis in the sports units was around rules, techniques and strategies and having a thorough practical understanding of a broad range of sports and physical activities that the pre-service teachers would be required to teach in schools. One of the strengths was the practical nature and hands-on approach to the content: ‘the fact that they’re practical, so that they’re doing the real things … the strength of the unit is about the actual practical task of teaching health or teaching physical education’. Quality teaching includes ‘content knowledge expertise’ as a criterion, yet teaching is often described as ‘elusive and complex requiring the use of professional judgement and specific knowledge and technical skills’ (The Education Review Office, 1998). A pressing issue was managing time constraints, establishing a balance in the course in terms of academic content and practical units: ‘you’re limited in terms of the hours you’ve got, limited in terms of the amount of practical activities they can do … there’s a balance between the academic and the practical as well’.

Consistent with the teacher educators is Vu's (2007) belief in the value of authenticity in theory and practice in teacher education. The authenticity enhances students’ learning and program outcomes and is essential to integrating real-life, student-centred situations related to the teaching profession. This suggests that the teacher educator needs to have credibility as a practitioner and an ability to create authentic curriculum and opportunities for authentic student-centred learning.
The health specialist identified pre-service teachers’ early learning as being very content driven, providing a foundation upon which they could then build. This scaffolding was seen as important and sequential: ‘scaffolding and learning that’s what we’re doing … if you don’t … [you] stuff up the order’. The tutorial program encouraged students to participate in value clarification and exploration of the theoretical content delivered in lectures. The Health specialists felt that some pre-service teachers did not see the health content as being important, and viewed the subject content as something they could obtain as they needed in teaching: ‘[they thought] they could get it on the web. You just Google it next time, it’s not a problem, you read it in magazines, it’s always there, it’s always accessible.’ What was also considered pivotal was the linking of educational content (curriculum/syllabus) to specific health content and demonstrating a sensitivity and awareness when teaching health. The importance of creating links for students was stressed by the health specialist: ‘I do make the point of getting them to dig out how their health classes actually relate to the PE classes’. An issue for teacher education is the failure of many pre-service teachers to recognise the link between the school experience and formal university coursework (Lieberman, 1995).

The sports science content was biomedical and this provided a challenge in terms of application to practical situations. Learning and organisational theorists tell us that people learn best through active involvement, in-depth inquiry, a connectedness to knowledge, authentic links to the real world and opportunity to reflect on what they have learnt (Covino & Iwanicki, 1996; Wehlage et al., 1996). The sports scientist stressed the importance of a strong, content foundation and strong conceptual base upon which students could build knowledge and apply it to different situations. The foundation units of anatomy and physiology were identified as being the main content focus: ‘I want to lay down a foundation that the biomechanics, the physiology of exercise, the motor control, the
psychology … the sports medicine … so that ideas can be laid on top without the foundation collapsing’. Acquiring foundational knowledge is supported in US national studies on educational reform that argue that knowledge should frame teacher education and directly inform teacher practice (Carnegie Task Force on Teaching as a Profession, 1986; The Holmes Group, 1986).

There was an identified need for students to develop a willingness to ask for help or advice in terms of content knowledge and to develop an ability to take content and modify it or adapt or expand for new situations. Effective teachers should be concerned about and practice continuous growth and development, and be reflective practitioners and lifelong learners (Brighouse & Woods, 2000). Knowing how to adapt, modify, select and review knowledge was viewed as an important aspect of teacher knowledge by both the pre-service teachers and the teacher educators.

A strong content knowledge base was valued by both the pre-service teachers and the teacher educators. A tension was that this did not remain consistent with the pre-service teachers viewing knowledge as more important in the beginning of the course than in the later years and with professional knowledge and pedagogy more highly valued later in the course than content knowledge. There was a shared common belief in the value of hands-on practical approach to knowledge. In the early years, knowledge was viewed as a source of power in the classroom. However, later in the course content knowledge for many of the pre-service teachers was viewed as something that could get as you needed.

12.3 Pedagogical Qualities

The teacher educators identified a distinction between pedagogical approaches and PPP. The acquisition of pedagogical knowledge was viewed as developmental in nature, with the pre-service teachers gaining pedagogical knowledge and skills first and then
acquiring pedagogical understandings needed for the professional teacher later. The
teacher educators identified specific pedagogy, which could be referred to as pedagogical
approaches, and discussed PPP, which they believed was important for pre-service teachers
to know, develop and be able to demonstrate as professional teachers. A broad view of
teaching was reinforced by the teacher educators who identified a range of pedagogical
approaches that their specific subject areas favoured. They did agree that the learning of
pedagogy was progressive in nature.

The teacher educators, observed that learning involved the process of laying down
a firm foundation of content knowledge in the early years of the degree: ‘the first two years
we work on the knowledge part of it, so what we’re trying to do is get as much content
information … all the sorts of things that they’re likely to be required to teach’. Then they
progressed through to combining the content with appropriate pedagogical approaches.
The teacher educators had a holistic perception of how the ‘finished’ pre-service teacher
would be, with the expectation that pre-service teachers would acquire the necessary
pedagogical professional understandings by the later years of the course. This
developmental process was highlighted by the sport scientist: ‘it changes a bit, because the
emphasis is more on them as a teacher rather than them as students in the second half of
their course’. Northfield (1997) supports the idea that pedagogical learning is
developmental, describing pre-service teachers’ learning as constructivist in the sense that
individuals construct personal meaning ‘as newer experiences are linked to existing ideas
and values’(p.49). The teacher educators identified specific student-centred pedagogical
approaches and modelled these in their own teaching of the pre-service teachers. These
pedagogical approaches were viewed as best practice and most effective for high school
teachers.
Favoured pedagogical approaches identified by the sports specialist included the importance of modelling, demonstrating and performance in the degree, rather than just listening particularly in teaching of sports skills, and ‘the importance of demonstration … recognising quality performance and demonstrating quality performance is really important’. The health specialist favoured student- and resource-centred pedagogical approaches that also included demonstrating and performing not just listening. This include the hands-on application of learning and was seen as a strength, particularly in the application to curriculum planning, OHS and practicing classroom exercises: ‘I worked with … where they were coming from … a student-centred approach, which I was modelling and explicitly saying I am modelling this’. Teaching students to link skills to games and apply classroom knowledge was seen as important pedagogical approaches for the sport scientist. The sport scientist used pedagogical approaches such as episodic memory and visual memory, suggesting that student teachers probably teach this way. This also reflected the way they learnt. A key teaching strategy that was used by the sport specialist was demonstration and peer modelling. Pedagogical approaches that involved student-centred learning and participation, where the pre-service teachers were required to construct their own meaning, were more effective than pedagogical approaches that placed emphasis on memorisation of facts and mastery of routine skills. This reflects the current thinking with respect to effective pedagogy in that it requires a greater focus on application, reasoning and conceptual understanding (Darling-Hammond, 2000).

The teacher educators focused on pedagogical approaches such as developing communication skills, particularly leading and generating discussions in the classrooms, and skills in debriefing. They encouraged the pre-service teachers to share and learn from different teaching styles. They wanted students to develop techniques for managing, manipulating discussion and disclosures and to formulate skills in linking PE to health.
These PPP were: ‘skills of delivering information, but also being able to unpack information and experiences … how you stop conversations, how you manipulate a discussion with a group of teenagers. How you avoid them disclosing stuff in public’, were seen as important and essential for successful teaching.

The teacher educators identified the category of PPP and referred to it as the professional understandings needed for effective teaching in the classroom. This included inclusive practices, lifelong learning and professionalism. The teacher educators also referred to the professional role of the teachers beyond the classroom such as health experts, coaches, and team leaders. For the sport scientist, professionalism came with the position whether it was as a coach or teacher. The teacher educators identified being a leader and having control of the learning situations as important professionally. Being prepared to do extracurricular work was also considered part of the professional responsibility of the position: [the pre-service teachers] put their hand up and go ‘yeah, I’ll take the team. Other PPP aspects included attention to OHS issues and showing a genuine interest in students and their teaching area. The pre-service teachers saw value in the professional role consistent with this is Tipp’s (1994) belief in the importance of providing adequate professional preparation and opportunities for teachers. According to Schon (1988), it has evolved to the point where ‘the professional school’s prevailing conception of professional knowledge may not match well with the actual competencies required of practitioners in the field’ (p.25). However, an emphasis on subject content at the expense of professional education courses are likely to be less effective in preparing pre-service teachers (Ferguson & Womcak, 1993).

The sport specialist referred to the modelling of pedagogy and inclusive attitudes: ‘I always to model respect for all students and respect for opinions and needs’. Adapting teaching to students’ needs and differing contexts was discussed. This involved using a
range of approaches, ‘a range of pedagogy to use, depending on different situations in a classroom, different types of students, different type of content’, and being able to adapt and modify to suit individuals: ‘a different approach to teaching to get it across in a meaningful way to students, especially with adolescents and their different life stories … more inclusive and demonstrated a broader perspective’. The teacher educators had similar beliefs to the pre-service teachers on pedagogy, these beliefs were shared with the pre-service teachers in their units and as a result shaped the pre-service teachers pedagogical understandings and practices. The idea of relevance was reinforced by the teacher educators who acknowledged and encouraged the PDHPE pre-service teachers to take on roles in the broader school community. The idea of developing pre-service teachers who were able to connect with the broader community was important as it reinforces the concepts of PIK as being important pedagogical qualities in the degree. The development of professional teacher standards since the 1990s has broadened the definition of professional teaching to view teaching as a collegial professional activity with membership to a broader community (Mitchell et al., 2001).

The teacher educators valued authentic experiences and learning on the job (professional experience). They believed this provided real opportunities for pre-service teachers to develop pedagogical skills and understandings so they could learn to modify and adapt teaching to students’ specific needs. The health specialist referred to the need to adapt and modify to suit individuals and to be flexible to students’ needs: ‘to be discerning about what you teach and when you teach it and how you might teach it’. Relevance, the importance of generating interest, motivating students and developing problem-solving and enquiry-based learning skills was identified in the pedagogical practices of the sports scientist: ‘I am aiming at motivate them in the lab and keep them interested and thinking.’

Evertson et al., (1985) suggest that there is a need for teacher education programs to focus
on decision making, attitude formation and analytical skills. Authenticity and relevance in teacher education is needed, with careful integration of school and classroom culture if pre-service teacher practice is to be relevant and meaningful (Cambourne, as cited in Ramsey, 2000). However, there is a degree of ambiguity around the term ‘authenticity’ (Ridley & Stern, 1998; Torrance, 1995). This ambiguity can be seen in the pre-service teachers perceptions of what they viewed as ‘authentic’ and relevant.

The moral purpose of teaching supports the idea of teachers having a significant role to play beyond the classroom (Byrne, 2005). Similarly, research into teaching suggests that effective teaching is a combination of ethical, moral commitment and good management and instructional techniques, together they are part of what constitute the beginnings of effective professional practice (American Association of School Administrators, 1986). McBer (2000) reports on research into ‘teacher effectiveness’ and finds three main factors that impact on teachers’ ability to significantly influence student progress: teaching skills, professional characteristics (moral/ethical commitment) and the classroom climate. Woolfolk (2000) adds to this view by suggesting that quality teaching is a combination of professional ethics and subject knowledge.

The teacher educators recognised the importance of pedagogical learning in the course, particularly in Years 2–3, where key method units and extended professional experience blocks occurred. They were strong advocates for a solid content based upon which to build pedagogical practices. Being able to motivate and engage, having a range of teaching strategies, plan, and adapt were embedded in the broader ideals of pedagogical learning. The teacher educators highlighted the need for pre-service teachers’ to develop professional skills in independent and lifelong learning. They encouraged pre-service teachers to develop skills in research, in addition to valuing pre-service teachers learning on how to plan, organise, evaluate and reflect on their lessons: ‘those teaching skills, which
help them plan, help them tailor activities to the needs of students, help them evaluate and reflect on their own experiences when they teach … [are] good routine in terms of planning a lesson and a good routine in terms of implementing the lesson’. Shulman (1987) proposed that effective teaching was a manifestation of a teachers’ PCK. This enabled the pre-service teacher to link knowledge to pedagogy as a way of representing and formulating their subjects thereby making it comprehensible to others. In order to develop this skill, teachers need to be familiar with the interrelationship between teachers’ knowledge, subject content and pedagogy, and the need for teachers to develop a range of strategies to present knowledge (So & Kim, 2009).

There was an emphasis on the importance of reflection and the ability to evaluate their own and other’s teaching as an important professional pedagogical skill. The teacher educators wanted the pre-service teachers to learn how to think, how to work in teams and how to work cooperatively with other students:

They break the lesson into parts and they make sure that they’ve got the parts covered in terms of the different domains … so they make the kids [sic] think; they make the kids [sic] do the practical skills and they make the kids [sic] work with each other in sort of cooperative teams and the kids [sic] are aware and look after each other’s needs.

Consistent with this emphasis in the PDHPE program is research that supports the view that reflective inquiry deepens the understanding of teaching and learning for pre-service teachers (ACSA, 2005; Briscoe, 1996; Edwards, 1995; Reid, 2005; Witt, 2009).

There was considerable commonality with the teacher educators’ ideals on pedagogy and the pre-service teacher educators’ views of what was important. This suggests that the teacher educators reinforced and modelled the pedagogical
understandings and practices that teacher educators valued, and that these were then made explicit by the pre-service teachers. An aspect of commonality include an emphasis on active, authentic, relevant learning, peer modelling and demonstrations, the use of group discussions, and the importance of inclusive practices. Points of variation were the value of memorisation, mixed views on the mastery of skills versus the use of games and the level of community participation.

12.4 Interpersonal and Professional Qualities

Professionalism emerged as a theme from the analysis of the teacher educator interviews. This theme reflected on the professional and interpersonal qualities and the relationships that existed between teaching practice and the interpersonal expertise required of the pre-service teacher. The teacher educators believed it was necessary to develop and nurture interpersonal and professional qualities in the pre-service teachers. The concept of professional development of pre-service teachers are supported by researchers in the fields, particularly McBer (2000), Kiggins (2007) and Woolfolk (2000), who reinforced the idea that teaching is complex, involving a combination of skilful activity and demands on the professional.

The development of professional qualities was viewed as a transformational process with strong ties to content units, pedagogy units and professional experience. There was a recognised need to develop the professional capacity of linking theory knowledge to professional practice. The linking of theory to practice is often an issue for teacher education programs (Wubbels, 1992). The teacher educators wanted to develop professional teachers by providing a solid content background on which to base pedagogical and professional decisions around teaching and learning. The teacher educators recognised the need to do this through authentic learning experiences. Authentic
practice for teachers involves the creation of ongoing professional learning cultures for teachers (Carpenter et al., 2000).

The role of teacher enjoyment and confidence is linked to pedagogy efficacy and effective quality teaching (Martin, 2006). It is also proposed that interpersonal qualities can affect student teacher relationships, motivation and engagement (Teven & McCroskey, 1997). The role of interpersonal characteristics is a significant aspect of teaching: ‘teaching is a profession that relies as much on skilful human relations as it does on subject matter and pedagogical skills’ (Collinson et al., 1999, p.365).

The teacher educators recognised the leadership and interpersonal qualities of many of the pre-service teachers and viewed them as necessary for effective teaching. The teacher educators actively encouraged the pre-service teachers to take on leadership and to be a positive presence in schools. One of the identified themes in the teacher educator interviews centred on the development of the pre-service teachers’ professional education leadership. Leadership characteristics qualities for teachers included being self-critical, energetic, motivated, skilled and knowledgeable (Solmon et al., 2004).

For the sports specialist, professional growth was emphasised as a developmental process of encouraging students to start thinking like teachers, both in their pedagogical learning and professional practice. Developing professionalism was seen as important in developing the ethical practices of pre-service teachers. The concept of professional capacity was seen as a developmental process, involving ethical practices and principles of professionalism. The teacher educators modelled inclusive practice in terms of developing professional ethics in pre-service teachers ‘in terms of being inclusive and making sure everyone gets a fair go’. The importance of the professional relationship with schools was identified as crucial to the development of the students’ professional qualities. Quality teachers are able to ‘create relationships’ in which learning can flourish. In teacher
education, this means developing pre-service teachers who, through good interpersonal skills, are able to motivate, create and nurture supportive working relationships (Collinson et al., 1999, p.357).

Leadership skills, referent power and being the type of teacher that students want to follow were seen as essential to effective teaching: ‘get kids to listen, get them to follow you, you’ve got to be the leader’. They felt it was important to develop teachers that were capable and prepared to cater for individuals in the class: ‘they’re really acutely aware of looking after the needs of the timid or the quite kids in their class, not just catering for kids who are good at sport’. For the teacher educators, the focus was on catering for individuals, fairness, allowing competition to be fun and purposeful and being aware of physical and psychological bullying or intimidation that can occur in school sports. Purposeful learning was about teaching students skills in a cooperative, fun environment, and not using the ‘babysitting technique’. One of the values that they highlighted was the need for the pre-service teachers to love sport and physical activity because this inspired the students: ‘just to be someone who really loves being physical and loves to encourage other people’. An effective practitioner recognises the social and moral role of teaching and fosters in students the ability to take on the ‘responsibility for their own learning and become more involved as thinking learners rather than rote learners’ (Butler, 1992, p.221).

A personal philosophy and values system that encompassed interpersonal qualities such as establishing a rapport and having respect for students was identified by the sports specialist as desirable for pre-service teachers. They were encouraged to develop and demonstrate these qualities in their teaching practice, ‘building good rapport and expectation, having kids understand that you’ve got a certain level of expectation with regard to them … your respect for them’. They also identified the importance of the ability to be perceptive, to develop good listening skills and strategies and to quickly identify and
understand students’ needs. Being charismatic, having a firm presence, being confident, and listening to students were all identified as belonging to a particular personality type that was more effective in engaging students in learning. Duffy (2009) identifies the need to develop pre-service teachers with strong personal philosophies, and decision-making skills that require ‘thoughtful adaptation rather than technical compliance’ (p.237). He argues that pre-service teachers ‘should form their own stance … on teaching’ not follow a set pattern (Duffy, 2009, p.237).

For the sports scientist, professionalism came with the position. The sport scientist identified being a leader and having control of the learning situation as important professionally. Having sound pedagogical skills and being prepared to do extracurricular work was also considered somewhat unique to the position. For the health specialist, the desirable teacher qualities centred squarely on the need to make health education relevant both to the students and to the broader school community: ‘actually tell them that’s what they will be by default, because other members of the school community and other teachers and other students and whatever and their families will look to them for help’. The health specialist wanted the pre-service teachers to develop personal awareness and professional sensitivity when teaching health content, and to encourage students to explore their own understandings and value systems. They identified that ‘part of being a professional educator is that you are sensitive to student needs, families, how they fit in’ and that you are ‘helping students personally develop … [you] focus on students as young adults … what are their values?’ According to the health specialist, leadership was about individual professional and interpersonal abilities to take on the educator’s role not only in the class but beyond in the school community: ‘that ability as a professional educator … to present themselves to the whole school community, the world and to themselves’.

Collinson et al. (1999, p.359) argue that ‘exemplary teachers are those that exhibit
dispositions and philosophical beliefs that support environments and policies that promote respect’.

The sports scientist particularly highlighted the importance of pre-service teachers developing interpersonal qualities that enabled them to be leaders as well as being able to read students so learning experiences suited student needs: ‘they don’t have to have particular personalities, but they have to have certain leadership traits. They have to have a certain degree of confidence and loudness. They have to be a bit bubbly.’ The sport scientist mentioned that it was significant that students ‘actually get to see [their] teacher as a real person’. The sport scientist acknowledged the importance of appealing to students but felt that it was not always achievable: ‘I don’t think every teacher … has to feel guilty about the fact that they don’t connect with every kid, because you can’t do that’.

Each of the teacher educators held firm ideas on what constituted a good teacher. The health specialist identified the development of good teacher qualities stating that, ‘my belief is that they really need to be able to be flexible, know their content area to be a professional educator they have to learn to adapt, be a bit chameleon-like if their teaching approaches are to be relevant to students’. For the sport specialist, being energetic and confident in sport was an important aspect for the PDHPE teacher: ‘a need to “love” sport/physical activity to inspire others is important’. The importance of being energetic was reinforced by the sport scientist, who stated that, ‘good teachers are not lazy they are interested in learning and their students and want to engage students’. The sport scientist also encouraged the pre-service teacher to develop ‘the ability to “read” the students’ so learning was relevant.

The sport specialist wanted pre-service teachers to view teaching as more than just teaching sport. It’s all about teaching the kids to develop effective skills, social skills, looking after each other, working as teams’ with the activity, make it skill based … perfect
lesson … don’t know they have done sport, just had fun’. Ayers (2001) states that ‘good teachers are not always fun; good teachers should aim always for authentic engagement with students’ (p. 12).

The teacher educators overwhelmingly viewed the pre-service teachers as outgoing and energetic future teachers. This was valued by the teacher educators in coursework and reinforced on professional experience (this is what is successful in schools). There was shared value within the teacher educators and the pre-service teachers in the importance in professionalism and professional practices such as inclusive practices and teamwork. The love of sport, enjoyment, motivation and confidence were valued interpersonal qualities. The differences between the three teacher educators were more subtle. The teacher educators wanted the pre-service teachers to link theory to practice, which would be evidence of their professional growth as teachers, but this did not have the same level of importance for pre-service teachers. Similarly, being a leader and engaging in professional development were not identified as having the same level of importance for pre-service teachers. For the pre-service teachers, there was mixed views in terms of being flexible or the need to be skilful in human relations. The differences highlight the gap in interpersonal and professional qualities of pre-service teachers compared to those of the experts.

12.5 Teacher Educators’ Views on the Developmental Story

One of the key themes that emerged from the pre-service teachers’ data was the idea that the pre-service teachers’ learning was developmental in nature. The teacher educators referred to changes, shifts in attitudes and the development of specific interpersonal and professional qualities they wanted the pre-service teachers to gain over the course of their study. The idea of a single model of discrete stages of development for pre-service teachers is challenged by Burn et al. (2003). They suggest that this view obscures the complexity of the learning process for pre-service teachers and does not
consider the enormous variations between individuals in terms of where they are starting from and how their thinking develops. This is in contrasts to the teacher educators’ who had expressed firm ideas of what teacher qualities they wanted all of their students to gain in the course.

The sport scientist referred to the shift in learning of the pre-service teachers that involved changes from seeing themselves as a student to thinking like a teacher: ‘then after that we get into the methodology or the teaching units. It changes a bit there because the emphasis is more on them as a teacher rather than them as a student in the second half of their course.’ The sport specialists saw learning as developmental: ‘working from the content of the first two years we really start to hone in on what the actual teachings skills and the things that make people effective and quality teachers’. The Fuller and Brown’s (1975) model of pre-service teacher development identifies a shift from initial preoccupation with self to a focus on teaching tasks and situations and finally to a consideration of the impact of their teaching on the students. For the sport scientist, it was about being able to apply and use knowledge, being responsive to new ideas, adapting to changes in sport, being able to modify and adapt, and to keep growing as a professional. Being able to apply information and to thinking innovatively and to build upon knowledge was seen as important: ‘apply the principles of motor control to that brand new sport, because you are confident enough that you can take your skills and you can go outside the box’. The development of pre-service teachers’ understanding involves a process of observation, through a process of clarification and then reconstruction of effective performance (Edwards, 1995).

The teacher educators highlighted the need of professional learning goals necessary for the development of effective professional high school teachers. They did want the pre-service teachers to develop effective strategies; however, the long-term goal was to
develop as professional, ethical teachers, committed to the broader responsibilities of the classroom teacher. The development of these professional and ethical qualities including: developing a real understanding of students’ needs, of being perceptive, and developing listening skills. The health specialist suggested that professional sensitivity was important and awareness that involves ‘being discerning about what you teach and when you teach it and how you might teach it’. For the sport scientist, it was about demonstrating a genuine interest in students and teaching: ‘I think once they start teaching, if they’re interested and good in their teaching, then they will want to interest their students’. The development of emotional intelligence of pre-service teachers’ is being able to consider the needs of their students and involves self-awareness, mood management, self-motivation, empathic skills and relationship skills (Goleman, 1995).

The health specialist identified specific areas of professional growth or development needed for health teachers. This involved the pre-service teachers thinking beyond their own personal needs to considering the needs of their students. Development for the pre-service teachers starts as they enter education programs. They come with their ‘own personal beliefs about teaching and images of good teachers, images of self as teachers and memories of themselves as pupils in classrooms’, (Kagan, 1992, p.145). They then go on to gain other qualities such as being knowledgeable in their content areas and flexible so that their teaching and approaches were relevant to students: ‘my belief is that they really need to be able to be flexible, know their content area’ [teacher educator].

The health specialist wanted the pre-service teachers to develop sensitivity and awareness when teaching health education both to students and to their families. Developing professionally involved encouraging the pre-service teachers to become lifelong learners, through to engaging with others in the health field and maintaining and developing networks: ‘keep in contact with the professional networks, learn, change, adapt,
do stuff well. Whatever you do try and do it well.’ Developing the professional capacity to engage not just the school students but the broader community was important to the health specialist.

Berliner (2004) maintains that pre-service teachers are not fully formed; that they are developing and acquiring expertise as they pass through different stages of increasing professional levels of competency and accomplishments.

The concept of professional capacity was discussed in the interview with the sport specialist, who viewed this as a gradual developmental process, incorporating ethics and principles of professional teacher theory to the actual practice of what teachers do and do not do on a daily basis: ‘…a really good understanding of the role of the teacher; that’s everything from the professional ethics of being a teacher to all the responsibilities of being a teacher’. The understanding of the role of teachers involves demonstrated the importance of mastery at distinct phases of individual sense-making (Karmiloff-Smith, 1992). The sport scientist saw the importance of developing pre-service teachers’ leadership skills: ‘they don’t have to have particular personalities, but they have to have certain leadership traits, confidence and loudness’. The capacity to keep growing professionally, particularly as new scientific knowledge becomes available in sport science, was seen as important for student engagement. Pre-service teacher learning is a developmental journey where pre-service teachers construct their teaching identities as they modify and reconstruct their professional images of self as a teacher (Kagan, 1992). This journey is sometimes explained in teacher education as a rite of passage (White & Smerdon, 2008).

The teacher educators encouraged the pre-service teachers to be engaged in their content delivery; however, the emphasis was on encouraging deep and meaningful learning in the teaching areas of sport skills, social health and sport science. Lieberman (1995)
discusses the importance of constructing a continuum of actual practices that encourages teacher growth. The continuum moves from direct teaching to practices that involve learning in schools to a variety of learning out of school. The change is from teaching to learning, which is significant for the pre-service teacher. For the sport specialist, teaching was more than just student engagement it was for students to have a love sport/physical activity to inspire others. Teachers change their conceptions of teaching and learning when they begin to accept the value and the benefit teaching has for the student (Hand & Treagust, 1994). Fischler (1999) suggests that pre-service teachers begin teaching with fixed conceptions about teaching and learning and only change their views of teaching when they experience failure, and then they are prepared to try alternative ideas or conceptions.

The teacher educators identified the learning of the pre-service teacher as developmental, which to a large extent was driven by the designed learning experiences of the teacher educators and the stated course outcomes. As the pre-service teachers progressed through the course, they are required to develop professional capacity as teachers, particularly during professional experience. Aspects identified by the teacher educators as being developmental in nature, such as being able to adapt and modify, design purposeful learning and demonstrate ethical practices, are directly linked to the curricula requirements of the course. The pre-service teachers valued these qualities, which were also flagged as learning milestones in the course.

12.6 External Drivers on the Pre-service Teachers’ Perceptions

External drivers can be defined as those aspects in the course, both internal and external, explicit and implicit that influence and inform preferred teacher qualities and teaching practices. In considering what external drivers may have affected the pre-service teacher perceptions of teacher qualities, it is important to point out that no specific
questions or responses were directly linked to external drivers. The pre-service teachers were unaware or at least appeared unaware of the role of external guidelines on teacher education (for example, university graduate attributes or NSWIT Graduate Standards) and did not discuss any influence they may have had on their beliefs at the time of the survey. It is possible that pre-service teachers, in 2011, maybe more aware and influenced by these measured external indicators of quality, as the institutional demands to meet these guidelines are made more overt, but this is a matter for future research and investigation. It has been suggested that research to date focuses on what the teacher does, but not on what they think: the cognitive process (Covino & Iwanicki, 1996). It is what the pre-service students perceive are effective qualities that was the most pertinent to this research. It is correct to assume that the pre-service teachers in this study were aware of the syllabi and learning outcomes of their units; they were also keenly aware of the employment requirements of the ACT and DET education systems, at least by the end of their final year of study. As a group, the participants valued the role of professional experiences and the influence of the teacher mentors in providing authentic teaching practice and linking of theory to practice in the field. The formal statement of requirements of what the teacher educators want from the pre-service teachers are only partly communicated by clear expectations, as they are likely to be perceived in different ways by different students and in different contexts (Joughin, 2010). This suggests that the mentor teacher influence may have differ from the pre-service teachers’ own perceptions or those expressed by the teacher educators. There is also the risk that the pre-service teachers in establishing and re-establishing new belief systems may perpetuate new beliefs that are flawed or traditionally entrenched. The research aim was to explore the developing pre-service teachers’ qualities rather than a checklist of standards that may be needed for employment and/or registration in the profession (Raths, 1999).
Similarly, the teacher educators in planning their units would have considered the university graduate attributes and the NSW Institute Graduate Teacher Standards made reference to them in unit documentation. The role of both of these and ACT and DET curriculum content requirements for secondary teachers would have influenced syllabi development and content expectations. The hidden aspect of the teacher education curriculum and one that may have had a greater influence to this study is the aspirational outcomes of the teacher educators for pre-service teachers. Snyder (1971) states that ‘it is this hidden curriculum, more than the formal curriculum, that influences the adaption of students and faculty’ (p. xiii). For the purpose of this study hidden curriculum is defined as course, program expectations or graduate attributes that are not explicitly stated but expected none the less. What becomes evident in comparing the teacher educators’ aspirations for the pre-service teachers and the specified course outcomes is that there is often aspirational preferences that are not explicitly outlined in syllabi or outcomes, yet were identified as importance in the teacher educator interviews. Barnett and Coate (2005) suggest that academics are often interested and concerned with the type of skills they want to see their students develop and note that ‘the distinction between the curriculum as presented and the curriculum as experienced cannot be held entirely watertight’ (p. 45). The hidden curriculum in this way reflects the social context in which it is located and can be both pervasive and powerful in shaping disciplinary values, norms and rules.

Traits such as leadership, professionalism, authentic and credible practice, lifelong learning, values, philosophy development and networking were the teacher qualities valued by the teacher educators. The covert, inferred outcomes and the means of success are rooted in the teacher educators’ assumptions and values and the pre-service teachers’ expectations as well as the social context in which they and their teachers are immersed (Snyder, 1971). In comparing the teacher educators’ aspirations to the course
documentation (outcomes and syllabi), there are clear differences. The focus for the documentation was on knowledge outcomes, with reference to the theoretical aspects of teaching and pedagogy and high-order learning. There were limited and often broad references in some units to teaching, teaching practice and professional values.

There was however, in some units, there was reference to developing skills in differentiation. Only some of the course material referred to the school context and schools syllabus and the role of the teacher, including reference to ‘an understanding of current modes of teaching, and state and territory curriculum requirements’ (University of Canberra, 2007). It is important to note that the teacher education interviews were focused on those educators who were responsible for delivering the subject content, not necessarily the core education units of the degree. Woolfolk (2000) suggests a dilemma for research into teacher qualities is whether the focus is on lists and checklists that highlight teacher standards that need to be reached or qualities that need to be demonstrated. In terms of this study, the focus was on what teacher qualities the pre-service teachers perceived as important to demonstrate or act out as a pre-service teacher. This Chapter highlights the overt and covert influence of teacher educators on pre-service teachers’ perceptions, by reinforcing and favouring their own aspirations for the pre-service teachers. This is an important context for understanding what changes and developments were occurring for the pre-service teachers.

Chapter 13, the conclusion to this study, begins by drawing together the key ideas from Chapters 9 to 12, through the use of the Shifting Perceptions Model (see Figure 13.1) to represent visually what was occurring to the pre-service teachers’ perceptions of teacher qualities over the course of their study.
Figure 13.1. Shifting perceptions model: The continuum of constructing and reconstructing the views of teacher qualities in the pre-service teacher.
Chapter 13: Conclusion

13.1 The Shifting Perceptions Model: The Continuum of Constructing and Reconstructing the Views of Teacher Qualities by the Pre-service Teacher

The Shifting Perceptions Model shown in Figure 13.1 highlights the continuum of practice involving the repositioning and reconstructing of the pre-service teachers’ perceptions of teacher qualities as pre-service teachers’ progress through the teacher education degree. The ‘model’ represents a visual plan from which to gain understanding of how pre-service teacher perceptions of teacher qualities change. This model has been created by the researcher to represent the range of data obtained in this study. The premise of this model is that pre-service teachers enter teacher education with conceptions of the sort of qualities that constitute good teaching and during the course of their teacher education program these conceptions change. In particular the thesis posits that the changes are threefold: changes in perceptions on knowledge, pedagogy and interpersonal and professional qualities. This model (e.g. a visual plan from which to gain understanding of how pre-service teacher perceptions of teacher qualities change) is particularly useful as it illustrate the pre-service teacher as somewhat egocentric at the beginning of the course, becoming more student-centric in their views as their training proceeds.

The repositioning and reconstructing of perceptions occurs as the pre-service teacher develops and links new beliefs to existing frameworks. This was observed for the three teacher quality constructs: knowledge, pedagogy and professional and interpersonal qualities. New ways of thinking involve the pre-service teacher in re-evaluating existing
frameworks as new knowledge is linked to existing ideas. These new beliefs are reinforced or challenged by the experiences and learning that is occurring both during coursework and professional experience. The reinforcement and challenges that pre-service teachers may encounter as they progress from beginning pre-service teachers through to graduate teachers can be beneficial to their developing understanding of teaching practice or they can perpetuate alternative conceptions of traditionally held views (Eraut, 1995; Hargreaves, 1998; Tickle, 2000). As such, teacher educators, mentor teachers, the teacher education curriculum and the hidden curricula play an important role in guiding and scaffolding pre-service teachers’ changing frameworks. An aspect of the hidden curriculum is the pre-service teachers’ own perceptions, often linked to their socio-cultural histories, or rooted in teacher educators’ covert teaching of their assumptions, values or expectations (Snyder, 1971).

The Shifting Perception Model indicates an ongoing, close relationship existing between two of the constructs, *pedagogical qualities* and *professional and interpersonal qualities*, which, according to the pre-service teachers, are closely linked. For pre-service teachers, new beliefs around pedagogy were adopted if they aligned with their interpersonal values and/or professional expectations; and new ideas around professional practice are considered if they are pedagogically sound (i.e. do they work in the classroom?) The pre-service teachers’ perceptions of pedagogy include relevant PCK identified by Shulman (1987). For the pre-service teacher, this involved knowing the best approaches for teaching their subject areas. In addition to PCK, the pre-service teachers valued PIK, which was viewed as a combination of pedagogy and interpersonal professional know how for effective teaching. These were the emotional, interpersonal and intuitive practices identified by the pre-service teachers and supported by Garritz (2010) as an important component of effective pedagogy. The model highlights the close alignment
or link between pedagogical practices and interpersonal and professional qualities identified in the pre-service teachers’ perceptions.

The Shifting Perception Model identifies teacher education learning as a continuum; the pre-service were engaged in a process of metacognition (Brown, Bransford, Ferrara & Campione, 1983). They were involved in monitoring their own understandings about preferred teacher qualities, they recognised gaps or flows in their own thinking, articulated this through process and revising their views. Research by Edwards (1995) suggest that specific learning occurs on two distinct planes: the social plane, involving familiarity with ideas, language and pedagogy of the profession; and the personal plane, the process of internalising of new language, ideas and pedagogy within the school context. Karmiloff-Smith (1992) builds on Edwards’s (1995) ideas and refers to student learning as the shifting of half-understood ideas through to a process of clarification, reconstruction and effective practice. The Shifting Perceptions Model depicts a learning continuum of reflecting, repositioning, adopting or rejecting new perceptions into existing frameworks, and it does not contradict Edwards (1995) and Karmiloff-Smith’s (1992) concepts of student learning. Rather, it offers a process for the learning, which views learning as a continuum rather than a series of specific stages or steps. The concept of a continuum of learning reinforces the idea that learning about teaching does not finish at the graduate stage but continues as the beginning teacher moves through the different stages of their career (Hantano & Ingaki, 1986).

The construct of knowledge, although of equal importance as the other teacher quality constructs, was not viewed as having a continuous link to the other constructs (it was most important in the earlier years and less so in latter years). For the pre-service teachers in this study, being an expert in content knowledge was important, but by Year 3 and 4 of the course, professional knowledge had become more important, as had pedagogy
By Year 4, subject content was still viewed as important but the pre-service teachers were satisfied that the foundational knowledge they had acquired in the beginning years would provide them with enough content to be effective graduate teachers. For many of them content was something they felt they could obtain and gather as needed. This suggests that they viewed learning as ongoing and professional teachers as lifelong learners.

The continuum of shifting perceptions of the teacher qualities that were important for the pre-service teachers occurred from Years 1 to 4. This commenced with an egocentric perception, which involved operating at the personal or functional level. For pre-service teachers in the early years, it was about their individual pedagogical expertise, knowledge and interpersonal skills. The pre-service teachers believed they would gain this from their lecturers or mentor teachers; it would give them power and respect in the classroom to engage students in learning. By the later years, a shift had occurred from the functional level (bag of tricks) to an acknowledgement of the broader ethical and professional responsibilities; viewing teaching as professional, collaborative, student-centred and inclusive. The final stage for the pre-service teachers was the shift from student engagement to student motivation. The student-centric stage was about designing purposeful learning, motivating students and encouraging participation in learning.

The Shifting Perceptions Model indicates a series of outlying factors; these are the hidden agendas or curricula, which influence many of the pre-service teachers’ beliefs. The teacher educators shared many of the perceptions of teacher qualities held by the pre-service teachers, identifying common constructs. The pre-service teachers constructed similar beliefs to those modelled and emphasised by their teacher educators, particularly if they aligned with their own original belief systems and were reinforced as being successful during professional practice. Synder’s (1971) research explores this concept as the hidden
curriculum; the distinction between the formal curriculum stated in curricula documents and the information curriculum constituted by the teacher educators’ expectations, which may not have been stated explicitly. The continuum concept is important to consider in this model as the pre-service teachers frame of reference changes and broadens over time, through both covert and explicit teaching. However, the pre-service teachers did continue to maintain some of their originally held perceptions, often reflecting on them in the middle stages of the course and then returning to include them alongside newer, broader frameworks in the later stage of the course. This demonstrated their ability to recognise the limits of their current knowledge and then take steps to remedy the situation (Brown 1980, 1982; Brown, Bransford, Ferrara, & Campione, 1983; Brown & Campion, 1996; Flavell, 1985, 1991; Posner et al., 1982).

The teacher educators were not alone in influencing the pre-service teachers. Other factors such as the syllabi and graduate attributes, registration and employment requirements both directly and indirectly influenced course design and direction, and in turn influenced the reconstruction of ideas about what was needed at specific points in time in the degree and requirements at the end of the course. The hidden curricula included the aspirations that individual teacher educators held as part of their subject or as an aspect of the teacher educators own personal histories. This was often coupled with the pre-service teachers’ parallel professional learning (both prior qualifications and ongoing learning for example, certificates in training and coaching). The school mentors and school context (often overtly reflecting recent state and federal initiatives) during professional experiences added to the continuum of shifting views either reinforcing and acknowledging them or assisting in dismissal of certain beliefs (Greenberg, Pomerance & Walsh, 2011). According to Joughin (2010), there is a ‘parallel set of expectations based on the social context and the assumptions and expectations of both teachers and students’ (p. 339). The Shifting
Perceptions Model provides a mechanism to explain the developing perceptions of teachers’ qualities of the pre-service teacher.

13.2 The Research Purpose

The focus of this study is the exploration of pre-service teachers’ perceptions of teacher qualities as they progress through a secondary undergraduate degree. The mixed-methods approach provided strong evidence, based on analysis of quantitative and qualitative findings. Understandings were drawn from relevant literature and statistical findings, obtained from the survey instrument, which were supported by qualitative data obtained in the focus groups and teacher educators’ interviews. Each of these dimensions in the research process assisted in tracing the journey and constructing a view of the perceptions of a group of undergraduate secondary teachers throughout the four year course. While there is some congruence in the perceptions of the pre-service teachers and the teacher educators and to some extent the views held in the literature, there are also distinct differences and contradictions between the educators’ aspirations and the pre-service teachers’ perceptions of teacher qualities.

Methodologically, the study demonstrated the practicality and benefit of the mixed-methods approach used. The contrasting worldviews and usefulness of the social constructivists’ epistemology to conduct research on perceptions provided for a range of assumptions about reality and knowledge. The post-positivist approach questions whether it is possible to advance single theoretical explanations when clearly there are multiple perspectives ‘out there’ among the pre-service teachers and teacher educators and researchers. Therefore, the use of contrasting worldviews was a suitable methodological approach that assisted the understanding of the multiple perspectives of the pre-service teachers on teacher qualities.
The mixed-methods approach was useful in guiding the construction of the research question, the selection of methods and in establishing credible, transferable, dependable and conformable interpretations. The mixed methodology approach to social science research is not new. This study’s use of both quantitative and qualitative methodology offers an effective approach to data collection, particularly the use of a pre- and post-snapshot survey approach connecting quantitative and qualitative datasets in the analysis phase.

The additional, qualitative data provided by the teacher educators’ interviews offered a useful viewpoint for understanding the pre-service teachers’ beliefs. The mixed-methods approach was most suited to the participants selected for the study, enabling data to be collected from a large study group, combined with reflections from a smaller subset of this group. The mixed-methods analysis extended the breath of the research by revealing some issues that would not have been addressed in quantitative data alone. For example, the qualitative data provided information on the social nature of the cohort, encouraged personal stories, highlighted the energy and passion that the pre-service teachers had for teaching and provided a view of the constructed belief systems of the pre-service teachers and the teacher educators, all of which were important considerations in the study.

Similarly, the nature of the quantitative data provided statistical validation to the interpretation of the pre-service teachers’ views and identified key changes across the years and over the years for the study group. The research problem, involved exploring the pre-service teachers perceptions of teacher qualities as they progressed though a 4 Year teacher education program, was well supported through the use of Creswell’s et al., (2003) model of Exploratory Design, incorporating a sequential analysis of the different datasets. This approach enabled the researcher to be situated in different methodological contexts and gather multiple data forms from diverse audiences. The reliability of the main survey
instrument was strengthened through the use of qualitative data collection and trialling prior to finalisation of design and implementation of the instrument. Survey items were selected based upon the findings from the focus groups and the literature. The wording for each section was developed, reviewed and modified after the pre-trial. The participants at Time 1 provided a representative sample of the population. The connections of the datasets in the discussion phase assisted the researcher in establishing a convergence of interpretations, strengthen validity and provided a richer understanding of the research problem.

Macfarlane (2009) suggests that the final stage of the research process involves thinking about how the research may have reshaped the researchers’ thinking and beliefs systems. In considering this, it is important to note that the tacit knowledge identified by Macfarlane (2009) played a significant part in selecting a mixed methodology approach. The explicit research practice of using qualitative data is a content-specific practice in social science research; combining this with quantitative data collection allowed the researcher to develop new skills and understandings in statistical data collection and analysis. Personally, this provided greater opportunity to develop new research skills and a deeper appreciation for the use of quantitative and mixed-methods research. In interrogating critically the way the research was conducted, this researcher can conclude that the selected mixed-methods design established by Creswell et al. (2003) was a useful approach to effectively examining the different worldviews presented and quantitative and qualitative datasets generated, in this study. The questions asked and the analysis of the data proved suitable in reaching credible conclusions to the research questions. In terms of what the researcher would do differently, this would involve conducting more focus groups and not combining the year levels. It could have been useful to extend the teacher educator interviews to provide a broader range of teacher educator responses. Another possibility
would have been the use of online blogs to capture individual pre-service teacher narratives over an extended period, rather than the use of open-ended questions at the end of the survey, which were not generally well answered. Overall, the research approach was rigorous, defendable and provided credible information that pertained directly to the research questions.

13.3 **Illuminating the Student Voice**

One of the main shortcomings of current research on teacher qualities is the lack of research on how pre-service teachers think, develop and the teacher qualities they value over the course of their study. The findings around this enquiry were extensive and complex. For the purpose of this conclusion, findings have been synthesised and grouped into the following key categories:

- the pre-service teachers’ construct
- the teacher educators’ construct.

The ideas that emerge from the analysis of the findings, both from the pre-service teachers and the teacher educators were previously referred to as common constructs. There was a correlation of the common constructs evident in the categories that occurred in the factor analysis, the focus groups analysis and in the themes drawn from teacher educator interviews. This suggests that particular views and/or values were presented to the pre-service teachers. The teacher educators’ influenced, modelled and reinforced particular beliefs about preferred teacher qualities. The pre-service teachers and the teacher educators shared common ideas, with the teacher educators holding firm ideas on the teacher qualities they aimed to develop in their students. Key ideas include the following.
The pre-service teachers’ age, gender, prior experiences and prior qualifications influenced their perceptions of teacher qualities. This result points to pre-service teachers’ conceptual frameworks or frame of reference on favoured teacher qualities being influenced by increased maturity, experiences and gender. For younger participants in the 18–24 age group, pedagogy was of higher importance than for the older 25–29 year age group. Anecdotal evidence suggests that older students’ tended to have more confidence (more experience) with their pedagogical approaches than younger students. Similarly, those participants entering the course from Year 12 and post-school study or work placed a higher value on teacher knowledge than those currently in the course, thus prior experiences and confidence play a role in informing students’ beliefs systems. Prior professional understandings acquired through participants existing qualifications influenced their ideas on the value of PPP in teaching. Males and females participants viewed interpersonal and professional qualities differently, with males placing more value on professional attributes, and female participants placing a higher value on interpersonal and relationship qualities.

The pre-service teachers’ views on knowledge shifted across each year and from Years 1–4. Pre-service teachers viewed content knowledge as most important at the start of the academic year and in the beginning years of the course. Being an expert in knowledge was valued and promoted; participants wanted to develop a strong foundational knowledge base. By Year 4, pre-service teachers had gained confidence with their content knowledge and viewed pedagogy and professional knowledge as having greater importance. Pre-service teachers’ perceptions were being repositioned and reconstructed as they were influenced by the changing requirements and priorities in the course and their widening experiences as practicing pre-service teachers. Certain values did not become less important to the pre-service teachers, they just became less pressing at specific times,
for example, content knowledge in Years 3 and 4 was not as immediate a priority compared to having effective pedagogy, good interpersonal skills or professional knowledge.

The pre-service teachers’ developed a broader definition and view of knowledge as they progressed through Years 1–4. Initially, the pre-service teachers’ were most concerned about being knowledgeable enough and being an expert teacher in their subject area. This view broadened in the later years with the pre-service teachers in Years 3 and 4 placing increased value on being able to successfully use and apply their knowledge as a teacher. They were concerned about being able to teach a range of students not just a range of subjects; they wanted to deliver deep purposeful learning experiences to their students. The deepening of the belief systems around knowledge aligns with the egocentric to student-centric view highlighted in the Shifting Perceptions Model (see Figure 13.1) and reflects the course curriculum in Years 3 and 4 of the degree. The pre-service teachers’ concept of what knowledge was important as a practicing teacher expanded, and was influenced and reinforced during professional experience. By Year 4, pre-service teachers wanted confidence in content knowledge in their first area—PDHPE but also in their second teaching area, as well as knowledge of subject-specific pedagogy and the professional knowledge needed in the classroom.

The pre-service teachers believed that pedagogy was usually learnt on the job. The pre-service teachers entered the course with the view that they would learn the practices of teaching from classroom teachers while on professional experience. This belief was reinforced by the teacher educators who supported the concept, of the authentic nature of professional field experiences, with some reservations. Initially, the pre-service teachers’ focus was on their own performance as a teacher, but with practice and confidence this view changed in focus. By Year 3 and 4, the pre-service teachers viewed
pedagogy as needing to be more collaborative, inclusive and student-centred. Pre-service teachers’ ideas on pedagogy were gained through their own personal school experiences and were later reinforced through the interactions with teacher educators during course work, through school mentors and through their professional school experiences.

The pre-service teachers entered the course with set beliefs about effective pedagogy. These beliefs were reinforced by the teacher educators, mentor teachers and professional school experiences. Participants entered the course wanting to be relevant, engaging, energetic and able to adapt to student needs in different contexts. They valued this from their experiences as a school student themselves. This conceptual frame of reference remained consistent over time. They entered and left the course with these beliefs, which were reinforced by the teacher education experience. There was a widening of pedagogical ideals across the four years, including four common pedagogical approaches: uses a range of teaching strategies, uses high-interest lessons, planning lessons that are relevant to students, and adapts teaching to their students’ learning environment. These perceptions of effective pedagogy are reflective of this study group’s own biases. As individuals they were active, outgoing, competitive and high achievers. They valued pedagogical approaches that supported and reflected their own learning, teaching styles and their personalities and made their teaching relevant to the students. These beliefs were often modelled and reinforced by their lecturers, mentor teachers and through positive professional school experiences.

The pre-service teachers viewed effective pedagogy as reliant on having good interpersonal and professional qualities. The pre-service teachers placed equal importance on interpersonal qualities and pedagogical qualities. They believed that having good interpersonal qualities and being professional in their teaching approaches influenced effective delivery (pedagogy) of lessons. The participants as a group valued and
demonstrated particular personal qualities that were reflected in their teaching practices (pedagogy) and referred to specific PPP and PIK qualities they valued and needed to develop to be an effective teacher. They believed effective pedagogy involved being energetic, engaging and relevant. This is what inspired them as students and this is what they would do as teachers. They viewed these as personal characteristics and as an aspect of their pedagogical practice that they would develop further as a pre-service teacher. This view was modelled and reinforced by the teacher educators who identified with this active personality type. The participants’ never wavered in their original belief in the importance of being energetic, engaging and relevant and this belief was reinforced in coursework and practice.

The pre-service teachers entered the course with firm ideas on the interpersonal and professional qualities needed to be a good teacher. The pre-service teachers believed that a good teacher needed to understand their students and make their teaching relevant; and they need to be confident, energetic and relaxed. This was important across each year and over the four years. The pre-service teachers wanted to enjoy students and makes learning fun; this is what inspired many of them to become teachers. They in turn wanted to be this type of teacher. Their view of a good teacher is someone who understands and relates to students, and inspires them to learn. This belief remained constant and was significant in Years 1, 2 and 4. As discussed earlier, Year 3 was a time of repositioning and reconstructing views on teacher qualities and the good teacher. In Year 3, there was an increase in pedagogical priorities and a subsequence lessening of the importance in interpersonal qualities, hence having fun and enjoying students was not the priority for pre-service teachers in Year 3. However, the participants did continue to widen their repertoire of preferred interpersonal qualities over the course of the four years, with some of the originally held beliefs returning to importance by Year 4. Five of the
most useful qualities of the good teacher identified by participants included *challenges and encourage students*, *helps students develop self-esteem*, *employs knowledge of students to facilitate learning*, *projects enthusiasm for teaching*, and *is sensitive to students’ needs and concerns*. The good teacher qualities identified by the pre-service teachers align closely with the desirable qualities of a professional teacher often identified in the literature and highlighted the positive, outgoing nature of the study group.

**The learning of pedagogy was developmental, with priorities changing participants’ views both across each year and over the four-year period.** The pre-service teachers viewed pedagogy as most important at the beginning of each year prior to their professional experience. Professional experience was interpreted as the [pre-service teachers] test as a teacher. Once professional experience was achieved, and their ideas reinforced, other priorities became important. This repositioning and reconstructing occurred in an ongoing way as they progressed from pre-service to graduate teacher. This reconstructing of views on pedagogy is evident in Year 1, where they were required to teach for the first time and in Year 3, where they had to reconceptualise their learning around pedagogical practices to teach their second teaching area. By Year 4, pre-service teachers had started to consolidate their views; they had developed a broader range of pedagogical approaches, they were more confident with their pedagogy practice and they had moved the focus to student-centred teaching rather than the earlier teacher-centred (egocentric) approaches.

**Years 2 and 3 were identified as a significant point in time in the course, where the pre-service teachers reflected, revised and reviewed, adopted ideas on favoured teacher qualities.** Participants entered the course with firm ideas on those teacher qualities they most valued. Changes occurred over time for many of the teacher qualities; however, a crucial period of repositioning and reconstructing occurred in Years 2 and 3 as
participants adopted certain ideas on teacher qualities. In Year 1, knowledge and interpersonal and professional qualities were identified as most important. In Years 2 and 3, these beliefs were expanded by pedagogy and professional knowledge. This aligns with the shift from egocentric to student-centric values and the increasing priority for planning and pedagogy at this point in the degree. This finding is important as it demonstrates that the pre-service teachers’ perceptions can and did change and that they were influenced by changing course expectations and precedents.

**The pre-service teachers demonstrated a shift from an egocentric to a student-centric belief system over time.** The shift from egocentric to student-centric perspectives occurred in three distinct areas: a personal shift in focus from the individual and his or her performance to the teacher and his or her students’ learning; a technical shift from working at the functional level to taking personal and ethical responsibility for learning; and the final stage, which involved a level of consolidation, with pre-service teachers’ developing professional maturity. They now viewed effective teaching as having progressed from student engagement (how can I keep them on task?) to student motivation (what will motivate my students towards purposeful learning?) The egocentric to student-centric pattern is highlighted as interpersonal and professional qualities increased in importance, highlighting the growing maturity of the pre-service teachers by Year 4. By the end of their course, the pre-service teachers’ concerns were on catering for all students rather than the earlier emphasis on their own performance. This in turn required them to search for more sophisticated ideas and understandings of student learning across the three teacher quality constructs (knowledge, pedagogy and professional and interpersonal qualities). The repositioning and reconstructing of ideas about teacher qualities demonstrate the learning and development cycle of pre-service teachers from the position of a beginning pre-service teacher in the early years to the graduate teacher by the end of the degree.
The pre-service teacher views of teacher qualities developed from initial preoccupation on functional practice to greater ethical professional responsibilities over time. The pre-service teachers entered the course with beliefs and ideas about teaching adopted from their own personal histories and biographies and unless challenged many of these ideas returned by Year 4. One such belief was the importance of engaging students in the subject content. A repositioning of views around the functional practice of teaching and learning occurred in Years 3 and 4 with the pre-service teachers’ wanting to engage students but at a deeper level. They wanted to better understand their student and provide relevant learning opportunities. They believed they could do this by having knowledge of individual students, showing students respect and being sensitive to students’ needs. This heralded a shift in their perceptions towards a student-centred orientation of caring or ethical practices and move towards professionalism and professional understanding of learning, in comparison to earlier ideas of keeping students engaged in the lesson. This professional growth revealed pre-service teachers’ understandings of the obligation of catering for individuals in their classroom. The pre-service teachers’ emphasis had moved from functional practice in the early years towards professional and ethical responsibility required of a graduate teacher in the later years.

The pre-service teachers shifted their ideas on teaching from student engagement to student motivation. Entering the course, the pre-service teachers viewed teaching as set knowledge and specific skills to be acquired. A repositioning and reconstructing of perceptions on teacher qualities occurred over the four years with the pre-service teachers gradually developing the view of teaching as a profession, involving lifelong learning and professional obligations. This involved a shift in emphasis from viewing teaching as engaging students in learning to motivating students to want to learn. The emphasis in the beginning years had been on the pre-service teacher developing high-
interest lessons, being organised, being well planned. This changed in Year 3, where the
pre-service teachers needed to work collaboratively with students; they were required to
demonstrate that they could adapt teaching and learning to suit specific contexts and
individuals. The pre-service teachers believed they could encourage participating and
motivate students by challenging students, developing student self-esteem and employing
knowledge of the students to improve the teaching and learning. They wanted to be
sensitive to students’ needs and project enthusiasm for the students and teaching. As a
consequence, by Year 4, they had begun exploring ideas around student motivation,
developing pedagogical and interpersonal strategies and approaches that would assist them.

13.4 About the Teacher Educators

The teacher educators shared common beliefs (constructs) that I consider
influenced the pre-service teachers’ perceptions on teacher qualities, either directly
through curriculum design or indirectly through modelling and reinforcing their
value systems. This finding was inferential. A shared common belief system, the teacher
educators were able to influence and reinforce particular teacher qualities that they valued
and that they wanted their students to adopt. Examples are the need for the solid
understanding of subject content, and the belief in the value of authenticity in the learning
experience. The teacher educators indicated that they reinforced set values through
scaffolding and modelling in the degree and this in turn emphasised the value of hands-on
application to learning. The practical nature of the course was viewed as strength by the
teacher educators, this perception was valued by the teacher educators and the pre-service
teachers. The teacher educators wanted the pre-service teachers to apply content
knowledge to practical situations encouraging them to develop a willingness to ask for help
or advice and to work as part of a team. They explored content knowledge with the pre-
service teachers and worked on how to take content and modify it or adapt it for new
situations. They modelled inclusivity and teamwork and encouraged professional ethical practices. In this way, they indicated that they encouraged certain behaviour and reinforced pre-service teachers’ belief systems.

The teacher educators’ course design reinforced views on teacher qualities, such as a solid content base in the early years of the course and that the acquisition of subject specific pedagogical knowledge. The pre-service teachers gained essential content knowledge and skills in the beginning years of the degree and then acquired the pedagogical understandings needed for the professional teacher in Years 3 and 4. The teacher educators used a range of pedagogical practices and approaches that they personally valued, many of which were also valued by the pre-service teachers. Examples include the mastery of routine skills, communication skills, particularly in leading and generating discussions and skills in debriefing and sharing in teamwork situations.

The teacher educators’ views on teacher qualities were influenced by external drivers on curriculum design (registration bodies) that in turn would place direct value and priority on certain teacher qualities they modelled or reinforced with the pre-service teachers. In the design of specific units of study, the teacher educators were required to prescribed content, skill and attitude components in their syllabi dictated by university graduate attributes statements, NSW Graduate Teaching Standards and the NSW and ACT Department of Education content requirements. The design and timing of units indicated a possible influence on pre-service teachers’ values and learning around teacher qualities over the course of the study (i.e. catering for special needs were more important after this unit). An example of this is the requirements of core education units such as special needs, Indigenous education, ICT, behaviour management and methods (subject pedagogy) as well as prescribed content in subject teaching areas. Each of these areas of
study has their own set of prescribed outcomes, in addition to hidden values and priority directions.

The teacher educators recognised the leadership and interpersonal qualities of many of their students and viewed them as valuable for effective teaching. The teacher educators believed that the pre-service teachers would develop the professional understandings needed for effective teaching. This included the importance of the pre-service teachers’ role as future leaders in their subject areas. The teacher educators actively encouraged the pre-service teachers to take on leadership roles, to be a positive presence in schools and to contribute to the broader community. They believe that effective teachers are charismatic, have a firm presence, are confident and listen to students. They influenced the development of these interpersonal and professional qualities in the pre-service teachers by valuing qualities such as rapport, respect, being perceptive, developing good communicating skills and encouraged them to understand and respond to students’ needs. These qualities were identified by the teacher educators as belonging to a preferred personality type, valued by them and valued in the school, particularly for PDHPE teachers.

It can be inferred that the teacher educators’ personal aspirations for the pre-service teachers may have influenced the perceptions of the pre-service teachers through their hidden curricula and personal narratives. Hidden qualities valued by the teacher educators, and revealed in the stories and narratives in interviews were often unconsciously and sometimes consciously reinforced with the pre-service teachers, yet these qualities were not explicitly highlighted in the syllabi for the course. Such qualities included being flexible, being energetic and confident in sport. There was a belief in the need to love sport and physical activity, the importance of inspiring others’ interest in learning, and the need to teach effective social skills, look after each other and work as a
team. The teacher educators referred to developmental changes in the pre-service teachers over time including shifts in attitudes, the development of specific interpersonal and professional qualities, professional engagement and networks. These teacher qualities were encouraged and reinforced by the teacher educators and influenced the pre-service teachers’ perceptions and developing views around teaching.

13.5 Overarching Implication

13.5.1 Overarching implication for research.

This study provides new insights and greater understanding of pre-service teachers’ perceptions on the teacher qualities they value and will contribute to the discourse in teacher education. This will include understanding the changes that occur for pre-service teachers over time and the factors that may be influencing these changes. This is in addition to acknowledging that pre-service teachers bring many beliefs into their course. The findings gained in the study provide greater recognition of the need to understand the changing perceptions of the pre-service teacher in the planning, timing and scaffolding of learning offered to the pre-service teacher. This will allow practitioners to capitalise on student learning at crucial points in time when the pre-service teachers are reflecting, reviewing and reconstructing ideas.

13.5.2 Overarching implication for practice in teacher education

The study contributes a deeper understanding of the pre-service teachers’ perceptions on teacher qualities at a time when the students’ voice is rarely heard in literature. This research signals the need for further exploration of pre-service teachers’ developing perceptions and the beliefs they bring into teacher education courses. In particular, teacher education needs to provide opportunities to learn from pre-service teachers so as to better design and develop teacher education programs; more suited their
existing and changing perceptions of pre-service teachers. A deeper understanding of the preconceptions of the pre-service teacher would enable teacher educators to capitalise on pre-existing views and develop ideas around the qualities that the pre-service teachers’ value. Teacher education programs can be pitched and scaffolded to best suit the needs of the group, gaining an understanding of existing perceptions on which new ideas and beliefs can be built. It is crucial to develop a broader understanding of the factors that influence the pre-service teachers’ belief systems, particularly the role that teacher educators and teacher mentors play in reinforcing particular value systems. This understanding has implications for the scaffolding of the pre-service teachers’ learning experiences, with particular acknowledgement of those points in time when the pre-service teacher are engaged in reflection and reconstructing of ideas.

At a time when a culture of teacher education accountability, particularly in terms of the assessment and accreditation of beginning teachers is dominant, this investigation addresses a notable gap in the discourse. This research highlights the need to consider the voice of the pre-service teacher as well as the voice of the expert in terms of establishing guidelines for practice in teacher education and accreditation. It is imperative to find ways that the perceptions of the pre-service teacher can be used to inform and shape not only course design but the prevailing discourse of how the pre-service teacher develops into an effective classroom teacher. When sufficiently sophisticated and nuanced understandings about the pre-service teacher perceptions are developed, teacher education can move to genuinely meet the needs of pre-service teachers and thus better prepare them as professional teachers.

13.6 Areas for Further Investigation

Despite the significant understandings of the pre-service teacher perceptions of teacher qualities found in this study, there is still extensive research that needs to occur in
this field. It is important that teacher education discourse continues to build upon the ideas found in this inquiry in order to find ways to incorporate the views and beliefs of pre-service teachers when planning teacher education courses. In this way, teacher education programs will be better able to prepare pre-service teachers for teaching and the realities of teaching. Future areas of study should also include the changing perceptions of the beginning teacher beyond formal study, what has changed for them, were they well prepared and how can they be supported as early career teachers, particularly in terms of meeting national professional standards for teachers (AITSL) registration and certification and in addressing high attrition rates in teaching especially male teachers.

13.7 Concluding Remarks

This enquiry into the perceptions of the pre-service teachers makes an important contribution to existing knowledge, as there are so few studies in this area. The study has identified the pre-service teachers’ perceptions of the most valued teacher qualities. This was achieved through focus groups and a survey instrument. Similarly, the research methods tracked changes in perceptions over time, through the use of a snapshot survey with pre- and post-testing. This testing also identified significant points of time when changes in perceptions occurred for the pre-service teachers, particularly in Years 2 and 3, where new ideas and beliefs were being attached to existing frameworks. The mixed-methods design assisted in validating the teacher qualities that were identified as most important to the pre-service teachers, particularly the interpersonal and professional qualities such as confidence, being energetic and relevant. Other qualities, often those depicted in the literature as belonging to expert teachers—challenging, encouraging, enthusiastic and sensitive to students’ needs and concerns gradually increased in importance, revealing the growing maturity of students in the later years of the course. Similarly, pedagogical qualities such as planning high-interest lessons, using a range of
strategies, planning relevant lessons, adapting and taking a student-centred approach were increasingly valued across each year.

The study identified underlying constructs such as age, gender, prior experiences and additional qualifications or parallel learning as influencing the pre-service teachers’ perceptions, suggesting that the maturity of the pre-service teacher and the richness of their life experiences influence the formation of belief systems around teacher qualities. The study also revealed that pre-service teachers’ have the ability to gauge what qualities define a good teacher, at least within the context of their own experiences—what works for theme. In particular, the study reinforces the belief that pre-service teachers enter teaching with preconceived ideas about what it means to be a good teacher and what teacher qualities are important. In the beginning years of pre-service teacher education individuals demonstrate egocentric behaviours that eventually metamorphose into more student-centric beliefs and practices later in the course. This contrasts with previous research that suggests that preconceived ideas do not readily change for the pre-service teacher. In this study, the pre-service teachers’ beliefs did not always remain constant, a number of priorities and values changed in parallel with the changing demands of the course. Some teacher qualities did remain consistent, commonly because they were being reinforced by the teacher educators and through school practice. Examples of teacher qualities that were valued throughout the course were: is confident, energetic and relevant, projects enthusiasm for teaching, is sensitive to students’ needs, and enjoys students and makes learning fun.

Perspectives of the teacher educator interviews provided an important lens in terms of addressing the research questions. Their personal aspirations for the pre-service teachers, both those identified in curricula and those that were hidden, revealed commonalities suggesting an influence on the developing perceptions of the pre-service
teachers. This also reinforces the links between changes in perceptions and the timing of specific educational experiences, highlighted in the quantitative dataset.

Therefore, it is anticipated that these findings will make an important contribution to understanding pre-service teachers’ developing perceptions on teacher qualities and contribute to the development and inform the strategic design of teacher education courses. This is particularly significant with the release of the recent Bradley et al. (2008) report, which proposes recommendations to address access, success and retention of students in higher education degrees. According to the Bradley et al. (2008) report, to do this:

Higher education providers must not only address their students’ learning needs but also recognise and act on issues such as the culture of the institution, the culture competence of all staff—academic and professional and the nature of the curriculum. (p. 32)

This study suggests that student perceptions and an understanding of how they learn and develop are important if teacher education is to be responsive to pre-service teacher success in the future. An awareness of the influence of aspirations and competence of academic and professional staff (mentor teachers) in developing effective teachers for the future was noted in recent US reports on teacher training and clinical preparation (Greenberg, Pomerance & Walsh, 2011; NCATE Blue Ribbon Panel, 2010).

An understanding the pre-service teachers’ perceptions during the course of their study and the impact of the hidden curriculum on these shifting ideas can add to the discourse on teacher education. This provides a clearer understanding of the culture of pre-service teachers and the requirements of teacher education. As stated by Snyder (1971), ‘the silence about the hidden curriculum: is related to the difference in [culture] attitudes, norms and perceptions’ (p. 4). The issue for pre-service teacher education is to ensure that
the overt and covert aspirations for pre-service teachers, the hidden agendas of the teaching program and the culture of the cohort interact positively in building and reinforcing successful and effective teacher preparation and practices opportunities. The challenge for teaching education is in making teacher education more overt without creating a system whereby teaching is reduced to a discrete set of prescribed skills, ignoring the students’ own voice and stifling restless curiosity (Snyder, 1971). In ignoring the student voice and not developing a searching dialogue, teacher education runs the risk of the hidden curriculum and the formal curriculum losing relevancy and thus, not addressing their students’ learning needs. Most importantly, the study provides a more complete picture of what pre-service teacher values in a ‘good’ teacher. This enables issues to be addressed within teacher education curricula, pre-service teacher practice and beginning teacher accreditation.
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Appendices

Appendix A: Participant Information Form—Focus Groups

UNIVERSITY OF CANBERRA

Participant Information Form—Focus Groups

Project Title: Exploring Pre-Service Teachers’ Perceptions on Teacher Qualities in Secondary Education: A Mixed-Method Study

<table>
<thead>
<tr>
<th>Researcher:</th>
<th>Supervision:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lynn Sheridan</td>
<td>Dr Leah Moore</td>
</tr>
<tr>
<td>Doctorate of Philosophy Candidate</td>
<td>Deputy Head</td>
</tr>
<tr>
<td>Division of Communication and Education</td>
<td>Communication and Education Division</td>
</tr>
<tr>
<td>University of Canberra #0021K</td>
<td>University of Canberra #0021K</td>
</tr>
<tr>
<td>Phone: +61 (0)2 6201 2067</td>
<td>Phone: +61 (0)2 6201 2651</td>
</tr>
<tr>
<td>Email: <a href="mailto:Lynn.Sheridan@canberra.edu.au">Lynn.Sheridan@canberra.edu.au</a></td>
<td>Building 5 Room 5C65</td>
</tr>
<tr>
<td>Building 5 Room B7</td>
<td>Building 5 Room 5C65</td>
</tr>
</tbody>
</table>

The purpose of the proposed study is to identify students’ perceptions of what teacher qualities (attitudes, knowledge and skills) are associated with being an effective secondary health and PE teacher.

The benefit of this study will be to provide information that can contribute to the discourse around teacher qualities and contribute to the knowledge and practice in secondary teacher education. The purpose of the focus groups is to generate discussions
around the research topic and focus group questions, which will be used to design a survey instrument that will be distributed to the whole cohort of students in the degree.

Participants will be given the opportunity to read the focus group questions and ask for any clarification from the researcher. **Participants are under no obligation to participate in the focus groups and are free to leave at any time.** Even though Lynn Sheridan was your Secondary Course Convenor during 2006, your decision to participate, or not will have no impact on your course assessment.

Participants will be placed into a group of 6–8 participants. The researcher will take on the role of facilitator. Two focus groups will be conducted. The focus groups will consist of participants in Years 1 and 2 (FG1) and Years 3 and 4 (FG2) in the Bachelor of Health and Physical of Education degree. The focus groups will take about 1 hour and will occur prior to the distribution of a survey instrument at the beginning of the academic year in 2007. The focus group conversations will be recorded and notes will be taken during the discussion. Individuals will be identified only by a code. Participants will be asked to sign consent forms. A transcript of the conversation will be made available to participants on request.

**Privacy**

Information taken from the focus groups is confidential and will not be used for any other purpose other than this research. While we may wish to quote from your comments and observations, this will not involve information that could be used to directly identify individuals. I can assure you that every effort will be made, in reporting the findings of this research, to ensure that no actual person can be identified from the information provided. A copy of the draft analysis will be made available to participants at the conclusion of the research episode on request.

Please contact me if you would like further information or assistance.
This research has been considered and approved by the University of Canberra Committee for Ethics in Human Research.

Lynn Sheridan

February 2007

Lynn Sheridan
Doctorate of Philosophy Student
School Education and Community Studies
Division of Communication and Education
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Phone: +61 (0)2 6201 2067
Email: Lynn.Sheridan@canberra.edu.au
Appendix B: Participant Information Form—Survey

UNIVERSITY OF CANBERRA

Project Title: Exploring Pre-Service Teachers’ Perceptions of Teacher Qualities in Secondary Education: A Mixed-Method Study

<table>
<thead>
<tr>
<th>Researcher:</th>
<th>Supervision:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lynn Sheridan</td>
<td>Dr Leah Moore</td>
</tr>
<tr>
<td>Doctorate of Philosophy Candidate</td>
<td>Deputy Head</td>
</tr>
<tr>
<td>Division of Communication and Education</td>
<td>Communication and Education Division</td>
</tr>
<tr>
<td>University of Canberra #0021K</td>
<td>University of Canberra #0021K</td>
</tr>
<tr>
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<td>Phone: +61 (0)2 6201 2651</td>
</tr>
<tr>
<td>Email: <a href="mailto:Lynn.Sheridan@canberra.edu.au">Lynn.Sheridan@canberra.edu.au</a></td>
<td>Building 5 Room 5C65</td>
</tr>
<tr>
<td>Building 5 Room B7</td>
<td></td>
</tr>
</tbody>
</table>

The purpose of the proposed study is to identify students’ perceptions of what teacher qualities (attitudes, knowledge and skills) are associated with being an effective secondary health and PE teacher.

The benefit of this study will be to provide information that can contribute to the discourse around teacher qualities and contribute to the knowledge and practice in secondary teacher education.

Participants will be given the opportunity to read and ask questions of the researcher. Participants are under no obligation to participate in the survey and are free to leave at any time. Even though was your Secondary Course Convenor during 2006 your decision to participate, or not will have no impact on your course assessment.
Participants will be giving a survey to complete at the beginning of the academic year 2007 in each cohort group in the Bachelor of Education—Health and PE. This exercise will be repeated at the end of the year 2007. The survey will take about 40 minutes to complete and will be voluntary.

Individuals will be identified only by a code. On the survey consent form participants will be asked if they are interested in volunteering for the follow-up interviews. Interviews will be conducted at the end of 2007. The researcher will select 12 volunteers who are representative of the dominant themes, three students from each cohort.

**Privacy**

Information taken from the surveys is confidential and will not be used for any other purpose other than this research. While we may wish to quote from your comments and observations, this will not involve information that could be used to directly identify individuals. I can assure you that every effort will be made, in reporting the findings of this research, to ensure that no actual person can be identified from the information provided. A copy of the draft analysis will be made available to participants at the conclusion of the research episode on request.

Please contact me if you would like further information or assistance.

This research has been considered and approved by the University of Canberra Committee for Ethics in Human Research.

Lynn Sheridan

February 2007
Appendix C: Participant Information Form—Interviews

UNIVERSITY OF CANBERRA

Participant Information Form—Interviews

**Project Title:** Exploring Pre-Service Teachers’ Perceptions of Teacher Qualities in Secondary Education: A Mixed-Method Study

<table>
<thead>
<tr>
<th>Researcher:</th>
<th>Supervision:</th>
</tr>
</thead>
</table>
| Lynn Sheridan  
Doctorate of Philosophy Candidate  
Division of Communication and Education  
University of Canberra #0021K  
Phone: +61 (0)2 6201 2067  
Email: Lynn.Sheridan@canberra.edu.au  
Building 5 Room B7 | Dr Leah Moore  
Deputy Head  
Communication and Education Division  
University of Canberra #0021K  
Phone: +61 (0)2 6201 2651  
Building 5 Room 5C65 |

The purpose of the proposed study is to identify students’ perceptions of what teacher qualities (attitudes, knowledge and skills) are associated with being an effective secondary health and PE teacher.

The benefit of this study will be to provide information that can contribute to the discourse around teacher qualities and contribute to the knowledge and practice in secondary teacher education. The purpose of the interviews is to generate discussions around the research topic and interview questions, which will be used as a frame of reference in which to further understand the perceptions of the pre-service teachers.
Participants will be given the opportunity to read the interview questions beforehand and seek clarification from the researcher. **Participants are under no obligation to participate in the interviews and are free to leave at any time.**

Participants will be interviewed individually. The researcher will take on the role of facilitator. The interview will take about 40 minutes and will occur during the academic year in 2007. The interview discussions will be recorded and notes will be taken during the interview. Individuals will be identified only by a code. Participants will be asked to sign consent forms. A transcript of the conversation will be made available to participants who will be asked to sign a release form. Participants will be free to revise and amend the transcript as required.

**Privacy**

Information taken from the interviews is confidential and will not be used for any other purpose other than this research. While we may wish to quote from your comments and observations, this will not involve information that could be used to directly identify individuals. I can assure you that every effort will be made, in reporting the findings of this research, to ensure that no actual person can be identified from the information provided. A copy of the draft analysis will be made available to participants at the conclusion of the research episode on request.

Please contact me if you would like further information or assistance.

This research has been considered and approved by the University of Canberra Committee for Ethics in Human Research.

Lynn Sheridan

February 2007
Appendix D: Informed Consent Form—Focus Group and Survey

UNIVERSITY OF CANBERRA

Informed Consent Form—Focus Groups and Survey

**Project Title:** *Exploring Pre-Service Teachers’ Perceptions of Teacher Qualities in Secondary Education: A Mixed-Method Study*

**Consent Statement:**
I have read and understood the information about the research and I agree to participate in this research. I have had the opportunity to ask questions about my participation in the research. All questions I have asked have been answered to my satisfaction.

Name……………………………………… Signature………………………………

Date……………………………………

A copy of the draft analysis will be made available to participants at the conclusion of the research episode on request. If you would like to take part in follow-up interviews following the survey please tick the permission box and include your contact details below.

☐ Yes I would like to take part in follow-up interviews

Name………………………………………

Address……………………………………

………………………………………………

Email……………………………………………… Phone No. ……………………

____________________________________

University of Canberra
Appendix E: Informed Consent Form—Interviews

UNIVERSITY OF CANBERRA

Informed Consent Form—Interviews

Project Title: Exploring Pre-Service Teachers’ Perceptions of Teacher Qualities in Secondary Education: A Mixed-Method Study

Consent Statement:

I have read and understood the information about the research and I agree to participate in this research. I have had the opportunity to ask questions about my participation in the research. All questions I have asked have been answered to my satisfaction.

Name……………………………………… Signature………………………………

Date……………………………………..

A copy of the transcript will be made available for participants to review and amend as required prior to signing a release form. The draft analysis will be made available to participants at the conclusion of the research episode on request.

University of Canberra
Appendix F: Release Form

UNIVERSITY OF CANBERRA

**Project Title:** *Exploring Pre-Service Teachers’ Perceptions of Teacher Qualities in Secondary Education: A Mixed-Method Study*

**RELEASE FORM**

I ………………………………………………..(the participant) give permission for Lynn Sheridan to use the information contained in an edited transcript of the focus group conducted on teacher qualities to be used in Doctoral research.

RESTRICTIONS RELATED TO USE OF THE INFORMATION (in this section you may want to edit or delete certain information that may identify you):

…………………………………………………………………………………………
…………………………………………………………………………………………
…………………………………………………………………………………………
…………………………………………………………………………………………

NAME OF PARTICIPANT: ……………………………………………………………

SIGNATURE: ………………………….. DATE: …………………………………
Appendix G: Survey Instrument

**Project Title:** Exploring Pre-Service Teachers’ Perceptions of Teacher Qualities in Secondary Education: A Mixed-Method Study

**Section 1. About you as a pre-service teacher**

1a. This part of the survey asks for some background information about you as a pre-service secondary teacher. Which of the following categories best describes you as a pre-service teacher? Please tick the relevant boxes.

(i) What is your gender? Male □ Female □

(ii) Your age group? 18–24 □ 25–29 □ 30+ □

(iii) Your year of study? Year 1 □ Year 2 □ Year 3 □ Year 4 □

   Other: (please specify) ________________________________

1b. What best describes your situation last year (2006)?

□ I completed Year 12  □ I was working and have just returned to study

□ I completed other post-school study (for example, TAFE, army, other degree?) Please explain

...........................................................................................................................................................................

□ I was in year…..of my Health and Physical Teaching Degree at UC

□ Other .................................................................................................................................................................

1c. How many years since you finished your schooling?

...........................................................................................................................................................................

1d. Have you existing qualifications? If yes, please specify

...........................................................................................................................................................................

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...........................................................................................................................................................................
1e. Your Ethnicity

<table>
<thead>
<tr>
<th>Primarily □</th>
<th>Primarily □</th>
<th>Indigenous &amp; or □</th>
<th>Other: □ (please specify)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anglo-Celtic</td>
<td>Non-English</td>
<td>Torres Strait Islander</td>
<td></td>
</tr>
<tr>
<td>Speaking background</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Section 2. Your views on teacher qualities

2a. This part of the survey asks you to consider what qualities you have in mind when you think about a ‘really good teacher’. Please choose five items from the following list and rank them in order of importance from 1–5

A good teacher…….

(i) Is confident, energetic and relates well to students. _____
(ii) Is organised. _____
(iii) Has a thorough understanding of their subject area. _____
(iv) Helps students make connections. _____
(v) Enjoys students and makes lessons fun. _____
(vi) Is well prepared and well planned. _____
(vii) Modifies their teaching to suit individuals. _____
(viii) Wants to make a difference with their students. _____
(ix) Is able to come down to students’ level and bring them up to theirs. _____
(x) Uses a range of teaching/learning strategies. _____
(xi) Is inclusive (e.g. special needs, gender, ethnicity) _____
(xii) Cares about their students. _____
(xiii) Uses positive behaviour management. _____
(xiv) Uses rules and routines. _____
(xv) Is a lifelong learner. _____
(xvi) Is reliable and flexible. _____
(xvii) Develops positive relationships. _____
(xviii) Challenges students to achieve. _____
(xviii) Is a team player.

(xix) Has good communication skills.

(xx) Caters for all abilities in the class

2b. In the list above select (3) qualities that have influenced you the most as a pre-service teacher so far? Explain why?

...................................................................................................................................................................................

...................................................................................................................................................................................

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...................................................................................................................................................................................

...................................................................................................................................................................................

Section 3. Your views on content/knowledge

3a. This part of the survey asks your views on which of the following content knowledge you believe will be most useful/relevant in your course as a secondary health and physical education teacher. Please indicate your level of agreement by ticking one box in each row.

A thorough grounding in…..

<table>
<thead>
<tr>
<th>Content</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge specific to health and physical education</td>
<td>Not very important</td>
<td>Important</td>
<td>Very</td>
<td>Extremely</td>
<td>Don’t know</td>
</tr>
</tbody>
</table>

(i) Sports science: anatomy, physiology, biomechanics etc.)

(ii) Sport skills: e.g. Acquisition of Skills units

(iii) Social health issues: mental health, sexuality, eating disorders, drug issues etc.), e.g. health units
3b. The following are examples of **content knowledge** that is specific to the educational component of your course. Please indicate your level of agreement by ticking one box in each row.

*A thorough grounding in…..*

<table>
<thead>
<tr>
<th>Content Knowledge specific to Education</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not very important</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Important</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very</td>
<td></td>
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<td></td>
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<tr>
<td>Extremely</td>
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<tr>
<td>Uncertain</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

(i) **Knowledge on the theories of education and learning** e.g. Education Foundations, Socio-Cultural Politics of Education & Curriculum Studies

(iii) **Knowledge on Inclusive Education (catering to special needs)** e.g. Responding to Individual Needs

(iii) **Knowledge on Behaviour Management** e.g. Promoting Positive Learning Environments

(iv) **Content Knowledge on school curriculum** e.g. Secondary Teaching Studies

(iv) **Content Knowledge on teaching & learning** (teaching strategies, lesson planning, unit planning, assessment), e.g. Secondary Teaching Studies & Professional Experience

3c. In the list of **content knowledge** above, which type of **content knowledge** has influenced or will influence you the most as a pre-service teacher? Why? (You may want to talk about specific units you have completed)

…………………………………………………………………………………………………………
…………………………………………………………………………………………………………
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Section 4. Your views on interpersonal skills

4a. This part of the survey asks you about your views on interpersonal skills. These are the personal qualities often demonstrated by teachers. Below is a set of statements. Which do you believe will be most useful as a teacher?

Please choose five items from the following list and rank them in order of importance from 1–5

<table>
<thead>
<tr>
<th>Qualities most important as a teacher…. (rank 1-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitive to students’ needs and concerns</td>
</tr>
<tr>
<td>Helps students develop positive self-esteem</td>
</tr>
<tr>
<td>Shows inclusive practice</td>
</tr>
<tr>
<td>Employs knowledge of students to facilitate learning</td>
</tr>
<tr>
<td>Has the ability to come down to students level</td>
</tr>
<tr>
<td>Has the ability to come down to student level</td>
</tr>
<tr>
<td>Encourages students to take on responsibility</td>
</tr>
<tr>
<td>Is flexible—able to change &amp; can adjust</td>
</tr>
<tr>
<td>Is warm, friendly &amp; firm</td>
</tr>
<tr>
<td>Is flexible able to change and adjust</td>
</tr>
</tbody>
</table>

4b. What experiences have you had as a student so far that have been most influential in developing your interpersonal skills? Please specify (for example, professional experience, lectures, tutes, teachers, sport, community involvement, family etc.)

…………………………………………………………………………………………………………
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Section 5. Your views on classroom management

This part of the survey asks you about your views on classroom (both in classrooms and gym, field etc.) management. This includes aspect such as behaviour management, classroom organisation, classroom climate, timing and sequencing of learning strategies.

5a. Beside each of the statements presented below, please indicate your level of agreement on the importance of the following classroom management techniques for secondary teachers? Please tick one box in each row.

It’s important for a teacher to……

<table>
<thead>
<tr>
<th>Classroom Management statements</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncertain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(i) Uses enthusiasm and motivation to maintain appropriate student behaviour.

(ii) Considers students interests when planning the uses of time, space, materials and equipment in teaching.

(iii) Uses expert knowledge or skills to maintain appropriate student behaviour.

(iv) Intrinsically know what to consider when planning the use of time, space, materials and equipment in teaching.

(v) Use routines and rules to maintain appropriate student behaviour.

(vi) Consider resources and time available when planning learning.

(vii) Use interpersonal communication to maintain appropriate student behaviour.

(viii) Consider students needs when planning the uses of time, space, materials and equipment in teaching.
(ix) Use school policies and procedures to maintain appropriate student behaviour.

5b. What experiences have you had as a student so far that has been most influential in developing your ideas on class management? Please specify (for example, professional experience, units, lectures, tutes, teachers, own schooling, sport and clubs, family etc.)

…………………………………………………………………………………………………………
…………………………………………………………………………………………………………
…………………………………………………………………………………………………………
…………………………………………………………………………………………………………
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Section 6. Your view on instructional techniques (pedagogical practice)

This part of the survey asks you about your views on pedagogy (teaching practice). In particular, it asks you about the strategies and approaches that you believe are most relevant/important to secondary teaching.

6a. Based on your experiences so far and observations how important (if at all) do you believe the following strategies are in teaching secondary students.

Beside each of the statements presented below, please indicate your level of agreement on the importance of the following instructional techniques for secondary teachers? Please tick one box in each row.

It’s important for a teacher to ……

<table>
<thead>
<tr>
<th>Instructional Techniques</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncertain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(i) Use a reference or textbooks

(ii) Use activity sheets

(iii) Use direct teaching (teacher talks to class)

(iv) Use group work
(v) Use models, tactile aids
(vi) Use demonstration and modelling
(vii) Use discussion
(ix) Use IT (computers, power point, internet, smart board etc.)
(x) Use videos, DVD’s
(xi) Use verbal questioning techniques
(xii) Use problem-solving strategies
(xiii) Use student-centred approach

6b. Rank the following pedagogical approaches in order of importance. One (1) being the most important and twelve (12) being the least important. Please number the box from 1–12.

<table>
<thead>
<tr>
<th>Approaches</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Uses a range of teaching strategies</td>
<td></td>
</tr>
<tr>
<td>(ii) Uses high-interest lessons—interactive, student interest high</td>
<td></td>
</tr>
<tr>
<td>(iii) Adapts teaching to students’ learning styles</td>
<td></td>
</tr>
<tr>
<td>(iv) Links curriculum/syllabus to teaching</td>
<td></td>
</tr>
<tr>
<td>(v) Monitors students understanding during instruction</td>
<td></td>
</tr>
<tr>
<td>(vi) Communicates purpose/outcomes of the lessons</td>
<td></td>
</tr>
<tr>
<td>(vii) Encourages students to take responsibilities for their learning</td>
<td></td>
</tr>
<tr>
<td>(viii) Show students that you are a learner e.g. makes use of student expertise</td>
<td></td>
</tr>
<tr>
<td>(ix) A student-centred approach</td>
<td></td>
</tr>
<tr>
<td>(x) Adapts teaching to their environment/context e.g. caters for special needs</td>
<td></td>
</tr>
<tr>
<td>(xi) Plans lessons that are relevant to students</td>
<td></td>
</tr>
</tbody>
</table>
6c. What experiences have you had as a student so far that has been most influential in developing your ideas on class management? Please specify? e.g. (Professional Experience, observation, Secondary Teaching Studies, own school experiences, coaching etc.)

……………………………………………………………………………………………………………

……………………………………………………………………………………………………………

……………………………………………………………………………………………………………

……………………………………………………………………………………………………………

Section 7. Your views on professional characteristics

7a. This part of the survey asks you about your views on the professional attributes that you have or will develop in your course. Beside each of the statements presented below, please indicate your level of agreement on the importance of the following professional attributes for secondary teachers? Please tick one box in each row

It’s important for a teacher to be……

<table>
<thead>
<tr>
<th>Professional Attributes</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly agree</td>
<td>Agree</td>
<td>Disagree</td>
<td>Strongly disagree</td>
<td>Uncertain</td>
</tr>
</tbody>
</table>

(i) Collaborative

(ii) A reflective practitioner.
(e.g. thinks about their teaching)

(iii) A positive

member of staff—team player

(iv) Willing to share

with colleagues (resources, workload)

(v) Able to communicate with parents

(vi) A lifelong learner

(v) Able to projects a professional image

(vi) Willing to
participate in extra curricula sport, excursions

(vii) Willing to participate in Planning & assessment

(viii) Willing to attend meetings

(ix) Willing to refer a learner with special needs to a specialist

(x) Committed to encouraging students’ to learn

7b. What experiences have you had as a student so far that has been most influential in developing you as a professional? Please specify (for example, professional experience, coursework, school teachers, own school experience work experience, family, sport, clubs etc.)

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........................................................................................................................................
........................................................................................................................................
........................................................................................................................................
........................................................................................................................................

Thank You
Appendix H: Focus Group Questions

**Focus Group Questions**

**Project Title:** *Exploring Pre-Service Teachers’ Perceptions of Teacher Qualities in Secondary Education: A Mixed-Method Study*

- Focus Groups conducted by Lynn Sheridan, PhD researcher from the University of Canberra
- Please note that your participation in the focus group is voluntary and that you can withdraw at any time. Remember that anything you say will be kept confidential and that you will be referred to by a pseudonym in any publication or presentations arising from the research
- Once again thank you for your participation in the focus groups.

1. You are training to be a health and physical education secondary teacher. What do you consider the most important qualities a health and physical education teacher must have?

2. How did you develop your ideas about teacher qualities? Your ideas may have come from teachers you have here or have seen in schools or just ideas you have developed at university. (prompt)

3. What differences can you see between the qualities you have identified and teachers that are currently in the school system?

4. How do you see the link between teacher quality and effective teaching?

5. One of the most common responses from school students in terms of what makes an effective teacher is that the teacher was able to relate to us, what do you think this response means for you as a pre-service teacher?

6. Reflecting back are there any qualities you would now like to add?
Appendix I: Recruitment Email—Focus Groups

**Project Title:** Exploring Pre-Service Teachers’ Perceptions of Teacher Qualities in Secondary Education: A Mixed-Method Study

**Email Transcript:**

Dear health and physical education students,

I am a PhD student at the university and I am looking for volunteers in your degree who are interested in participating in a focus group (discussion/conversation) around the topic of teacher qualities.

I will be running two focus groups next semester at a time that suits participants and will be looking for participants from each year in the course. The focus groups are voluntary. Data gathered from the sessions will be confidential and there will be opportunity for participants to read, add or delete transcripts.

Refreshments will be provided.

If you are interested can you please email me or phone.

Thanks

Lynn Sheridan

Phone: 6201 2067
Appendix J: Interview Questions

Interview Questions

Project Title: Exploring Pre-Service Teachers’ Perceptions of Teacher Qualities in Secondary Education: A Mixed-Method Study

- Interviews conducted by Lynn Sheridan, PhD researcher from the University of Canberra
- Please note that your participation in this interview is voluntary and that you can withdraw at any time. Remember that anything you say will be kept confidential and that you will be referred to by a pseudonym in any publication or presentations arising from the research
- Once again thank you for your participation in this interview.

Questions:

1. Considering the units that you convene/teach to health and physical education students—What are your goals/aspirations for the students in terms of developing their teacher qualities (knowledge, skills, attitudes, understandings). You may want to consider learning outcomes, student attributes, assessment etc.

2. What factors have influenced your understanding of teacher qualities and effective teaching—How does this influence your aspirations/goals for your students?

3. What do you believe are the strengths and constraints (if any) in terms of the needed teacher qualities—(skills, knowledge, attitudes, understandings) of the units you convene/teach? (Consider content knowledge, skills, interpersonal skills, class management, instructional techniques and professional attributes).

4. On reflection, is there anything else you would like to add?
### Appendix K: Factor Analysis

Rotated Component Matrix

<table>
<thead>
<tr>
<th>Professional Characteristic</th>
<th>Component 1</th>
<th>Component 2</th>
<th>Component 3</th>
<th>Component 4</th>
<th>Component 5</th>
<th>Component 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>professional characteristic—willing to refer a learner with special needs to a specialist</td>
<td>.694</td>
<td>.100</td>
<td>-.063</td>
<td>-.017</td>
<td>.105</td>
<td>.038</td>
</tr>
<tr>
<td>professional characteristic—willing to participate in extracurricular</td>
<td>.691</td>
<td>.173</td>
<td>.118</td>
<td>.137</td>
<td>-.031</td>
<td>.229</td>
</tr>
<tr>
<td>professional characteristic—communicated to encouraging students to learn</td>
<td>.686</td>
<td>.135</td>
<td>.024</td>
<td>.116</td>
<td>-.283</td>
<td>-.078</td>
</tr>
<tr>
<td>professional characteristic—willing to share with colleagues</td>
<td>.651</td>
<td>.293</td>
<td>-.290</td>
<td>-.051</td>
<td>.104</td>
<td>-.002</td>
</tr>
<tr>
<td>professional characteristic—able to project a professional image</td>
<td>.650</td>
<td>.109</td>
<td>-.082</td>
<td>.180</td>
<td>.159</td>
<td>.191</td>
</tr>
<tr>
<td>professional characteristic—a lifelong learner</td>
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<td>.153</td>
<td>.020</td>
<td>.125</td>
<td>-.192</td>
<td>-.005</td>
</tr>
<tr>
<td>professional characteristic—willing to participate in planning and assessment</td>
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<td>.252</td>
<td>-.044</td>
<td>.213</td>
<td>-.154</td>
<td>.162</td>
</tr>
<tr>
<td>professional characteristic—a positive member of staff</td>
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<td>.140</td>
<td>-.266</td>
<td>.123</td>
<td>-.114</td>
<td>.106</td>
</tr>
<tr>
<td>professional characteristic—Collaborative</td>
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<td>.044</td>
<td>.012</td>
<td>.277</td>
<td>-.152</td>
<td>-.054</td>
</tr>
<tr>
<td>professional characteristic—able to communicate with parents</td>
<td>.550</td>
<td>.347</td>
<td>-.363</td>
<td>.065</td>
<td>.092</td>
<td>-.232</td>
</tr>
<tr>
<td>professional characteristic—willing to attend meetings</td>
<td>.541</td>
<td>.387</td>
<td>-.113</td>
<td>-.043</td>
<td>-.040</td>
<td>.009</td>
</tr>
<tr>
<td>professional characteristic—a reflective practitioner</td>
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<td>.061</td>
<td>-.180</td>
<td>.144</td>
<td>-.093</td>
<td>-.092</td>
</tr>
<tr>
<td>view on instructional techniques—models, tactile aids</td>
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<td>.725</td>
<td>-.037</td>
<td>.167</td>
<td>-.112</td>
<td>.139</td>
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<tr>
<td>view on instructional techniques—discussion</td>
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<td>.694</td>
<td>-.118</td>
<td>-.063</td>
<td>-.073</td>
<td>.032</td>
</tr>
<tr>
<td>view on instructional techniques—problem-solving techniques</td>
<td>.120</td>
<td>.693</td>
<td>.092</td>
<td>.010</td>
<td>-.309</td>
<td>.050</td>
</tr>
<tr>
<td>view on instructional techniques—group work</td>
<td>.232</td>
<td>.621</td>
<td>-.234</td>
<td>.093</td>
<td>.087</td>
<td>.051</td>
</tr>
<tr>
<td>view on instructional techniques—student-centred approach</td>
<td>.335</td>
<td>.589</td>
<td>-.174</td>
<td>-.052</td>
<td>-.006</td>
<td>-.137</td>
</tr>
<tr>
<td>view on instructional techniques—demonstration and modelling</td>
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<td>.545</td>
<td>-.105</td>
<td>.340</td>
<td>-.108</td>
<td>.069</td>
</tr>
</tbody>
</table>
view on instructional techniques—IT-computers, power point internet, smart board  

view on instructional techniques—video/DVD  

uses interpersonal communication to maintain appropriate student behaviour  

view on instructional techniques—verbal questioning techniques  

social health issues  

content knowledge on teaching & learning  

content knowledge on school curriculum  

sport skills  

uses enthusiasm and motivation to maintain appropriate student behaviour  

uses routines and rules to maintain appropriate student behaviour  

consider students’ needs when planning the sues of time space materials and equipment in teaching  

use school policy and procedures to maintain appropriate student behaviour  

intrinsiclly knows what to consider when planning the use of time space materials and equipment  

considers resources and time available when planning learning  

uses expert knowledge or skills to maintain appropriate student behaviour  

knowledge on the theories of education and learning  

knowledge on behaviour management  

knowledge on inclusive education  

view on instructional techniques—direct teaching  

sport science  

considers students interests when planning the use of time space materials and equipment
<table>
<thead>
<tr>
<th>View on Instructional Techniques</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
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<td>.056</td>
<td>.031</td>
<td>.045</td>
<td>-.225</td>
</tr>
<tr>
<td>Activity Sheets</td>
<td>-.110</td>
<td>.154</td>
<td>-.079</td>
<td>-.118</td>
<td>-.074</td>
</tr>
</tbody>
</table>
Appendix L: Quantitative Test Questions

In conducting statistical tests a series of questions were designed in response to the research questions. Tests were conducted against the demographics and against the identified factors from the factor analysis. Tests were also conducted to compare before and after across Years 1–4.

Demographic information: Year of study, age, gender, situation prior to study, prior qualifications, ethnic background.

Questions asked in each section against the demographics:

- What was the percentage of male and female students in each year?
- What was the age group range?
- What comparison occurred over the four years?
- How many of the students were school leavers?
- How many of the students have completed other study?
- What was the percentage of students in the different ethnic categories?

Questions asked against the factors identified in the factor analysis:

Students views on teacher qualities

- What are the five first-choice teacher qualities pre-service teachers most valued?
- Which quality was most valued in each year, overall?
- Did the selection of preferred teacher qualities vary across years and from the beginning to the end of the year in each year level?
- Was there a gender difference in the results?

Students views on content knowledge—most useful/relevant
• What was considered ‘extremely’ or ‘very important’ in each year across years?

• Did students’ perceptions change during the years—before and after in Years 1, 2, 3 and 4?

• Did particular years state particular things? If so why?

• Was there any percentage difference in the years, for example, Year 1 said this but Year 2 said that?

• Was there a gender difference in the responses over the years?

**Perceptions on interpersonal skills**

• What are the five first-choice teacher interpersonal qualities students most value?

• Which interpersonal qualities were most valued in each year, overall?

• Did the selection of preferred interpersonal teacher qualities vary across years and from the beginning to the end of the year in each year level?

• Was there an overall gender difference in responses over the years?

**Perceptions on classroom management**

• What statements were considered ‘extremely’ or ‘very important’ in each year across years?

• Overall, which statement was most significant across the whole group?

• Did students’ perceptions change during the years—before and after in Years 1, 2, 3 and 4?

• Did particular years select a particular statement? If so why?
- Was there any percentage difference in the years, e.g. first year said this but second year said this
- Was there a gender difference in years?

**Views on instructional techniques**

- What was the ranked most important for each instructional techniques overall?
- Which techniques were ranked the most important in each year?
- Did particular years select a particular technique? If so why?
- Was there any percentage difference across the years?
- Was there a gender difference in years?

**Views on pedagogical approaches**

- What were the first-choice rankings for each year level?
- Was there a difference in the ranking in each year level?
- Was there a difference in rankings across the years?
- Did particular years focus on specific pedagogical approaches? If so why?

**Views on professional characteristics**

- What professional characteristics were most importance in each year, across years?
- What differences were there in the different year cohorts? If so why?
- What was the overall the most important professional characteristics identified by the pre-service teachers?
Appendix M: Extracts From the Focus Groups

(FG1) Transcript

What differences can you see between the qualities you have identified and teachers that are currently in the school system?

# (2) One of the most powerful things I have seen in schools is ‘referent power’

If you ask a student, who is your favourite teacher – they will say the one who relates well to me.

For me this was also my footy coach – he looked out for me, made sure I didn’t get in trouble – he would take it off other teachers’ hands to discipline me

#(1) The ability to relate to kids say – If the teacher has no interest in what you do then you will show and interest in what they are teaching you.

#(2) If you can relate to the student – you know you can ask them what they did on the weekend then you immediately have a connection with that kids

You will work harder for him because he took an interest in you.

#(4) At LG the maths teacher was the indoor soccer coach so when they had maths with him they showed him more respect than other teachers because he was their soccer coach. As a coach he as looked up to.

#(3) Talking about good teachers my physics teacher in year 11 & 12 was good I found this subject hard but the teacher was accepting and supportive. He didn’t put me down or say hurry up just to get the answer. He took the time to sit down with me and talk to me about the content and organise extra tutorials after school. So instead of just writing you off he took an interest in you, he didn’t right me off he saw that I had the potential. I just
needed time to grasp the concepts and maybe needed an explanation in a different way. Sometimes I find things hard to grasp if it’s taught in just one way – explained differently I can just get it. (flicked fingers)

(FG2) Transcript

What do you consider the most important qualities a PDHPE teacher must have?

# (1) passion, positive and enthusiastic attitude

# (2) Adapt to different learning styles

# (6) like you are often put into situations…You may not even be teaching PE or often in schools in my experiences PE are often put in situations where no one else is going to help out where…If there are 5 teachers away they are often the ones who are going to have to fill in the gaps.

# (4) Willingness to learn, open minded, different people have different styles. Like in the last idea different teachers have different styles and you have to cater so that students used to a particular style of teaching are catered to, so they get the most out of the lesson. You need to adapt to different situations.

# (7) With PE I suppose you could say that it’s not like something like maths or English where there is a certain way of doing things, its broader. I’m looking predominantly at the physical approach so you need a range of strategies and approaches. So yeah you really need to be flexible with your kids, sort of look for the ways that suits you. I think that’s important.

# (1) Yeah collaboration
# (5) One of the things I found on internship was that year 10 girls they felt that they were uncoordinated and it wasn’t that they were uncoordinated it was that they were not at the same level and I kept saying to them I don’t care how good you are it’s your participation that matters to me, and they couldn’t believe that I had come in with that attitude they kept questioning me – saying isn’t it all about how good I am? Aren’t you going to grade me? And I said yes, I am going to grade you but its still important to all have a go – that’s important.

# (5) Its part of your inclusive practice I suppose

# (4) Encouragement

All yeah agreement

# (5) acceptances – I don’t know

# (4) self- acceptance on the students’ part

# (2) I would say energetic. Because you have to teach them to be out there, healthy, involved in physical activity. If you are kinda ‘dull’ just saying eat this……

You know you go for a run around the lake once a week and not make it fun then they are not interested in doing it. So I say energetic.

# (3) Sense of humour – laugh at yourself if you are demonstrating to the kids

You know when you are teaching a subject like health some things are sensitive.
Appendix N: Course Information

Course: Bachelor of Education in Secondary Teaching (Health and Physical Education) (433BN)

Award: Bachelor of Education (2007)

Course Level: 10

Faculty: Faculty of Education

Offered Locations and Delivery Modes:

- UC Bruce Campus
  - Full Time, Face-to-Face/Part Time, Face-to-Face

Introduction

This course is offered to school leavers and those with no previous tertiary qualifications who would like to become secondary teachers in Health and Physical Education. Graduates will develop: sensitivity to the needs and characteristics of learners; awareness of the social context and implications of schooling; understanding of basic education problems and issues; self-awareness, including awareness of the place of the teachers personal theories, values and modes of operation in the motivation of learning; knowledge, skills and attitudes to be an effective teacher; and, flexibility to enable constructive work in given education settings.

Course Requirements

At least 96 credit points comprising of:

(a) Required 81 credit points
(b) Restricted choice 12 credit points

(c) Open elective 3 credit points

as set out below:

(a) Required (81 credit points):

Major in Teacher Education (Open) (18 credit points)

Major in Professional Studies Secondary (Restricted) (21 credit points)

Minor in Physical Skills (Restricted) (12 credit points)

6577 Indigenous Education: What Works (3cp)

6904 Teaching Internship (6cp)

7562 Acquisition of Skills 5 (3cp)

Health and Sport Science units (18 credit points):

6534 Regional Anatomy and Physiology

6529 Systemic Anatomy and Physiology

6615 Introduction to Exercise Science

6581 Health and Personal Development

6582 Health Education

6909 Health Promoting Schools

(b) Restricted choice (12 credit points):

Four units comprising restricted electives (Restricted to any electives within the Key Learning Areas of a secondary school curriculum). Students are required to seek course advice before deciding on their restricted electives. Students are only restricted by school KLAs. (No more then 30 credit points at level 1 allowed for the course.)
(c) Open electives (3 credit points):

One unit in last semester fourth year (no more than 30 credit points at level 1 allowed for the course).

**Typical Course Structure**

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Semester 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>YEAR 1</strong></td>
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<tr>
<td>4782 Education Foundations</td>
<td>6577 Indigenous Education: What Works</td>
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<td>6581 Health and Personal Development</td>
<td>6582 Health Education</td>
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<td>5965 Acquisition of Skills 1</td>
<td>5966 Acquisition of Skills 2: CIT</td>
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<tr>
<td>6534 Regional Anatomy and Physiology</td>
<td>6529 Systemic Anatomy and Physiology</td>
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<tr>
<td><strong>YEAR 2</strong></td>
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<td>6732 Promoting Positive Learning Environments</td>
<td>6895 Information Technology and Education</td>
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<td>7560 Acquisition of Skills 3 CIT</td>
<td>7561 Acquisition of Skills 4</td>
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<td>6906 Professional Experience SEC 1</td>
<td>6615 Introduction to Exercise Science</td>
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<td>Restricted KLA elective</td>
<td>Restricted KLA elective</td>
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<tr>
<td><strong>YEAR 3</strong></td>
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<tr>
<td>6761 Secondary Teaching Studies 1 (Health &amp; Physical Education)</td>
<td>7562 Acquisition of Skills 5</td>
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<td>6909 Health Promoting Schools</td>
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</table>
6907 Professional Experience SEC 2      6908 Professional Experience SEC 3

Restricted KLA elective               Restricted KLA elective

YEARS 4

7480 Secondary Teaching Studies 3 (6cp)      6889 Socio-Cultural Politics of Education

6904 Teaching Internship (6cp)             6733 Responding to Individual Needs in Education

Open elective

6891 Curriculum Studies

Course Duration

8 Semesters full-time, equivalent part-time; maximum 20 semesters.