THE ROLE OF EMOTIONAL KNOWLEDGE IN LEARNING TO TEACH:

A FRAMEWORK FOR STUDENT TEACHERS AND THEIR MENTORS ON SCHOOL PLACEMENTS

EAMONN PUGH B.Ed., M.Ed.

25th November 2017

Declarations

This thesis results entirely from my own work and has not been offered previously for any other degree or diploma.

It is submitted in fulfilment of the requirements of the degree of Doctor of Philosophy.

The word length is 78,779 (excluding references), conforming to the permitted maximum.

Department of Educational Research

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Abstract

Emotional aspects of teaching impact on classroom relationships, as well as on teacher burnout and resilience. The research reported here contributes towards understanding emotional knowledge in initial teacher education.

Using particularly Boyatzis and Goleman's ideas of emotional competence, a four-quadrant framework was constructed, showing emotional knowledge as categories of self- and social awareness and self- and relationship management. This framework was tested in an inquiry to support student teachers during their work-based learning in classrooms. The research aimed to find the meanings attached to emotional knowledge by these student teachers and their school placement mentors.

One hundred and nineteen student teachers following a primary postgraduate programme provided an opportunity sample of participants. After introduction to the framework, eighty-four completed an online survey, self-reporting both their emotional knowledge and their confidence in making those self-reports. Eleven agreed to provide written reflections during school placements, to participate in a focus group and be interviewed. Their mentors supplemented this with interviews and their written end-of-placement reports on the student teachers.

In a mainly qualitative and interpretivist approach using thematic analysis, responses were coded using ATLAS.ti software and triangulated across data sets. This built a picture of how emotional knowledge was understood.

The research found that student teachers used emotional knowledge in managing behaviour and building trusting and respectful relationships with mentors and pupils while participants experienced it as a developmental part of reflective practice.

The findings were used alongside the ideas of dealing with emotions by transforming teacher knowledge and Zembylas' concept of emotional ecologies, thereby developing a new theoretical framework for emotional knowledge.

The main recommendation - that teacher educators prepare student teachers to explicitly recognise emotions and use emotional knowledge – has relevance to any work that involves dealing with emotions. The thesis also points towards empirical research into the re-theorised model.

Acknowledgements

The completion of this thesis would not have been possible without the support of others. I address them in no particular order, recognising that I needed them all and they all gave valued contributions.

Without the PGCE Primary student teachers and the school mentors who took part, there would have been no data to analyse. Special thanks are due to the handful of student teachers who contributed over a full year, culminating in interviews in school. I thank too my partnership tutor colleagues who agreed to collect observation data on their school visits.

I was able to grow in confidence as a researcher for which huge credit goes to the wonderful support of my supervisors, Pete Boyd and Hilary Constable. Their complimentary approaches and their timely use of support and challenge kept me going, especially their sensitivity at times when I was grinding to a near halt.

I appreciate the development opportunities afforded by the Graduate School, knowing that a bespoke training programme was there when I needed them. I am grateful too for the time and expertise of my thesis examiners and the feedback they gave me - insights from which I have been able to keep learning.

The ongoing encouragement received from my colleagues – in teacher education and other faculties, across the Carlisle and Lancaster campuses – has been tremendous. I must pick out Ed Tyson though for not just his collaboration with me in this area of research interest, but for the way he has taken work pressure from my shoulders, allowing me to devote energy and time to the thesis.

Last but not least, I thank my family. My wife Pam deserves a medal for her patience and sacrifice during the countless time I have been at the computer, time that I could have been spent with her or on sensible pursuits such as DIY, gardening and washing the car. My gratitude also extends to our children Elli, Matthew and Laura for their cajolement to complete this blessed thesis and get off the computer.

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Chapter 1: Introduction

1.1 Background

In twenty five years of teaching in the English state education system, mainly in primary schools, I have supported many student teachers on school placements. This has often been in the supporting and assessing role of school-based mentor and, sometimes, as the headteacher of the placement school. The large majority of these student teachers – sometimes called pre-service or trainee teachers - were confident, self-analytical individuals who 'connected' with the pupils they taught. The minority who struggled to meet the required teaching standards tended to be defensive, have brittle self-confidence and lacked the respect of the children they taught. I had wondered why the feelings of the student teachers themselves and those of the children they taught were not addressed more explicitly, or even at all, within the student teachers' initial teacher education programme and, in particular, on their school placements.

Moving from school to a teacher education role at university, my work for the past twelve years has been a mix of teaching student teachers, visiting schools to moderate the quality of student placements and engaging in educational research and scholarly activity. When my M.A. in Education called for a research project proposal and dissertation, my area of inquiry was this gap in knowledge about emotional aspects of learning to teach that I had perceived for some years as a serving primary teacher and now as a teacher educator. Emotional aspects of learning to teach were understood to be important, but this was a tacit recognition that had rarely received systematic attention by researchers. It still seemed to be a very obvious issue which was ignored – 'an elephant in the room'.

This initial study used an action research approach, hypothesising that awareness and use of 'emotional intelligence' would improve my performance and that of the four student participants. It found that students who were aware of their own emotions and relationships

with pupils in lessons also performed well generally, although no causal links were established. The main data collection instrument was a form for capturing emotionally intelligent behaviours through lesson observation by a university tutor. I concluded that the study, in a modest way, provided evidence to support the call for the emotional welfare and competence of student teachers to be addressed in an explicit and robust manner.

A pilot for this thesis was designed, with a similar 'emotional intelligence' form, this time completed by three student teachers, self-reporting with the aid of a video-recording of their teaching. Again a heightened awareness of emotional aspects of teaching by the students was evident. I learned something of the validity of video-recording as an action research tool but little about the emotional aspects of learning to teach as represented by emotional intelligence. The pilot had merit as an action research project, not least because the student teachers found reflection on a framework of emotional intelligence to be useful in terms of their teaching. There was little indication however that they understood emotional intelligence as a tangible asset to their teaching.

1.2 The research aim and questions

Therefore this inquiry began with a search for an emotional aspect of teaching, something that would be an asset to the teacher. The thesis is structured in terms of research questions with a hierarchy of abstraction (Punch, 2015).

It begins with a very general question addressing the broad research aim:

How could the emotional aspects of learning to teach be better addressed by teacher educators and student teachers?'.

This question guided my search through the research literature, presented within 'emotional aspects of learning to teach' themes - the subheadings of the literature review (Chapter 2). The analysis of the existing research led to the emergence of a new theoretical concept.

Consequently the literature review concludes with a more specific research question centred on this new idea - the emotional knowledge of learning to teach (section 2.4) .

This narrower research question was then broken down into four specific 'data collection' questions (Punch, 2015: 58). These questions are introduced (in section 3.3) as drivers behind the methods chosen. These data collection questions are part of the overarching questions and the analyses they inform thereby provide answers also to the two broader research questions.

The Results chapter that is structured as responses to four data collection questions (section 4.1, 4.2, 4.3 and 4.4) that break down the use of emotional knowledge by student teachers.

In the Discussion chapter, the inquiry analyses the results, answering the data collection questions, before returning to the main 'emotional knowledge' research question (in section 5.1). These discoveries lead back to an evaluation of how well the research aim was achieved - identifying better ways of addressing emotional aspects of learning to teach (section 6) .

I have organised the research in this way (with different levels of abstraction) to provide a cohesive and progressive structure to the thesis. Zooming in and then zooming out of these levels of questioning helped ensure tight logical links between the data collection and analysis.

In his advocacy of this approach, Punch (2015) argues that these links between levels of questions and answers is necessary if the research is to have consistency, coherence and validity. At the early stages of the thesis, this structure also provided a defence against any confusion and overload, an advantage pointed out by Miles and Huberman (1994:55). A further benefit is that, as a researcher with considerable experience of teaching and teacher education, I can draw on that experience to identify general, specific and data collection questions at an early stage.

This was the starting point for the research and will be revisited later (section 5.9). It gave the direction and focus needed to guide the next stage of the inquiry - my review of the literature.

1.3 The parameters of this research

The original contribution that this thesis makes is an emergent understanding of emotional knowledge. This emotion-related concept has been framed and tested to improve the practice of student teachers on their school placements and then re-framed as an asset with greater capacity for such improvement.

At this early point, I acknowledge that the learning of the pupils in their class is arguably the key achievement measure applied to any student teacher (or qualified teacher). However despite the seminal important of pupil progress, it is *not* the centre of this enquiry. This inquiry *is* about one emotional aspect of learning to teach - emotional knowledge. It includes awareness and management of emotions, those of students teachers and the pupils and adults with whom they interact on school placement.

The study *is not* about emotional intelligence or emotional competence. Neither is it an inquiry into emotion knowledge (which is different from emotion*al* knowledge).

Nor does it investigate emotions themselves. That said, the nature and characteristics of emotions themselves are addressed in the literature review because some understanding of how emotions can be recognised and managed by teachers is part of this investigation. The research does need to include a basic understanding of the properties of 'emotion' insofar as they are bound up within the 'emotional' aspects of learning to teach. After all, "emotions are intimately involved in virtually every aspect of the teaching and learning process" (Schutz and Lanehart, 2002:67). These themes are reflected in the literature review.

Concerns have abated about the scarcity of research into teacher emotions (Nias, 1996) with studies in this field steadily gaining prominence since Sutton and Wheatley's (2003) review

of what was then limited research. In arguing that teaching colours the feelings and actions of those who teach and those they influence, Hargreaves claims that "teachers can enthuse their students or bore them, be approachable to or standoff-ish with parents, trust their colleagues or be suspicious of them. All teaching is therefore inexorably emotional – by design or default" (Hargreaves, 2002: 396).

Yet emotions are the least investigated aspect of research on teaching, despite emotional aspects being most often mentioned as being important (Chen, 2016). When used well - and too often they are not - Alan Mortiboys argues, they can transform teaching for the better (Mortiboys, 2012). More research and theorisation on teachers' emotions is still needed to gather understandings of how emotions influence teaching (Schutz and Zembylas, 2011). Important as rational and fundamental aspects such as teacher knowledge and skills are, teacher emotions have often been ignored or underplayed in teaching improvement initiatives (Day and Lee, 2011; Hargreaves, 2001; Sutton and Wheatley, 2003). Such research is particularly needed to inform pre-service training programmes that place little emphasis on relationships between teachers' emotions and teaching practice (Sutton, Mudrey-Camino and Knight, 2009).

Meyer (2009) examines student teachers' emotions during the teaching practice experience through written reflections from, and interviews with, student teachers. She maintains that student teachers are introduced to teaching in a highly controlled environment and frequently feel powerless at the same time they are being asked to assume more control. In addition, it is common for student teachers' university supervisors and classroom mentors to sympathize with the myriad of emotions being experienced. At the same time, it is also common for supervisors and mentors to urge student teachers to manage their emotions and conform to professional expectations (2009: 74).

This thesis is a significant response to the calls for research and theorisation on teachers' emotions. It creates and tests a theoretical framework in a pre-service teacher setting. In applying the theory of emotional knowledge to the school placement practice of student teachers, it reconstructs the notion of emotional knowledge and situates it in the context of the learning to teach.

1.4 The ontological foundations

How I see reality in the world (my ontology) and the nature of knowledge (my epistemology) demarcates what counts as meaningful knowledge to me. As a researcher that knowledge that will be the outcome of my research. This understanding of what knowledge is a foundation underpinning the methodological approach to my inquiry, an approach that will lead to that knowledge.

A few years ago, I returned home from a concert with a t-shirt emblazoned with 'I believe I can change my world' (Dunnery, 1995), the title of one of the performer's best-known songs. I bought the souvenir because the words encapsulated my own view of 'world' in terms of empowerment, responsibility and plurality.

It captured my understanding that everyone can impact on their world by changing it. This change can be caused by giving someone an infectious smile that others respond to or continuing, under threat of death, to call for educational equality for girls. Change can also be caused by dropping a piece of litter or pressing the nuclear button. Everyone has some empowerment to change their world for good or bad.

Dunnery's lyrics were inspired by the mantra attributed to Gandhi - "Be the change that you wish to see in the world" (Edberg, 2008). This echoed my belief that everyone with the faculty to notice their environment also carries responsibility to act for a common good, contributing to positive ecologies in their world. This is a theme that this thesis returns to in the context of emotional aspects of teaching in section 2.2.5.

Yet, there is a contrast in the use of pronoun by Dunnery in 'I believe I can change *my* world' and Gandhi's definitive article in 'be the change that you wish to see in *the* world'. I am in the former camp insofar as I believe that everyone has their own world. There are as many versions of the world as there are people in it and every one of them has some capacity to change the world. This comes with empowerment and a personal responsibility to everyone to think, act and make a difference of some sort within their particular environment.

I am like everyone else in having a personal world and a personal view of it. This meta-view is my theory about what is real (Braun and Clarke, 2013), a level of self-referential thinking that has to influence how I conduct any research inquiry. Although the research participants have similarities in their roles, they each have their own perspective on emotions and teaching. The research framework I gave them became part of their own world. As researcher, I responded to the challenge of capturing these different participant understandings of that framework. To do this, I planned the inquiry accordingly, using mainly narrative methods through a qualitative approach.

These philosophical assumptions for my research have to be the starting point for my thesis. In terms of education it is therefore the philosophical study of the nature of educational reality and how there may be different perceptions of what is known (Jackson, 2013). As Greener (2004: 4) argues, importance lies in such assumptions because it increases the likelihood of making a better choice of methods than the researcher would otherwise make. Pring (2000: 89) warns that 'without the explicit formulation of the philosophical background – with implications for verification, explanation, knowledge of reality – researchers may remain innocently unaware of the deeper meaning and commitments of what they say or how they conduct their research'. These assumptions are broadly classified here as ontology, epistemology and methodology. Here I share my ontological position; the description of epistemology (section 2.2.3) and methodology (section 3.2) will follow and be informed by the literature review.

Ontology in this study is defined as 'the classification and explanation of entities in that what it is and what there is to be known are articulated' (Hartas, 2010:15). The ontological perspective has influenced my choice of methodological approach taken.

My employer is a university teacher training provider with many processes for teacher students, university staff and school-based teachers to follow. I see those processes as guidelines, but primarily for the education and wellbeing of student teachers and the children they teach. I believe that every other person will have their own view of these processes. This depends partly on who they are – tutor, student, school-based mentor, headteacher, pupil and anyone else affected within the settings of a teacher-training programme, typically on campus and in schools. It also depends up the personal circumstances that any of those individuals are in.

To illustrate, a student teacher may have begun a school placement despite a recent bereavement and be far less effective in the classroom than on a previous school placement. The student teacher is not motivating the pupils, there seems no purpose to the lessons taught and the class behaviour has worsened. Though the procedures for addressing a concern like this are recorded in writing, I do not see these processes as fixed and unbending. They are courses of action to follow, drawn up with the purpose of serving the greater good of all concerned. There are no absolute realities associated with them because, in the example given, the student, headteacher, tutor, pupil and pupil parent will each have a picture of the situation that is true, real and valid to that person. Indeed each person will have their own truth, though truth for a pupil parent may be that the student placement should be terminated, the truth for the student may be that extra support is needed and the truth for each of the other parties may be different still. These perspectives of the truth change when those who hold them listen to and understand each other; that is why such processes should be under ongoing review and changed to reflect different and changing realities.

In the context of learning to teach, ontology is about the nature of educational reality and how there may be different perceptions of what is known. It encompasses my beliefs about education. My world does not exist externally and independently of how other people perceive it to be. It is constructed by the individual and different experiences of people. My ontological position is summed up well by Jackson's description of reality as "experienced and constructed, based on social or individual human conception" (Jackson, 2013:52). To me, all truth is "constructed" by people in a social context. Multiple meanings exist, even of the same data.

This ontological understanding influences my epistemological outlook, shaping my methodological decision-making. Ultimately, the value of any claims I make from this research rests on my ability to describe and interpret those constructed experiences.

I used a predominantly qualitative approach to this inquiry. This approach focussed on understanding the meaning that student teachers attached to one emotional aspect of teaching, meaning that was created more through their words than any statistics that they generated.

1.5 My researcher positionality

Malterud makes the distinction that "Preconceptions are not the same as bias, unless the researcher fails to mention them" (2001: 484). Here I am giving the reader an introduction to my preconceptions because they will impact on the research. More such disclosures will follow at appropriate junctures.

I am a university lecturer working with student teachers preparing to become qualified teachers who gain employment in primary schools, teaching pupils aged 5 to 11.

The language 'student teacher' and 'teacher education' in this research are considered choices, consistent with my belief that becoming an effective teacher requires an education. It is more than being a 'trainee' engaged in 'initial teacher training', terms easily associated

with a transactional model of learning where learning to teach involves copying practice from more experienced teachers.

'Student teacher' makes a statement about this nature of the embryonic stage of learning to teach. It is an educative rather than a training experience. By contrast to this fixed view of reproducing teaching, I posit that learning to teach requires making informed decisions that go beyond automatically copying the practice of others as given truths. This justification of a similar nomenclature by Colin Richards and colleagues still holds currency:

> "The process of professional development, even within the Government's current regulations, is complex, demanding and when undertaken with appropriate regard for the nature of the teaching/learning enterprise can be deeply educative for both student and tutor (Richards, Simco and Twiselton, 1998)".

Acceptance that becoming a teacher is an educative process is incongruent with notions of 'trainee' and 'training'. However that terminology is still used in most of the media or government literature associated with pre-service teaching. The terms 'student teacher' and 'teacher education' emphasise that educative process. They are not surprisingly used by university-based providers of teaching qualifications and are the preferred names in this report.

This thesis is based on a premise that learning to teach is a journey on which the student teacher constantly makes complex choices, unlike an apprentice copying an experienced practitioner. Those decisions should be made from well-informed positions, using a strong evidence base and engaging in reflexive practice. That reflects my world view - as a person, teacher educator and researcher - that nobody holds an absolute truth to be passed on and used, independent of the beliefs and values of the recipients. Learning to teach is more successful if the learner constructs meaning in a bespoke manner from the various practices and beliefs of others such as peers, school-based mentors and university-based tutors. My

beliefs are also informed by my own values, including an ideal of teachers taking charge of their own learning, resolving their problems with the support of an initial teacher education programme.

In sharing the outcomes of this thesis, I seek to create an inquiry, causing something to happen in a tangible way. Hammersley perceives researchers as 'embodied agents whose work arises out of their biographies and engages their emotions and identities' (Hammersley 2005:148). This positionality is unavoidably influenced by the values and beliefs shared above. They are part of my personal philosophy which in turn is part of my research. Throughout the research I have been conscious of the credibility of my own voice, conscious that it must convey authenticity and trustworthiness. Because complete objectivity was impossible and pure subjectivity would have undermined the credibility of the findings, I struck a balance in my planning of the thesis; this balance is reflected in the methodology of the study (see Chapter 3) .

Nor should my research be free of values and beliefs. There is broad recognition though that researcher's perceptions are utilised in all stages of decision-making throughout a research project (Cohen, Manion and Morrison, 2001; Somekh and Lewin, 2006). Examples include Sikes' assertion that "a crucial aspect of choosing a methodology is researcher positionality (Sikes, 2004:17) and McDowell (1992) noting that researchers must especially take account of their own position or perspective in relation to the research participants and research setting.

To purge my philosophy to create a sort of neutrality was not feasible, necessary or desirable. However the study was conducted with adherence to relevant values and beliefs. The literature review that follows helps identify and challenge my pre-conceptions and the subsequent methodology chapter opens my research to scrutiny and challenge by others. A potential danger was present in the inherent bias of my position; it could have compromised

the impartiality of my interpretations and the conclusions reached. To avoid this researcher bias, I clarified my values and assumptions rather than attempting the impossible task of screening them out (Somekh and Lewin, 2006:348).

This is how I upheld my moral researcher responsibility to being truthful in a search for new knowledge about emotional aspects of learning to teach. So far these perceptions have been considered in the context of my ontology and researcher positionality. After reviewing the literature, the effect of my researcher perceptions and the management of my bias will be addressed against the background of my epistemology and chosen methodology.

1.6 The Teaching Standards

Any consideration of the emotional aspects of learning to teach on England primary school placements requires some understanding of the teaching standards that student teachers must meet to qualify for provisional registration and eligibility for employment, firstly on a one-year probation and induction period.

While these standards are for all teachers, there is a minimum level of performance required in all of the standards for student teachers seeking Qualified Teacher Status (QTS). Part 1 (Teaching) comprises eight standards:

TS1 - Set high expectations which inspire, motivate and challenge pupils

TS2 - Promote good progress and outcomes by pupils

TS3 - Demonstrate good subject and curriculum knowledge

TS4 - Plan and teach well-structured lessons

TS5 - Adapt teaching to respond to the strengths and needs of all pupils

TS6 - Make accurate and productive use of assessment

TS7 - Manage behaviour effectively to ensure a good and safe learning environment

TS8 - Fulfil wider professional responsibilities

(Department for Education, 2013)

An exploration of how teacher professionalism and knowledge is manifest through national qualifications frameworks and professional standards (Toledo-Figueroa et al., 2017) offered useful observations. Toledo-Figueroa and her colleagues used a sample of five analysed five national systems - Australia, England, Scotland, Ontario (Canada) and the National Board of Professional Teaching Standards (USA).

They compared the expectation of knowledge and understanding of theories about how children learn and develop and how these theories relate to the teaching practice (Toledo-Figueroa et al., 2017: 89). All five standards explicitly require teachers to have knowledge and understanding on learning and development. The Scottish standards speak about cognitive, social and emotional development while the American and Canadian standards are linked to social, physical, emotional and intellectual development. However, although the English (and Australian) standards address physical, social and intellectual development, there is no mention of emotional aspects of learning or teaching. The pertinence of this neglect to the thesis findings is discussed later (in section 5.3.3).

The professional standards from England, above, each have several components, supporting bullet points that further elaborate the professional standards' scope. They are not intended to be considered individually, but as a group of statements that clarify further the complexity of the competence requested. TS1b, for example, is a sub-division of TS1 challenging the teacher to 'set goals that stretch and challenge pupils of all backgrounds, abilities and dispositions'. Each sub-divisions are broken down into performance at four levels, shown as gradings from 4 up to 1 - 'not yet meeting', 'required improvement', 'good' and 'outstanding'. The student teachers participating in my inquiry are primarily concerned with securing best-fit grades for each of the eight standards.

At my own institution, this detailed matrix is presented as a 'Common Framework of Assessment Descriptors', a guide for student teacher self-reporting and for any teaching professional involving in the assessment of student teacher readiness to be awarded QTS.

The professional standards for England, Ontario and Scotland have separate components or standards for ethics-related aspects, where ethics comprise values such as: social justice, national values, care, integrity, trust and respect, and professional commitment. This was included as Part 2 (Personal and Professional Conduct) of the English standards, which sets out behaviour and attitudes required of student teachers and, indeed, all teachers throughout their career. Teaching with, and for, these values was to be an emergent theme later in this inquiry.

Corcoran and Tormey (2012: 19) suggest that any changes to teacher education do not normally include development of caring teachers, passionate teachers and emotionally-adept teachers, pointing to Hargreaves' declaration that 'emotions and feeling will only re-enter the change process by the back door' (1998: 109). Nevertheless, there have been continual changes to the UK models of teacher preparation since the 1980s (Tormey and Batteson, 2011) and these changes do impact on the emotional aspects of learning to teach.

Teacher education in the UK, and indeed worldwide, has been subject to multifaceted agendas which compete to drive reforms. Some of these agendas aim to achieve professional autonomy; others aim to control teaching politically. The former "aims to make teaching and teacher education a research-based profession with a formal body of knowledge" (Cochran-Smith, 2006: 44), distinguishing teachers from lay persons. The latter oppose this view, advocating the opening of multiple entry routes into teaching, with pupil test scores the bottom line for determining who should be teaching.

In England the statutory Teaching Standards exist in the midst of these tensions. As a teacher educator, I believe improved teaching is a result of reflection of one type or another. I see a

danger, shared in Ditchfield's warning, that professional standards "can act as outcomes, rather than as a participatory process that features reflection as a core component of developing teacher effectiveness" (Ditchfield, 2015: 95). These standards can be seen simply as hurdles to be overcome by student teachers rather than welcome guidance, creating pressures that make emotional demands upon them. This needs to be factored in to any research which involves these student teachers.

I have now discussed the broad area for the inquiry – emotional aspects of learning to teach – and the boundaries of that inquiry. The context in which the research will take place has been set – the beliefs and experiences that are part of me and hence the research, together the Teaching Standards which are part of school placements for student teachers in England.

The next chapter is a literature review, sharing and evaluating the utility of what has already been found out about emotional aspects of teaching.

Chapter 2: Literature Review

This chapter presents findings of particular relevance to my general research aim: '*How could the emotional aspects of learning to teach be better addressed by teacher educators and student teachers?*'

Beginning with a clarification of affective terms, of which emotion is one, it then considers models of emotional intelligence and competence before fixing on specifics of teacher emotions – positivity and negativity, true and false emotions, emotional regulation and emotional resilience. At this point, building from the literature, a framework for emotional knowledge is developed , the wider context of teaching and emotions is explored and approaches used to research emotional aspects of learning to teach are analysed. The outcome, informed by this analysis of the literature, is a more specific research question which is sub-divided into four questions designed to drive data collection for the thesis.

2.1 Affective aspects of learning to teach

This section briefly summarises growing attention given to research into the idea of 'affect' in relation to cognition, narrowing this to the capability of emotional intelligence and its application as emotional competence. A burgeoning body of literature exists on affect from diverse communities such as psychology, cognitive science, neuroscience, engineering, computer science, medicine, philosophy (for example, Damasio, 1996; Gedron, 2010; Izard, 2011; Lazarus, 1999; LeDoux, 2000). Where relevant, knowledge will be drawn from these sources even though findings from the field of education is generally more applicable to this thesis.

However, despite acceptance that teachers' emotions influence their cognition and behaviours (Damasio, 1996, Sutton and Wheatley, 2003, Hayes, 2003), the research to help teachers manage these emotional aspects of teaching is sparse. I draw upon some of this

knowledge from other fields of inquiry to inform my thesis because there is limited research centred on education, let alone the more specific education field of learning to teach.

One reason for the sparsity of research into managing teacher emotions may be the disputed relationship of affect and cognition in learning (Sellars, 2008, Day, 2004). Psychologists have compartmentalized the mind into cognition, affect and motivation since the eighteenth century (Mayer and Salovey, 1997). With notable exceptions such as Aristotle (Kristjánsson, 2006), recognition of a place for emotion in learning has been long overdue (Van Veen and Lasky, 2005). A change in perspective was prompted by Maslow (1943) who made emotions pertinent to education when he described how people can build emotional strength.

2.1.1 The cognitive and affective domains

Cognitive learning theory, widely accepted in the mid-20th Century, assumes that any new understanding depends on prior learning and that learning is a change in people's mental structures instead of changes in observable behaviour (Eggen and Kauchak, 2008). This contrasts with an understanding of cognition being located in one or more different cultural settings (Gardner and Hatch, 1989) and therefore not being wholly dependent on prior learning. In a teaching context, Price explains this as cognition having meaning through a particular school culture (2001). This rejects learning as an 'acquisition', seeing it as the result of 'participation' in which the aim is to socialise (Sfard, 1998).

From late 1950s to early 1970s, emotion was addressed through attempts to dissect and classify areas of human learning. This included Krathwohl, Bloom and Masia's theory (1973) which build on Bloom's three-category model of domains within his hierarchical taxonomy of learning objectives (Bloom, 1956)- cognitive - knowledge, psychomotor- skills, and affective - attitudes. Classifying the 'affective domain' as a set of attitudes did however emphasise how distinct they were from cognition. By contrast, Carl Rogers believed overemphasis on cognitivism in education was responsible for loss of excitement and enthusiasm for learning,

advocating recognition of feelings and emotions (Rogers, 1983). This was the forerunner of an oft-repeated view that while thinking can be impaired by too much emotion, it can also be weakened by too little emotion (Picard et al, 2004).

Emphasis then moved to teacher stress or burnout associated with negative emotions (Hargreaves, 1991, Sutton and Wheatley, 2003; Lambert and McCarthy, 2006) to addressing the need for self-regulation of teacher emotions by the use of positive emotions to build teacher resilience (Gu and Day, 2007; Le Cornu, 2009; Beltman, 2011 and Mansfield, 2012) and develop positive relationships in the classroom (Zembylas, 2003).

Theories put forward to further an understanding of these emotional aspects were challenged as incompatible with existing education, psychology or brain function theories (Locke, 2005; Burton, 2007; Burman, 2009). Some argue that they are actually detrimental to learning (Descartes, 1965; Kristjánsson, 2006), leading to obsession with emotional fragility and a diminished image that opens up teachers' and pupils' emotions to assessment by the governing agencies (Ecclestone and Hayes, 2007).

There has been long-standing international debate about the interaction of affect and cognition, of feeling and thinking. While many have considered emotions to be a limit on rationality (De Sousa, 1979, Lazarus, 1999), other studies show emotions to be critical to rational thinking (Locke, 2005).

I contend that not only cognition but emotions are inseparable from the situations in which they take shape (Lave, 1988). The common ground amongst all theorists is that a relationship exists between the emotions and cognition of every person (for example, Como and Anderson, 2015; Walshaw and Calbral, 2005; and Sansone and Thoman, 2005). Making the assumption that affect and cognition together have an impact on the quality of teaching, I am going on to consider the affective domain in more detail.

2.1.2 Affect, moods, emotions and feelings

Having spoken of the affective domain, it would be timely to establish the distinctions that researchers have made between affect, feelings, moods and emotions.

Affect

For the purpose of philosophers, the concept of 'affect' encompasses passions, moods, feelings, and emotions and has been a recurrent theme in the literature (La Caze and Lloyd, 2011; Savickiene, 2010). In psychological discourse, "affect" is sometimes used to refer to free-floating feelings. To educational researchers however, "affect" has often been a general term to mean anything emotional. More recent understanding of the term has been more aligned to "affect theory", within which subjectively experienced feelings (i.e. affects) are organized into discrete categories and each one is connected with its typical response. An example would be the affect 'joy' being observed through the teacher displaying a smile, an understanding that is consistent with the English meaning of the word "affect" which is literally "to produce a change." In this vein, affect had been described as feelings in response to a specific triggering event (Lindquist, 2011).

'Affective-cognitive consistency theory' builds on affect theory, examines affect as attitudes and beliefs in relation to cognition (Haddock and Maio, 2004), positing that individuals are in an unstable state when their attitudes towards an object, event or person and their knowledge about that object, event, or person are inconsistent.

In terms of learning to teach, the attitudes, beliefs and values of student teachers and the situations that they encounter is the core of this interaction between affect and cognition (Kristjánsson, 2010).

Moods

Moods and emotions share the affective feeling component and are therefore partly similar in their underlying representation. Robbins, Judge and Campbell (2010), writing of

organisational behaviour, suggest that moods may be more cognitive, causing individuals to think or brood for longer periods of time. In comparison, emotions are more likely to be caused by a specific event. However, in contrast psychology researchers Neumann, Seibt and Strack (2001) in 'Cognition and Emotion' journal, find that moods are purely experiential, even though pre-existing moods can influence emotions that are elicited from an event.

Research into moods have invariably been self-report studies using Positive/Negative and Pleasant/Unpleasant measurement (Watson and Tellegen, 1985). While appropriate for psychology studies, this approach has not found applications within educational research.

However, as will be discussed below, emotions can be defined as intense feelings that are directed at someone or something while moods are less intense and often lack a contextual stimulus.

Emotions

The word "emotion" derives from the French word "to stir up" and the Latin word "to move". That emotions have an impact upon behaviours is uncontentious but there is a divergence of opinion about what emotion actually is. Educational researcher Andy Hargreaves (1998) uses Koestler' definition that "Emotions are basically mental states accompanied by intense feeling and (which involve) bodily changes of a widespread character" (Koestler, 1967: 226). Izard (2010), from a clinical psychology perspective, argues that defining emotion is challenging, even within his own field. Education psychologist Fried and colleagues similarly attest that emotions have been notoriously difficult to define and there has been little agreement across disciplines, or for that matter within disciplines (Fried et al, 2015). Indeed, nearly a hundred definitions of emotion had been categorised as of 1981 (Kleinginna and Kleinginna, 1981). Nevertheless more recently there appears to be some agreements on the structure and function of emotion.

Insofar as emotions, or lack of them, show if and how much something matters to us (Baier, 2004), emotions are judgements when seen from an appraisal theory perspective (Solomon, 1993). In this sense they reveal themselves and speak of the truth. From a psychological perspective, Schutz (2006) describes emotions as "relational" because emotion episodes involve other people in some way.

The inference here is that emotions are socially-constructed, a position held by the most prominent researchers of teacher emotions (examples including Nias, 1996, Hargreaves 2002, Zembylas, 2005 and Winograd, 2009). Emotions are commonly presented as both internal states and socially-constructed (Gedron, 2010; Zembylas, 2011). Zembylas reprises Averill's explanation (1980) of the term constructionism having a double meaning when applied to emotions: firstly, it means that emotions are improvisations, based on an individual's interpretation of a particular situation and secondly, it means that the emotions are social constructions. This assumes that emotional experiences involve what Lazarus termed 'personal environmental transactions', which includes both "internal" personal characteristics and "external" environments (Lazarus, 1991).

Emotions, unlike moods, have objects to which they refer. Whereas moods do not necessarily hinge on that knowledge, showing emotions presupposes that one knows the origin of the affective feeling. Bullough (2011) illustrates this through the case study of a newly-qualified teacher whose struggles to maintain order in his class was destroying his aspiration to be a teacher who fostered inquiry in learners. The object of his growing anger could be the class, but his anger also turned inwards to self-preservation and forced an experience which termed as "an almost painful pressing awareness of self"(Fisher, 2002: 60). So the object of emotions can be intrapersonal as well as, or instead of, interpersonal.

 The initial objects of emotions do not have to be other people though. Another case study in the same report describes a teacher mentor harbouring guilt and disappointment that she

could not give as much nurturing motherly support to her two mentee teachers as she felt she should. The object of her emotions was her perceived failure to meet the mentor performance standards, although none of this was shared with the mentees. While both of these examples could be seen as negative emotions, positive emotions such as joy, satisfaction, pride and excitement also have objects to which they refer. Indeed, Bullough also explores the concept of teacher eudaimonia, the state of flourishing or being fulfilled in life (Bullough, 2010: 21) through interaction with events, objects or situations. Whether seen as negative or positive, emotions are certainly seen to be dynamic.

As the examples above show, teacher emotions are interactive, interrelating with events, objects or situation. In being so, emotions change and are changed by those events (Chubbuck and Zembylas, 2008; Farouk; 2012). Teacher emotions are emphasised by Shutz et al (2006) as personally-enacted ways of being that emerge from conscious and unconscious judgments. Chen (2016) emphasises that such judgements are made regarding the teacher's perceived successes at attaining goals or maintaining standards or beliefs. Day and Lee (2011) claim that the very act of a teacher's emotion existing is also a performance in itself because the emotion, by existing, is being used. Zembylas goes further, arguing that as well as being performative and interactive, teacher (and pupil) emotions are trans-formative in a classroom "in that they are not peripheral by-products of events, but … forces for (trans) forming individuals, social interactions and power relations" (Zembylas, 2011: 33).

Feelings

Clearly defined distinctions between feelings and emotions are hard to find from the peer-reviewed academic sources I searched. Day and Lee observe that a teacher's true feelings may be masked by their emotions (Day and Lee, 2011). Because feelings can be hidden, nobody can take charge of and manage another person's feelings for them, although people can help or hinder positive feelings in a teacher by the organisational structure and climates

that they build in that school (an issue to be addressed more fully in sections 2.2.3 and 2.2.4). To keep it simple, feelings are the physical sensations we experience in our body while emotions are the labels we give those sensations in our minds. Feelings express true identity, while emotions reveal how a person has been taught to respond to events in their life.

This section has provided clues within the existing body of knowledge on affect, feelings, moods and emotions. To sum up, **Affect** is a generic term that covers a broad range of feelings that people experience. It's an umbrella concept that encompasses both emotions and moods. **Moods** are feelings that tend to be less intense than emotions and that often (though not always) lack a contextual stimulus. **Feelings** are physical sensations which are not observable. **Emotions** are intense and observable feelings that are directed at someone or something. Those clues shaped my thinking, helping me to identify a particular emotional aspect of learning to teach. Emotions are malleable and controllable, properties which enable them to be used to make a positive impact on the performance of student teachers. This is why the affective phenomenon that I chose to investigate needed to incorporate the use of emotions. The starting point was to consider whether emotional intelligence might be the concept to explore.

2.1.3 Emotional intelligence

Emotional intelligence is the most widely-known representation of an asset to help deal with the emotional aspects of work (Kremenitzer, 2005; Matthews, Zeidner and Roberts, 2012). This section contrasts the most-widely used models of emotional intelligence, evaluating their potential to contribute to the theoretical framework tested through this thesis.

What is known about emotional intelligence is based mainly on psychology and neuroscience research. The most influential model in terms of primary school teaching and learning has been the multiple intelligence theory of psychologist Gardner (1983), a framework which

encouraged teachers to differentiate learning opportunities according to their pupils'

strongest intelligence areas, for example musical and kinaesthetic (Kornhaber, 2001).

Gardner's 'personal' intelligences drew cognition and affect together (Sellars, 2008), in

contrast to Bloom's hierarchical taxonomy . New York University neuroscientist LeDoux

(2000) hypothesized the human brain to have two memory systems -- one for ordinary facts

and one for emotionally charged ones, working out that our neural pathways for feelings can

bypass the neocortex (the thinking brain).

Linked to Gardner's two personal intelligences, intra- and inter-personal, emotional

intelligence is an oft-cited concept, due largely to Goleman's zeitgeist publication with the

seductive title 'Emotional intelligence: why it can matter more than IQ' (1995). Drawing on

research into a Social and Emotional Learning programme for pre-school to high school

pupils, Goleman claimed emotional intelligence to be a better predictor of life-time success

than a person's intelligence quotient.

Emotional intelligence models focus on measuring emotional skills (Bar-On, 1997; Goleman,

1995; Mayer and Salovey, 1997), using a mix of self-reporting, 360° feedback and objective

testing of ability or performance. While self-report and feedback seemed possible methods

for my thesis, an objective test was rejected at an early stage because it is devoid of any

classroom context.

Emotional intelligence has been subject to diverse interpretations (Salovey and Mayer, 1990;

Goleman, 1995; Bar-On, 2000). That diversity and lack of agreement is in itself a factor in

emotional intelligence receiving considerable criticism (for example, Burman 2009; Burton,

2007; Kristjánsson, 2006; Locke 2005). The theoretical underpinning of emotional

intelligence is challenged by many researchers. This questioning is well illustrated by

psychologist Matthews and colleagues who challenged researchers to produce greater

breadth and then more depth. In Emotional Intelligence: Science or Myth', they call for an

agreed characteristic of emotional intelligence that shapes human emotional functioning across diverse contexts (Matthews, Zeidner and Roberts, 2002). but later, in 'Emotional Intelligence: a promise unfulfilled', they accept that a more productive strategy may be "research on more narrowly defined but conceptually coherent research domains" (Matthews, Zeidner and Roberts, 2012:105).

Bar-On presents a broad perception, describing emotional intelligence as "a multi-factorial array of interrelated emotional, personal and social abilities that influence our overall ability to actively and effectively cope with daily demands and pressures." (Bar-On, 2006:3). His trait-based test, the EQ-I, examines individual's emotional and social strengths and weaknesses. However it is not clear how the composite scales of intrapersonal, interpersonal, adaptability, general mood and stress management relate conceptually to emotional intelligence (Conte, 2005).

A narrower construct is Goleman's definition which introduces the idea of mutual benefits from using emotional intelligence: "managing feelings so that they are expressed appropriately and effectively, enabling people to work together smoothly toward their common goals." (Goleman, 1998: 7). Leadership intervention trainer Geetu Bharwaney gets to the core of the matter, concisely calling it "the ability to tune in to the feelings of yourself and others" (2007:16). A small-scale inquiry showed that this sort of personal and interpersonal capability was highly valued amongst student teachers (Pugh, 2008).

Salovey and Mayer built upon Gardner's early work on multiple intelligences (1983), a cognitive theory identifying eight areas of intelligence: Linguistic/Word, Mathematical/Logical, Spatial/ Visual, Bodily/Kinaesthetic, Musical, Intrapersonal, Interpersonal and, later, Naturalist. Gardner viewed the intra-and inter-personal intelligences as interwoven, predominantly about the impact of emotions and more

dependent upon cultural norms - keeping eye contact, for example - than the other more 'standalone' intelligences, (Sellars, 2008).

Mayer and Salovey coined the term emotional intelligence, defining it as "the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions" (Salovey and Mayer , 1990:192). Mayer and Salovey's four-branch hierarchical model of emotional intelligence (Mayer and Salovey, 1997) labels emotional intelligence as the skills of perceiving, using, understanding and managing emotion. These skills are a progression of four branches from the fundamental level of (a) recognising emotions in oneself and others accurately to (b) using emotions to enable thinking, (c) understand emotions, emotional language, and the signals conveyed by emotions to the highest level of (d) managing emotions so as to regulate reflection and attain specific goals (Mayer, Salovey and Caruso, 2008).

Researching the emotional intelligence of health professionals, they emphasise emotional intelligence as two components - 'emotion' (considered earlier) and 'intelligence'(1989). They argue later that their model fulfils three key criteria for an intelligence by having tests – answers which are correct or incorrect, showing correlation patterns similar to other known intelligences and improved scoring with age (Mayer, Salovey and Caruso, 2004). While the third criteria diverges from the personal intelligences within the multiple intelligences from Gardner, they do share an understanding crucial to this research. Both assert that intelligences have *potential* (cited in Sellars, 2008; added emphasis) and are therefore malleable unfixed assets that can be developed. In contrast, Cabello and Fernández-Berrocal (2015) reported that their participants believed emotions themselves to be much more malleable than emotional intelligence. Implicit theories and ability emotional intelligence.

Reviewing the range of 'teacher and emotion' articles in Teaching and Teacher Education from 1985-2014, Uitto and her teacher educator colleagues (2015) report that emotional

intelligence has been studied in relation to teaching the components of teacher burnout such as emotional exhaustion (Chan, 2006), and the impact of teachers' emotional intelligence on teaching satisfaction and their use of emotional labour strategies, particularly expression of their naturally felt emotions (Yin, Lee, Zhang, and Jin, 2013).

Matthews, Zeidner and Roberts however suggest emotional intelligence may be 'old wine in a new bottle' (2002:12) or 'a psychological form of snake oil' (2002:79), a challenge rebuffed by Chernis. He declared that "rather than arguing about whether [emotional intelligence] is new, it is more useful and interesting to consider how important it is for effective performance at work" (2000:10). This view resonates with my own stance as a practitioner researcher. Nonetheless, other theorists have expressed scepticism, denouncing emotional intelligence as ill-defined, difficult to measure and overlapping studies of psychology, feelings, behaviour and brain function (Burman, 2009; McIntosh, 2004 and Pfeiffer, 2001).

Mayer, Salovey and Carusso (2008) do distance their own findings from these criticisms of other models, describing Bar-On's work as a renaming of personality theories and Goleman's construct as anecdote-based with limited reference to research. Mayer and Salovey's theory of emotional intelligence has some appeal for beginning teachers on the basis of their argument that it can be developed, measured and has consistency with existing cognition theory (Mayer and Salovey, 1997). This gives it an attraction which Goleman's model does not match. Additionally, critics claim that Goleman makes unsupported assertions about the power and predictive ability of emotional intelligence and exaggerates claims about the extent to which we can increase our emotional intelligence (Matthews, Zeidner and Roberts, 2002).

However, the study of Corcoran and Tormey (2012; 2013) explores Mayer, Salovey and Caruso's model of emotional intelligence (together with gender and prior attainment) as a contributor to preservice teacher performance. Yet it concludes that no positive association between those variables and teaching performance had yet been found.

My response was to doubt whether any model of emotional intelligence was actually an asset that teachers could develop to handle emotions.

Seeking to measure the emotional intelligence of teachers is not straightforward. The view that it can be developed is countered by an argument that it is not directly measurable but whose existence is indicated by other signs (Pérez, Petrides and Furnham, 2005). The various models fall into two types: trait or ability.

Traits are emotion-related self-perceptions measured via self-reports whereas abilities are emotion - related cognitive assets measured via maximum-performance tests in the same way as IQ tests. Problems of validity occur particularly where these self-report and tests are combined (O'Connor and Little, 2003; Warwick and Nettelbeck, 2004).

In the context of learning to teach, both types of emotional intelligence have shortcomings. Intelligence cannot be successfully assessed through self-report trait models such as Goleman's (Petrides, 2011) while the performance-tested ability models such as that of Mayer and Salovey cannot create tasks to reproduce work experiences while scoring against objective criteria (Robinson and Clore, 2002; Matthews, Zeidner, and Roberts, 2007). So measuring ability models of emotional intelligence for subjective emotional experiences such as learning to teach on a school placement has limited value. This indicates that exploring emotional assets through qualitative rather than quantitative methods has greater validity.

In looking to find a phenomenon that suitably represents the emotional aspects of learning to teach, the existence of research to test whether emotional intelligence was linked to teaching was the place to begin looking. Nonetheless, the limitations discussed above meant that my search for this phenomenon moved on.

Where emotional intelligence of teachers is measured, it is invariably through the use of quantitative methods (Uitto et al, 2015). One of two types of testing are employed: Self-reporting tests measure emotional intelligence as personality traits while problem-solving

tests in a general setting (not teaching) are used to measure emotional intelligence as abilities that a person possesses. A mix of self-reporting and feedback from others are used where the model of emotional intelligence includes both abilities and traits.

Different models of emotional intelligence are measured by different tests. Ability-based models defined as emotion-related cognition have been measured via maximum-performance tests with 'right or wrong' answers to problem-solving questions. The most widely-used ability model is the Mayer-Salovey-Caruso Emotional Intelligence Test or MSCEIT (Fiori et al., 2014).

Trait-based models encompass emotion-related dispositions and self-perceived abilities. These are measured largely via self-report, such as the Bar-On Emotional Quotient Inventory or EQi (Bar-On, 1997). Correlations between measures of trait and ability emotional intelligence are always low (Petrides, 2011), making it necessary to be explicit about the distinctions between them.

Ability-based emotional intelligence is measured through testing, a key factor in its claim to reliability. Consequently, quantitative methods using, for example, the MSCEIT have been used for research into emotional intelligence as ability to recognise, discriminate and act. Trait-based emotional intelligence models, such as Bar-On's emotional quotient inventory (1997), are measured by self-reporting. There are mixed models which containing abilities and traits. These include the emotional competence inventory of Boyatzis and Goleman (2007) which draws on a mix of self-reporting and feedback from others.

An online university library search for 'MSCIET' yielded research that uses the test with IT professionals, nursing trainees, firefighters, flight attendants, sales managers, military leaders as well as autistic children, substance abusers, sports coaches. While some overlaps with teacher education could be pointed out here, the studies centred on emotional

intelligence of student teachers are very sparse. It does exist, notably the study of student teachers by Corcoran and Tormey (2013) using the MSCEIT.

However, their study showed no correlation between EI test scores and student teacher performance. Surprised by this finding, they surmised that, because novice teaching is so cognitively demanding, the student teachers may have been too overloaded to draw on emotional skills in ways that impacted positively on their teaching performance. They suggest that this is. Noting this, I went on to avoid this possible pitfall by building ecological validity into my own data-collection by not burdening my participants with additional pressures and paperwork (section 3.4; Ethical Issues).

So one of the market's leading emotional intelligence ability test (the MSCEIT) has not yet been shown to benefit the teaching performance of student teachers. I was not convinced that emotional intelligence was the affective concept I was looking for, an asset that could be developed within student teachers to deal with their own emotions and those of others.

Goleman's model is distinct from that of Mayer and Salovey insofar as his theory is specifically grounded within the context of work performance. Where Mayer and Salovey frame their theories as general theories of emotional intelligence, Goleman points out that his theory is specific to the domain of work performance (Emmerling and Goleman, 2003). This was an important consideration for a thesis exploring emotional aspects of 'learning to teach' in a work-based setting.

2.1.4 Emotional competence

This section reports on research that presents 'emotional competence' as the application of emotional intelligence and considers whether an emotional competence model is the best way to 'pin down' emotional aspects of teaching.

Along with the MSCEIT and the EQ-I, the most commercially-successful version of emotional intelligence testing is the Emotional Competence Inventory or ECI. The ECI is essentially a

multi-rater tool that assesses emotional intelligence through its application as emotional competence (Boyatzis and Goleman, 2007). Constructed for Hay McBer through collaboration between Boyatzis and Goleman, the ECI test combines self-report and 360⁰ feedback from those who know the work of the subject.

Gardner's perception of intelligence as "the ability to solve problems or create products" (Gardner, 1999:33) implies a tangible outcome. Intelligence is useless unless you use it. Goleman holds the same view about emotional intelligence, explaining that:

> our emotional intelligence determines our potential for learning the practical skills that underlie the four EI clusters [*self-awareness, social awareness, self-management and relationship management*] but our emotional competence shows how much of that potential we have realized by learning and mastering skills and translating intelligence into on-the-job capabilities (Goleman, 2001: 94).

The ECI has been used as a method for researching, for example, orthopaedic students, hospital employees, university leaders, governance board members and library branch managers. While there is little reported use of the ECI by teachers, it was adapted for use in a quantitative study by teacher educators Kyburienė, Večkienė and Senikeinė (2007). Recognising the distinction between emotional intelligence and emotional competence, they defining the latter as "how much emotional intelligence potential is realised by the teacher perceiving, recognizing, understanding and integrating emotions into personal and professional activity" (Kyburienė, Večkienė and Senikeinė, 2007:48). Amudhadevi (2012) however did use the ECI test with female teachers, concluding from statistically analysis that only the social awareness part of the ECI is related to interpersonal relationships (positively) and teacher stress (negatively).

At this juncture, the research indicated that if trait emotional intelligence were to be tested, then the actual demonstration of it would be seen as emotional competence.

Goleman defines such competences as "a learned capability based on emotional intelligence that results in outstanding performance at work" (2001:27). Chernis (2001) points out that "both Goleman (1998) and Mayer, Salovey, and Caruso (1998) have argued that by itself emotional intelligence probably is not a strong predictor of job performance. Rather, Chernis argues, emotional intelligence provides the bedrock for competencies that are such predictors (2001:7) or, as Oberst (2009) puts it, emotional competencies are those competencies that are developed on the base of emotional intelligence.

The ECI consists of eighteen categories of emotional competencies, grouped in four domains – Self-awareness, Self-management, Social Awareness and Relationship Management – with the outcomes shown in a hierarchy with four levels of behaviour. It therefore has potential to encompass the emotional aspects of learning to teach that are personal and relational, thinking and acting.

Another strength of the ECI is that it is designed for staff developmental rather than administrative functions such a selection or promotion, crucial when this thesis was designed as an inquiry to develop teaching. Each of the eighteen categories within the ECI have four target levels, which seemed to lend themselves to differentiation and developmental purposes. These were established by the authors and Hay McBer studying and then differentiating the behaviours of effective and outstanding performers. While the inventory is not specific to teaching, these levels do add some clarity to the concepts within each category. It should be noted at this point that the ECI is a commercially-available product for which accreditation has to be given by the Hay McBer group (2005) if a researcher wished to administer the inventory and give subject feedback. However, using the ECI in a positivist manner as a measurement tool would have been inconsistent with my ontological stance (see section 1.4). Nonetheless the structure of the eighteen categories seemed from my researcher perspective to have relevance to learning to teach, describing features such as self-control, empathy, adaptability and developing others. Even though I was declining to

label the phenomenon as emotional competencies or emotional intelligence, the components were certainly emotional aspects of teaching.

The ECI measures the outcomes of emotional intelligence, using a mix of self-reporting and feedback from others. Designed as a self-report survey combined with evaluations by the subject's line manager, peers and customers designed for 360 degree feedback. In a teacher education context the evaluators could be a student teacher, school mentor, peers and the children taught by the student teacher.

A restriction is that the inventory is not designed specifically for development of student teachers. For example, I anticipated that the concept of 'service orientation' was too generic to be associated with teaching. I thought it more likely that student teachers would resonate with alternative phrases such as 'putting the pupil's needs first' or being 'pupil-orientated'.

Another difficulty in applying the inventory to emotional aspects of teaching is the cultural connotation of the adjective 'competent' within England. The European community have in place the Bologna Accord, centred on a set of eight key competences for lifelong learning, defining competencies as "a combination of knowledge, skills and attitudes appropriate to the context" (Schaeper, 2008:5). Hargreaves, though, sees good teaching as charged with positive emotions by emotional, passionate beings who connects with their students. He sees teachers as more than well-oiled machines and teaching "*not* just a matter of knowing one's subject(s) … of having the correct *competences* or knowing all the right techniques" (Hargreaves, 1998b: 835). In similar fashion, 'competent' is only a lukewarm descriptive term in England, implying mediocrity or faint praise. Boyzatis and Goleman (2007) may not have recognised this juxta-positioning of 'mediocre' with their claim that emotional competence is a measure of 'outstanding' performance at work.

While the Emotional Competence Inventory has good reliability for leadership and organisational performance (Murenski, 2000; Boyatzis and Sala, 2004) the instrument is

difficult to access for educational research. There is certainly a lack of consensus in determining a correct conceptualization for emotional intelligence - or its source, emotional competence – as well as varied methods of attempting to assess it (Cassady, 2008). These discrepancies could explain the limited use made of either concept as a measurement tool for teachers.

I was planning an emotional aspect of learning to teach as an inquiry that was likely to benefit student teacher performance. However I hesitated before enquiring further into models of either emotional intelligence or emotional competence for pragmatic as well as academic reasons. In all of the publications by these researchers, it is difficult to assess the nature of evidence that they present, given that the data, as Brotheridge (2002) points out, are proprietary in nature. The researchers are often also consultants conducting studies for clients who, for competitive reasons, have not allowed the data or results to be divulged to the public or research communities. This was a significant drawback.

In summary, despite reservations about the concept of 'emotional intelligence' and the measurement of it as 'emotional competence', the ECI (Boyzatis and Goleman, 2005) had a structure which I saw as relevant to learning to teach.

2.2 The reality of teacher emotions in a 'learning to teach' setting

The workplace environment of school placements is a setting in which the student teachers are placed for at least 70% of a one-year postgraduate teacher education programme. This environment provides contexts which cannot be fully replicated on a university campus, such as interacting with a range of professionals, pupils and their parents.

My empirical study would centre on emotions and teaching in the cauldron of real school placements. This section considers issues which research has highlighted as key emotional challenges for teachers, namely positive and negative emotions, the authenticity of those emotions, the idea of emotional knowledge and the emotional landscapes and ecologies of

the school placements. Understanding more about these ideas better prepared me to conduct accurate interpretive analysis of the participant experiences. I had to be a researcher who was ready to take into account the emotional reality of school placements.

The importance of this back story is emphasised by Denis Hayes' research with primary student teachers (Hayes, 2003) through which he highlights the impact of their emotional condition on their ability to function efficiently. He suggests that in a time of rapid change and increasing pressure on teachers from every direction, learning to cope with emotions is an important element of training. As those pressures have not receded, his valuation still has currency.

This literature review began by summarising a growing recognition that emotion has some part of play alongside our cognitive functions. These advances led to the constructs of emotional intelligence and emotional competence, the validity of both being subject to question. It is clear though that emotional aspects of learning to teach, however they are represented, needed to be explored. Both the school-based and university-based settings are emotion-laden for student teachers although the extent to which some universities realise this is challenged by Mortiboys. He argues that it would be disturbing if universities were emotion-free zones, but 'curiously, so much of the culture in higher education implies that they are' (2002: 7).

2.2.1 Classifying teacher emotions as positive and negative

It is now widely recognised that emotions serve as a powerful vehicle for enhancing or inhibiting learning (Fried, 2015). Consequently, the literature for teacher emotions commonly classifies emotions as positive or negative (Rodrigo-Ruiz, 2016; Diener, 1999; Larson et al., 1990; Chang 2013; Brackett et al., 2013). Positive emotions generally include joy, satisfaction, pride and excitement, and negative emotions include anger, frustration, anxiety and sadness (Hargreaves, 1998; Kristjánsson, 2007; Sutton and Wheatley, 2003).

Although such classification is claimed to narrow down the nature of emotions or to be too straight-forward (Kristjansson, 2007; Sutton and Wheatley, 2003), they are relevant to this thesis because comfortable and uncomfortable emotions will inevitably be part of the classroom teaching experiences encountered by the participants in this thesis. For example, Swartz and Mcelwain's study of pre-service teachers (2012) reporting a strong correlation between their level of cognition and greater reappraisal strategies in regulating their own emotions to provide more supportive responses to children's positive and emotions.

It was from the notion of negative emotions that the view arose that emotions are an impediment to thinking clearly. Kemper (1978) defined emotion as essentially positive or negative short-term responses whereas Nias (1989) suggested that an examination of teachers' experiences would be incomplete if it did not incorporate discussion about both the positive and negative emotions that colour and impact on the experience of teaching. However the distinctions that are made should be based on the morality of using emotions rather the level of comfort or discomfort that the emotion brings to the subject. Chen and Kristjánsson (2011: 351) illustrate this with standard psychological understandings of particular emotions; *schadenfreude* being classed as a positive, pleasure-inducing emotion that is nevertheless morally repugnant while *compassion* can be a negative, painful emotion even when it is morally exemplary.

Trigwell (2012), using self-report questionnaires with higher education teachers, concludes that positive emotions were associated with student-focused teaching approaches and negative emotions with transmission approaches. The association of positive emotions and good teaching that engages learners is widely held; examples include Hargreaves (1998: 835) espousing that good teaching is 'charged with positive emotions' while Sutton and Wheatley suggested that teachers with more positive emotions might ''generate more teaching ideas and strategies''(2003: 338

Recently however a three-factor model - enjoyment, anger and anxiety - has been developed for teachers by Frenzel et.al. (2014), claiming to be superior to two factor (positive vs. negative affect) models. By using Frenzel's model, Hagenauer (2015) revealed that the interpersonal relationship formed between teachers and learners was the strongest predictor for teachers' joy (positive relation) and anxiety (negative relation), whereas lack of discipline in class best predicted teachers' anger experiences, suggesting that classifying emotions as positive/negative is not necessarily fit for purpose. The positive/negative emotion model has been challenged as over-simplified though. For example, in the field of organisational behaviour Lindebaum and Jordan (2012) discovered that findings depended on which participants the positivity or negativity labels were being applied because responses differed greatly when perceived from individual vantage points. Rash assumptions by the researcher about the positivity and negativity of teacher emotions or other emotional aspects of learning to teach are clearly to be avoided.

Discussion of the two-way relationship of emotions and the object of those emotions should include the term 'valence'. Even though its application has been predominantly in the fields of psychology and neuroscience, this research is of significance when considering teacher emotions. Valance is the intrinsic attractiveness (positive valence) or averseness (negative valence) of an event, object, or situation (Sharot and Garrett, 2016; Lindquist et al, 2015). In the example given by Chen and Kristjánsson above, the positive or negative valence of an emotion is irrelevant to the all-important question of whether or not it is felt towards the right person, at the right time, for the right reason and in the right proportion.

This introduces a moral aspect to teaching and emotions, a classification of not only emotions themselves as positive/negative, but also a recognition that the objects of those emotions can be similarly classified. This argument is that high emotional arousal goes together with high valence (positive or negative) with both arousal and valence contributing to the urgency of action tendencies (Murthy and Paul, 2016).

In a quantitative study, educational psychologists Hagenauer, Hascher and Volet (2015) revealed that the interpersonal relationship formed between teachers and learners was the strongest predictor for teachers' joy (positive emotion) and anxiety (negative emotion), whereas lack of discipline in class best predicted that teachers' anger was to follow. In those situations, the positive or negative valance of the interpersonal relationship or the negative valance of lack of class discipline had an impact on the teachers' emotions.

Therefore both sides of the interaction between emotion and people, events or situations (grouped as objects; see section 2.1.2) can include the attribution of positive/negative labelling with either emotion or object being a positive or negative antecedent for the other.

A study by Cross and Hong (2012) reported that primary teachers mostly gained positive emotions from teaching pupils and experienced unpleasant emotions with difficult pupils, parents, and colleagues. Winograd (2003) self-reported on a one-year sabbatical in which he swopping his education professorship for a primary classteacher role. He found that dysfunctional uses of emotion reflect situations in which teachers' dark emotions like anger and disgust) do not lead to positive action. Instead, they led him to the blaming of an object - students, parents, or the system – or sometimes turning inward and blaming himself, echoing the findings from Bullough's primary teacher case studies (2009); see section 2.1.2. Lee and Yin (2011) investigated teacher emotions in the context of educational reform with 25 secondary teachers in China using a qualitative approach. The results reveal that Chinese teachers try to maintain their positive emotions and hide or control their negative emotional feelings. The same participants were used to show teacher emotion as a social construction (see section 2.1.) with its own social norms and regulations, the most significant being commitment to teach with passion, hiding negative emotions, maintaining positive emotions, and instrumentalizing emotions to achieve goals (Yin and Lee, 2012) Bahia et al. (2013), using eight Portuguese primary and secondary teachers, found the most often reported positive emotions - enthusiasm, joy , zest, and satisfaction – were associated with

their engagement with students whereas, in contrast, their negative emotions related to their personal growth.

So positive/negative classification of teacher emotions is commonly used in teacher emotion research because positive emotions are associated with improvements in teaching strategies (Hargreaves, 1998b). Researchers do need however to be cautious in the assumptions they make about a person's own self-perception. Positive/negative emotions are also linked to objects with which they interact, objects which themselves can be classified as positive or negative valances (Sharot and Garrett, 2016). This thesis does not set out to classify emotions themselves, but the positive or negative valances of events, objects or situations that student teachers manage on placement are linked to emotional aspects of teachings.

2.2.2 Teacher emotions

Where a positive valance exists, it is easier for a teacher to show positive emotions in that situation or event – to be, for example, excited, smiling and relaxed. Unfortunately it is harder to display such positive emotions in situations with a negative valance. Emotional labour and emotional work relates to what is seen on the outside compared to what is felt on the inside. What is seen are emotional displays from teachers and central to this is the authenticity of these displays – whether the emotions are genuine or not.

Display rules, emotional labour, and deep and surface acting

A factor that impacts on research into the emotions of student teachers is the expectation that teachers need to show false emotions at times (Ye and Chen, 2015). An investigation by Taxer and Frenzel (2015) shows that teachers genuinely express, fake, and hide both positive and negative emotions. It is argued that when working in schools, unwritten rules about the display of feelings are enforced as part of the job regardless of the teacher's biological emotions (Lui and Prati, 2008). An expected social framework for emotions is encapsulated in these 'feelings rules' (Brennan, 2006). Winograd refers to these as 'emotion rules'

inhibiting free expression of teacher emotion, "particularly anger aimed at hierarchical/patriarchal structure arrangements or larger political structures" (2003:1642).

In the earlier-mentioned inquiry, Taxer and Frenzel also report that faked emotions, whether positive or negative, are negatively related to teacher well-being (2015: 86) and propose decreasing the experience of genuine negative emotions and increasing the experience of genuine positive emotions. In suggesting that this could be done through improved classroom management skills on teacher education programmes, they echo earlier calls for such interventions (Carson, 2007; Sutton, 2007; Tsouloupas et al, 2010). However following such display rules is not always easy or desirable for teachers.

Tensions exist when, for example, the teacher feels like showing anger to an abusive pupil rather than calmly reasoning and agreeing a behavioural target with the pupil. Hagenauer and Volet (2014) encountered teachers dealing with personal preferences (their liking or disliking specific pupils) that could be accompanied by either positive or negative emotions. Should they keep their emotions hidden since favouritism was unacceptable from a professional perspective, as some accounts revealed. The outcome was that "the teachers were unanimous that personal preferences should ideally be completely hidden in a teaching and learning setting (2014: 270)", the word 'ideally' betraying that this was an aspiration rather than a consistent practice.

Hochschild explains that where emotions are inconsistent with these rules problems arise and that teachers inevitably undertake what she termed 'emotional labour' (Hochschild, 1983), where the feeling displayed matches the rule, but hides the teacher's true and biological feeling.

On the other hand, this exploitative view of emotions is contested by a belief that teachers can be aware of and choose how to manage their emotions (Price, 2001). When a teacher and teacher educator conducted collaborative action research (Isenbarger and Zembylas,

2006) the findings demonstrate that performing emotional labour is an important aspect of the reality of teaching. Day and Leith illustrate, through the narrative of an experienced teacher, how emotional labour can be a deliberate protection strategy for teachers. They cite a teacher who, subjected to an unjust parental complaint, felt professionally maligned and decided to hide his feelings from then on: "I was afraid of being misinterpreted. From then on, instead of perhaps taking the risk to be me as I truly am, in my teaching roles I retreated into my hardened persona to protect myself. I still care but … "(Day and Leith, 2001:410). Nonetheless, even though teachers perform significant emotional labour as a consequence of their professional duties, the teaching profession needs strategies to mitigate the negative consequences of emotional labour (Brennan, 2006).

Many researchers put a teacher's emotions into two categories of authenticity. Surface acting involves a "faking" process through which outward expressions are altered, yet internal feelings are left intact (Hochschild, 1983). However surface acting has been reported as having a strong association with depressed moods and low job satisfaction (Lui Y.et al, 2008). Conversely, deep acting is an effortful process through which employees change their internal feelings to align with organizational expectations, producing more natural and genuine emotional displays (Grandy et al, 2013).

Recent findings also suggest that deep acting and expression of naturally felt emotion are more effective emotional labour strategies for teachers (Yin, 2015).The literature does, however, offer strategies to address such situational hazards (Hochschild, 1983; Sumsion, 2000 and Zembylas, 2003). So emotional labour can be addressed through the deliberate shallow engagement of surface acting, used as a coping strategy to prevent a situation being an impediment to effective teaching. The research findings show the preferred approach is for the teacher to actually the emotions being felt inside, thereby showing deep acting. This was likely to be an emerging issue to be recognised within my thesis.

Emotional work

There has been little distinction made between the terms emotional labour and emotional work within research into teachers and emotions, Isenbarger and Zembylas concluding that "in general, it may be argued that emotional labour is another term used to refer to emotional work'' (2006: 123).

A further confusion is that, even beyond educational research, there are two similar terms - emotion<u>al</u> work and emotion work, the latter being used interchangeably with emotional labour (Bierema, 2008). The difference between emotional labour and emotional work is however explained by psychology researchers Pisaniello and colleagues reporting on the wellbeing of nurses (2012). While they too acknowledge that the concepts of emotional labour and emotional work are often used interchangeably, they helpfully describe nursing as "an emotionally complex occupation, requiring performance of both emotional labour for the benefit of the organisation and professional role and emotional work for the benefit of the nurse-patient relationship"(Pisaniello et al, 2012: 579). Applied to teaching, emotional labour would be an expectation that the teacher would hide true feelings because it is seen as retaining a professional approach and for the benefit of the school. On the other hand, emotional work would be to show a level of care that is beyond professional expectations. Another psychologist, Strazdins (2000) proposed that employees, as well as regulating their own emotions to meet emotional and professional role demands, also undertook emotional work by regulating the emotions of others in order to improve others' wellbeing beyond their role requirements, resulting in building stronger relationships with others.

Carl Rogers (1983) held a humanist psychologist perception of human behaviour through the eyes of the person doing the behaving as well from the observer viewpoint. He theorised that for a person to "grow", they need an environment that provides them with genuineness (openness and self-disclosure), acceptance (being seen with unconditional positive regard),

and empathy (being listened to and understood). For pupils, this genuine, accepting and empathetic environment needs to be provided by teachers and student teachers. This requires them to engage in emotional work.

Theologian Oliver O'Donovan (2015), in reflecting on how work can be enjoyed, offers a perspective to emphasise three differences between work and labour. Firstly, work makes a purposeful difference by engaging with the material world (God's world, from the author's Christian perspective). Secondly, work satisfies our social instincts because when we are at work, our co-operation can be relied upon as we give ourselves and make ourselves indispensable to others. Labour, however, is seen as transactional, an exchange of effort for money. This are useful differences to consider when comparing emotional work and emotional labour.

However, although these papers infer the importance of emotional work of student teachers in terms of teacher/pupil relationships and benefits for the pupils, this emotional work of genuinely listening to, advising and showing warmth to pupils can still have hidden costs to teachers (Hargreaves, 2002). In researching emotions and teaching, Hargreaves recognised the participants experiencing these tensions and showing symptoms of emotional exhaustion and burnout.

The consensus from these sources is that a teacher's emotional work requires genuine care for their pupils, colleagues and others in the school community, whereas emotion labour is the showing of professional behaviours in return for payment. Emotional work comes with greater risk but more satisfaction.

Emotional regulation and emotional resilience.

Teachers and student teachers need to control and regulate their emotions. This is either achieved through emotional labour or they genuinely feel compelled to do so through emotional work (Fried, 2011). This control is the subject of emotional regulation theory,

described from a social psychologist perspective as "the process by which individuals consciously or unconsciously influence which emotions they have, when they have them, and how they experience and express them" (Gross, 1998). Teacher emotion regulation can counter ineffectiveness of teaching and classroom management (Olivier and Venter, 2003), teacher attrition (Macdonald, 1999) and teacher burnout and emotional exhaustion (Carson and Templin, 2007).

Teachers within their first five years are those at greatest risk of having to leave the profession; those getting through this particularly challenging period are likely to go on to thirty years of service and retirement (Chang, 2009; Johnson, Down and Le Cornu, 2015). A growing body of research advocates the use of positive emotions to build the teacher resilience necessary to meet this challenge (Turner and Braine, 2016; Beltman, Mansfield and Price, 2011; Le Cornu, 2009).

Findings from a school in an area of high poverty show that 'emotional resilience' is crucial for teachers who lead perilous working lives (Day and Hong, 2016), trying to cope with exhausting pupil motivational and behavioural challenges whilst simultaneously facing demands to raise standards of teaching, learning and attainment.

Particular aspects of classroom environments can enhance emotion regulation strategy. Fried (2011) refers to a limited body of research showing that some emotion regulation strategies seem to be more effective than others, with an antecedent approach - which occurs before emotions are generated - appearing more effective than a response focus - which occurs after response tendencies have been triggered (Jiang et al, 2016).

Educational researchers have classified emotion regulation strategies with guidance from Gross' antecedent/response model (1998). Examples include the antecedents of making the whole class work quietly, thinking of positive aspects, diverting attention and self-talk, in

contrast to responses such as taking a deep breath, having a drink of water and controlling facial expressions to regulate their emotions (Sutton, 2004).

Amongst other emotion regulation approaches reported, Gong et al. (2013) describes interviewed teachers using situation selection (e.g. walking to another group), situation modification (e.g. telling a joke), attention deployment (e.g. deliberately neglecting a situation) and cognitive change (e.g. thinking of the positive side of a thing).

A belief that positive and negative emotions can be regulated (see section 2.2.1) has been a starting point for other enquiries. Sutton et al (2009) did so by distinguishing between 'up-regulating' and 'down-regulating' emotions. In their research, teachers up-regulated positive emotions such as joy or enthusiasm to communicate positively with the class while, on other occasions, up-regulated a negative emotion such as anger to educate the students not to break the rules. Conversely, they also down-regulating as attempts to decrease the emotion experience. Sutton argued that teachers frequently down-regulate their negative emotions such as anger to maintain classroom management and to develop positive relationships with the class.

There is however a scarcity of emotional regulation research specifically for teacher education settings, with some notable exceptions (Le Cornu, 2009, Turner and Braine, 2016). This is recognised by Hagenauer and Volet (2014) who advise teacher educators to explicitly model effective emotional regulation:

> "Many—but not all—teacher educators have a background in school teaching and bring with them experience in emotion management in the classroom. Nevertheless it appears valuable to prepare teachers for effective emotional management, and role modelling for prospective teachers. Teaching expertise, including competence in emotion management, does not automatically emerge from [school placement]

experience, as experience is only one element of expertise." (Hagenauer and Volet, 2014: 77)

So regulation of teacher emotions is essential with pro-active strategies broadly more successful than when teacher responds after experiencing the emotion. Specific approaches have emerged from empirical studies to help teachers control the emotions of themselves and their learners, although the need to address this within teacher education has not yet been met.

As in any workplace, emotional regulation contributes to resilience. Bharwaney advocates and exemplifies the development of emotional resilience (Bharwaney, 2015). In a 'learning to teach' setting where a third of teachers starting in 2010 are reported to have dropped out within the first five years of teaching (Weale, 2016; BBC, 2016), the reality of regulating teacher emotions is that:

- particular emotions are widely seen as having a positive or negative impact on teachers and student teachers

- there is an expectation that student teachers regulate their own emotions and comply with school display rules, preferably as emotional work but through emotional labour if necessary.

The importance of emotional resilience was taken into account in my thesis, not least because recognising this resilience and regulation of emotions within the participant student teachers and their mentors enhanced the way I interpreted the data they provided. This researcher awareness that emotional aspects of learning can be uncomfortable was also one of the safeguarding tools I used to prevent the research harming the participants and reduce the risk that my interpretations of the data would damage the integrity of the research.

2.2.3 Emotions, knowledge and learning to teach

The evidence from other fields of inquiry, where research into emotional knowledge is beginning to grow, is that a tension exists regarding emotional knowledge and cognitive knowledge. Brătianu and Orsea researched knowledge management with university economics and business students, concluding that, on one hand, emotional knowledge is usually ignored by identifying knowledge with cognitive knowledge, and on the other hand, emotional knowledge is used in decision-making (2014: 42). This dichotomy was to return to prominence later (section 5.3.2) as the thesis moved towards solutions.

Verloop, Van Driel, and Meijer describe teacher knowledge as ''summarizing a large variety of *cognitions*, from conscious and well-balanced opinions to unconscious and unreflected *intuitions*'' (2001, p. 446, my added emphasis), juxtaposing a description of knowledge as cognition and knowledge including intuitions which must include use of emotions.

Educational researchers generally support the view that cognitive and emotional aspects of teaching - and indeed of learning to teach - are inseparable (for example, Nias, 1996; Sutton and Wheatley, 2003; Hargreaves, 2002 and Day and Lee, 2011). In short, emotional aspects of teaching are linked to cognitive bodies of teacher knowledge, while rarely recognised as such (Rosiek, 2003, Hargreaves, 1998). This contradiction is a gap in educational research that is addressed in this thesis.

Teacher Knowledge

Eraut refers to professional knowledge as making "claims to unique forms of expertise, which are not shared with other occupational groups" (1994:14). While Eraut recognised that the idea of expert bodies of knowledge is contested, the case for this knowledge to be inseparable from professional status has been reviewed and established (Goodwin, 2003; van Driel, de Jong and Verloop,2002) and professional knowledge has been shown to have

an effect on teacher behaviours (Dicke et. al., 2015 and Saddler et. al., 2013) and teacher wellbeing (Klusmann et. al. 2012). Nevertheless teachers' professional knowledge in the context of teacher education continues to be contested with seemingly everyone wanting a say in what teacher knowledge and teacher education should be (Hargreaves, 2013). As such it remains a matter of public and political interest (Oancea, 2014).

This is a background against which any study of the emotional aspects of learning to teach must be conducted - whether seen as emotional intelligence, emotional competencies or any other emotional attributes. They cannot be separated from an understanding of what is needed to be a teacher. Notwithstanding the different views of 'teacher knowledge', it has been a widely recognised term that has been expanded and broadened over time (Ben-Peretz, 2011) since the pioneering work of Lee Shulman (1986, 1987).

Shulman suggested that researchers consider one or more of the following kinds of teacher knowledge: content knowledge, general pedagogical knowledge, curriculum knowledge, pedagogical content knowledge, knowledge of learners and their characteristics, knowledge of educational contexts, knowledge of educational ends, purposes, and values and their philosophical and historical grounds (Shulman, 1986: 8). The work of educational researchers today is strongly influenced by Shulman's models (Révai and Guerriero, 2017: 40).

These divisions of teacher knowledge should not obscure the realisation that, when actually teaching, these knowledge bases are deployed simultaneously and interdependently (Thornbury, 2013). As such, they constitute an integrated and coherent whole (Tsui 2012). Nevertheless, in the interests of developing student teachers, it is often necessary to tease apart these diverse domains and organize them within a structured teacher education programme. In this case, they needed to be organised within a theoretical framework that takes account of emotional aspects and then to be tested within a teacher education programme.

The most widely cited of these domains on teacher education programmes (Aydin and Boz, 2012) is pedagogical content knowledge (PCK). Abell, researching science teacher education, attributed this to PCK's strength in guidance researchers and teacher educators in terms of which types of knowledge teachers have (Abell, 2007). I also suggest that another attraction is that PCK represents for student teachers a simplified combination of *how* to teach - pedagogical knowledge - and *what* to teach - content knowledge.

Research into this interaction of knowledge of *how* and *what* to teach is not new, although it is rare to see the emotional aspects of teaching recognised within this. An exception is Alan Mortiboys' teacher model (shown in Figure 1). His 'learning and teaching methods' combines Shulman's 'knowledge of learners and their characteristics' and 'general pedagogical knowledge' while 'subject expertise' is essentially 'content knowledge'. In Shulman's terms, the upper intersection of the model would be 'learner pedagogical content' knowledge. Mortiboys' argues that the emotional aspects of teaching – which he perceives as emotional intelligence – are essential. Indeed he claims that they not only take teaching to a higher level, but actually transform teaching. His work emphasizes the powerful impact on teaching and learning when an appropriate emotional asset is combined with teacher knowledge of methods and subject(s). I do not share his understanding that emotional intelligence is the key emotional asset for teaching; see section 2.1.3; my own theorization of that emotional asset is to follow. Nonetheless it is significant in this thesis because it illustrates a teaching model that emphasizes the transformational effect of combining an emotional asset with the cognitive dimension(s) of teaching.

Mortiboys merges the cognitive and the emotional here, based on the author's teacher experience and use of an emotional filter. This is controversial ground. On the one hand, teacher knowledge is seen widely as a set of cognitive constructs that remain distinct from the literature on teacher emotions. On the other hand it is subject to claims of being an all-

Figure 1: The effective teacher (Mortiboys, 2011: 2)
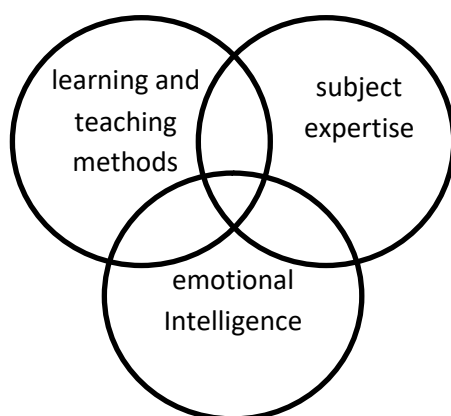
embracing concept that spans emotional and cognitive domains (Zembylas, 2007).

Grossman and Richert (1988) were amongst the first researchers to follow Shulman, interviewing and observing six student teachers before concluding that, while mastery of subject knowledge was achieved, it sometimes failed to evaluate the subject matter from the perspective of the learners or, put another way, they sometimes failed to show emotional awareness of the pupils' needs and feelings (Grossman and Richert, 1988: 59). While focused on subject knowledge, they defined teacher knowledge as "a body of professional knowledge that encompasses both knowledge of general pedagogical principles and skills and knowledge of the subject matter to be taught" (1998: 54).

Connelly, Clandinin and He (1997: 665) introduced a new dimension that bound the idea of teacher knowledge up with the actions they take. They presented the most important part of teacher knowledge as "what teachers know and how their knowing is expressed in teaching". Named "personal practical knowledge", this was a combination of past experience - what is in the teachers' heads now - and their future plans – to take actions. My perception of this relationship became one of awareness and management (or thinking and acting). It was to be of immense significance in remodelling the framework and will be revisited later (in section 5.3.2 and figure 10, p234) .

Shulman referred to a "special amalgam of content and pedagogy that is uniquely the province of teachers" (1986:15), defining it as 'pedagogic content knowledge'. McCaughtry declares this a most useful tool to "transform subject matter for trainee [student] learning" (2004:30), while Burns sees value in applying it to analysis of teacher knowledge (2007).

Though Driel, Verloop, and de Vos observe that 'there is no universally accepted conceptualization of pedagogic content knowledge' (1998: 677), Halim and Meerah's research with student teacher science specialists (2002) identified two forms of knowledge that they claim has wide scholastic agreement - knowledge for representing topics to the learners and knowledge of the learners' understanding of the topic. Shulman explains the outcome as a teacher's capacity to "transform the content knowledge he or she possess into forms that are pedagogically powerful and yet adaptive to the variations in ability and background presented by students [pupils]" (1986:15). Both implicitly recognise an interpersonal aspect to teacher knowledge.

The place of participant reflection in this research will be explored later in response to the findings of this research. However it is being flagged now because, although educationalists broadly consider reflection to be effective learning practice (Dewey, 1933; Schön, 1983; Kolb, 1984, Brookfield, 1995), it can be harmful if the environment is not aligned with the reflective practice required of the learner. Boud and Walker urge caution in arguing that "reflection is highly context-specific and that the social and cultural context in which reflection takes place has a powerful influence over the kind of reflection that can take place"(1998:191).

Indeed, insensitive use of reflection can threaten the 'emotional climate', the affective state of the learning environment built between teacher and learners (Mortiboys, 2011). Ghaye and Lillyman warn that tutors, in using reflection as a problem-solving process, can pressurise individual students who are reluctant to share private feelings as part of reflective

process (2007). Such an approach, deliberate or inadvertent, is likely to shape an emotional climate in which cognition and rationality are seen as outside of, or superior to, emotions" (Swan and Bailey, 2004:106).

Conversely it can be argued that "the sorts of knowledge pre-service teachers need is continuously changing, updating, refocussing and reconceptualising" (Santoro, Reid, Mayer, and Singh, 2013: 125). In my experience many student teachers choose to use Kolb's learning cycle as a model for reflecting on their teaching because it is one of few which overtly address the impact of emotions on reflection.

So there is no unified theory of teacher knowledge and the place of emotion inside (or outside) teacher knowledge is disputed. Nonetheless it is clear that teacher knowledge encompasses how and what to teach, includes the actual practice of the teacher and is built through the use of reflection.

Emotional knowledge: an emergent framework

I was now ready to move on from the starting question: 'How could the emotional aspects of learning to teaching be better addressed by teacher educators and student teachers?'

Models of emotional intelligence and emotional competence have been considered. However, their limitations have led me towards another manifestation of the 'emotional aspects of learning to teach', another asset to support student teachers. The emotional aspect of learning to teach that I was searching for was 'emotional knowledge' This was the concept that became central to my thesis and an inquiry with student teachers on school placements.

My introduction to emotional knowledge within the teaching profession was through Zembylas' description of emotional knowledge as "a *teacher's knowledge* about/from his or her emotional experiences with respect to *one's self, others* (e.g. students, colleagues), and *the wider social and political context* in which teaching and learning takes place." (2007: 356;

added emphasis). Two characteristics appear to be implicit here. Firstly emotional

knowledge is presented as part of teacher knowledge; Secondly, it includes emotional

knowledge of one's self, others and the wider social and political context. These were

described as follows:

- One's self: Emotional connections to the subject matter; attitudes and beliefs about learning and teaching; educational vision and philosophy; emotional self-awareness

- Others: Emotional affiliations with pupils; pupils' own emotional experiences; caring; empathy; classroom emotional climate; knowledge of pupils' emotions; social–emotional interactions

- Wider social and political context: Emotional knowledge of the institutional/cultural context (power relations); emotional understanding of curricular deliberations; emotional politics of pedagogies and subject matter discourses.

This model was a starting point in the literature on emotional knowledge and teaching,

addressing personal, intrapersonal and wider contexts. The data for Zembylas' theorising

came from four collaborative research projects that took place over a 10-year period with

ethnographic methods of data collection—interviews, observations, journal writing and

collection of documents. However, while the concept itself offers an alternative way of

viewing a teacher's emotional assets, the above description of 'emotional knowledge' is too

broad to represent tangible emotional benefits for student teachers on school placement.

So that emotional aspect of learning to teach is tested and developed in this thesis as

'emotional knowledge' because it seems best matched to the needs of this thesis; it appears

to be an emotional asset that contributes to teaching and has the potential to help student

teachers as an inquiry on their placements.

The earliest description I found of 'emotional knowledge' was the view that it is "stored as feelings which resonate or contrast with other feeling states in us and in others. (Peile, 1998:48). Whereas Peile seems to see emotional knowledge as a body of feelings, Silva emphasises emotional knowledge as knowledge needed about the emotions and presents it as being interdependent with other knowledge.

> Like other conceptual knowledge, knowledge about emotions can be primed and activated. To the extent that emotional knowledge contains self-relevant knowledge, then activating emotional knowledge should activate self-relevant information as well (Silvia, 2006:230).

My understanding of this 'self-relevant knowledge' - knowledge relevant to a student teacher – is of teacher knowledge as 'personal practical knowledge', referred to earlier (Connelly, Clandinin and He, 1997: 665).

Isenbarger and Zembylas (2006) describe emotional knowledge as a willing profession engagement with a deep, caring and empathetic commitment. Immordino-Yang and Damasio (2007) describe emotional knowledge as an asset present within emotions, becoming of value when it is generated by emotional triggers. Such an asset is crucial for teachers when they attempt to enter into relationships of 'care' with their students (Noddings, 2005). Ferry, McCaughtry and Kulinna (2011) found caring to be a reciprocal relationship, with the amount and accuracy of the social and emotional knowledge teachers' possess of their individual students will decrease the likelihood that their efforts to enter into caring relationships will be rejected.

Beatty (2007) argues that school leaders need to maintain moment-to-moment emotional attunements in spite of cognitive conspectus. Indeed she refers to 'emotional knowledge' as being constructed, reconstructed and communicated, thereby making emotions epistemological. While no source is cited for the term 'emotional knowledge' and the

evidence base is unclear, the notion of emotional knowledge as a bridge between cognition and emotions merits examination in this thesis and was to prove valuable when analysing the findings (section 5.3.2).

This heightened my interest in 'emotional knowledge' as the emotional asset I was looking for, that emotional aspect of learning to teach. From the small body of research cited above, some characteristics began to take shape. Emotional knowledge seemed to have personal and relational dimensions and was interactive with other (cognitive) aspects of knowledge and the experiencing of emotions.

The earliest reference I found to research into emotional knowledge and teaching was Byron's thesis investigation (2001). She used the MSCEIT emotional intelligence test together with workshops for student teachers, described emotional intelligence as partly 'the ability to understand emotions and emotional knowledge', drawing on Mayer and Salovey's definition (1997). This was of limited value, other than associating emotional knowledge with emotions and intelligence.

At this point, I am clarifying the earlier point that 'emotion knowledge' and 'emotion*al* knowledge' are different ideas. Carol Izard (2011) typifies the psychologist definition of 'emotion knowledge' as just that – knowledge *of* emotion - accurate understanding of the expressions, feelings, and functions of discrete emotions, usually in child development. This is distinct from 'emotional knowledge' – knowledge *about* emotions.

Ferry, McCaughtry and Hodges-Kulinna (2011) examine the functioning of teachers' social and emotional knowledge, defining this as all the knowledge a teacher might accumulate of their students as it pertains to their engagement within the school environment. Observing and interviewing primary school physical education teachers, they discovered social and emotional knowledge to consist of three interconnected parts:

- teachers' interpersonal relationships and knowledge of individual students' personal characteristics,

- understanding of students' peer relations

- and understanding the influence of wider sociocultural spaces, such as pupils' sense of ethnicity, gender, socioeconomic status and physical (dis)ability (Ferry, McCaughtry and Hodges-Kulinna, 2011: 14)

They do not distinguish the idea of a teacher's emotional knowledge from that of his/her social knowledge. Nor does it represent a fuller picture, one that encompasses the personal as well as the interpersonal aspects of emotional knowledge.

Table 1: Emotional Knowledge (EK) of learning to teaching: the tested framework
(*An adaptation of the Emotional Competencies Inventory 2.0, Hay McBer Group, 2005*)

Self-Awareness (EK1)	**Self-Management (EK2)**
Emotional Awareness	*Emotional Self-Control*
Accurate Self-Assessment	*Transparency*
Self-Confidence	*Adaptability*
	Achievement drive
	Initiative
	Optimism
Social Awareness (EK3)	**Relationship Management (EK4)**
Empathy	*Developing Others*
Organizational Awareness	*Inspiring Leadership*
Service Orientation	*Change Catalyst*
	Influence:
	Conflict Management
	Teamwork and Collaboration

However their studies do break this intrapersonal knowledge into observable components - which students are leaders and which are followers, which ones get along or dislike one other, who likes to dominate social settings, which students are members of particular peer groups, and how those groups interact with one another.

In exploring the role of knowledge alongside emotions in teaching, it would seem that knowledge can be recalled by the subject, thereby opening the possibility of explicit understanding that can be captured as data in a well-designed inquiry.

Although the empirical underpinning of the emotional competence inventory is questionable (see section 2.1.3) it nevertheless provides a basis for this theoretical framework of emotional knowledge, the focus of this study.

The eighteen categories and four clusters of emotional knowledge have been organised into four cells within a 2 x 2 matrix. The row headings are 'personal' and 'social' and the column headings are 'awareness' and 'management'. Grouping them this way opens opportunities explore the framework in dimensions of 'self and others' and 'thinking and acting'. Analysis of the finding in relation to 'thinking or acting' was to be a catalyst for remodeling the emotional knowledge framework.

Zembylas argues, from his ethnographic research with beginning and experienced teachers, that understanding of pedagogic content knowledge needs to be widened to acknowledge the idea of emotional knowledge (Zembylas, 2007).

McCaughtry's mixed methods study of his student teachers' pedagogic content knowledge found problems were experienced by those giving attention solely to cognitive and physical aspects of teacher learning at the expense of the emotional aspects (McCaughtry, 2003). Regarding teacher educators themselves, Ramsden makes a bolder contention that the emotional aspects of the teacher-student relationship are more important than the traditional advice on methods and techniques of lecturing (Ramsden, 1992).

The contention that emotional knowledge should be recognised as an aspect of pedagogic content knowledge (Zembylas, 2007) calls for a type of integration between the emotional and cognitional aspects of teaching. There are some similarities with Mortiboys' claim (2011:

3) that *teaching and learning methods* and *subject knowledge* (') can be transformed by the inclusion of *emotional intelligence* albeit that the latter has a wider view of teacher knowledge and visualises the transforming entity as a type of intelligence rather than type of knowledge.

Zembylas cites that an intersection of content and pedagogical knowledge labelled as pedagogic content knowledge (Shulman, 1987), implying that three cognitive concepts– emotional, content and pedagogic knowledge - are interrelated. Shulman, in defined pedagogic content knowledge as more than the sum of content and pedagogic knowledge, described it as knowledge that guides the teacher awareness and actions in classroom settings that are highly contextualized. A similar construct would be knowledge of self and others that becomes 'emotional knowledge' in intrinsically-emotional situations on school placement.

This section has included recommendations to address emotional knowledge as a teaching asset (Immordino-Yang and Damasio, 2007) and an underexplored aspect of teacher knowledge (Rosiek, 2003; McCaughtry, 2004; Zembylas, 2005, 2007). I have been unable, however, to find any clear definitions of emotional knowledge within the research literature, even in the sources cited above.

Does emotional knowledge function to inform the emotional awareness and responses that people feel themselves or recognises in others? Is it present as propositional or procedural knowledge, neither or both? Does this emotional awareness and response contribute to emotional knowledge, building what the subject knows about themselves and others? In short, I intended to develop this concept with research participants. I wanted to be clearer about what emotional knowledge is.

2.2.4 A positive emotional landscape

This chapter has so far distinguished between terms that are commonly, and often interchangeably, used in research into the affective domain - affect, mood, emotion and feelings. It has gone on to consider emotional intelligence, frequently measured by researchers as emotional competence, as the emotional aspect of learning to teach that is at the centre this thesis. I have shared my reservations, without so far sharing a conclusion, about emotional intelligence or emotional competence. I have instead gone on to flag how teachers engage in emotional labour and emotional work as they seek to regulate their own emotions and influence those of the pupils they teach. At this point in my reading, I was unclear what this research would investigate, other than looking for an emotional construct that could be framed and shared with student teachers to make a positive difference to their teaching experiences.

So emotional aspects of learning to teach include both the personal and relational perspectives. The latter places these emotional features within a social context. The importance of teachers knowing and understanding the relationship forces at work should not be underestimated as their students' social interactions will influence the larger class ecology (McCaughtry, Tischler, and Flory, 2008).

However it is theorised though, awareness and management of emotions by teachers impacts on the wider setting in which the personal and social aspects of emotions play out. This thesis tests through a teacher education inquiry and therefore seeks benefits for student teachers. As such, the framework is a positive design, intended to identify good practice and outcomes rather than bad. Hence the optimistic heading for this section.

Theorisations of emotional assets are classified as intrapersonal and interpersonal, personal or relational. However the emotions of student teachers and their pupils are not bound by the classroom or even school walls. Emotional aspects of learning to teach do not exist

within a vacuum. This section looks beyond this intrapersonal and interpersonal perspective of student teacher emotions within the classroom. It adopts a socially-situated model of their learning in the wider context of a teacher education programme, arguing that student teacher hopes and aspirations can be seen through such a model. Because the emotional aspects of learning to teach are embedded in teacher education programmes with school-based and university-based parts, a long-standing tension between practice and theory in teacher preparation will also be discussed.

Lave and Wenger (1991) conceptualise situated learning as learning communities into which novices (such as student teachers) are socialised through 'legitimate peripheral participation'. Their model presents the participation of student teachers who are beginning a school placement as the edge of practice and then moving towards the core as they take on and discharge more responsibilities. This outlook rejects learning transmission of abstract knowledge, viewing it instead as socially co-constructed knowledge.

Focusing on personal emotions, for example, showing caring and being tactful is associated with an individualistic account, treating emotions as a matter of personal choice or disposition, moral commitment, or private virtue (Hargreaves, 2000). This perspective has led researchers to pursue understanding of emotions "from a social, contextualized, situated point of view seeking to understanding what shapes the emotional lives and work of teachers"(Lippke, 2012: 463).

Wenger, through his 'landscapes of practice' (2010) emphasises a social body of knowledge created by linked communities of practice. He describes such a landscape as "A self-governing learning partnership among people who share challenges, passion or interest, interact regularly, learn from and with each other and improve their ability to do what they care about" (Wenger, 2010, slide 4)

For a student teacher, these partnerships may include the university tutors, student teacher peers, the placement class pupils and staff in their placement school. Wenger's definition of a community of practice below presents a supportive environment for a student teacher to engage with the emotional aspects of their teaching.

Wenger's landscape model recognises that communities of practice compete on this landscape for the learner's attention. For a student teacher the priority may be an essay due in at university for tutor marking and feedback. For the mentor precedence might be given to the student teacher's preparation of the class for forthcoming tests.

The idea of 'learning partnerships', described here is currently being showcased by the university as a structure to support all learners who are interconnected by that partnership. From that perspective all participants in this research should be a raison-d'être for positive emotional ecologies in the school workplace.

Creating emotional ecologies includes seeking to understand the influence of wider sociocultural spaces, such as students' embodied sense of race and ethnicity, socioeconomic status, gender, family life, physical (dis)ability, and religion. This sample of emotionally mediated social domains will inevitably have a bearing on students' experiences in school physical education, and as such, must be discussed together (Evans and Davies, 2006; Shilling, 2005). Teachers who use this knowledge in their teaching affirm their students' embodied identities and increase the likelihood they will successfully learn in ways that are culturally relevant (Ladson-Billings, 1995).

2.2.5 Emotional ecologies: garden or jungle?

Emotional aspects of learning to teach are set in a context of the values and aspirations of student teachers. These objectives should match those of the school and can only be met if teachers provide pupils with a socially and emotionally healthy classroom environment (Brackett et. al, 2011; Noddings 1992). Such emotionally-supportive classrooms and schools

are related to pupil enjoyment and engagement (Curby et al., 2009; Woolley, Kol, and Bowen, 2009) as well as academic achievement (Pianta et. al, 2008; Rudasill, Gallagher, and White, 2010).

This macro-picture is theorised and tested by educational researchers in different ways, all of which encompass more than the student teacher and pupil learners. These various models show a wider picture presented as environments, climates, cultures or ecologies. In studies of teacher emotions, these three levels or planes – the personal, the relational and the wider context – are helpfully viewed as 'affective terrains' to be navigated (Gallagher, 2016). While some studies centre on teacher emotions from either a personal or relational perspective rather than both (Uitto et al;, 2015), all such studies have a wider context. Zembylas offers a challenge to educational researchers by identifying a gap, stating that "missing [from teacher emotion research] is an exploration of teacher emotion as embedded in school culture, ideology and power relations" (2003:113). This thesis, in its analysis of the data, takes account of the socio-political context.

All of this affective terrain is valued-laden, loaded with judgements that are positive or negative, judgements from the participants and, where a qualitative approach is used, judgements from the researchers.

Teachers have a responsibility to create classroom conditions that are positive and conducive to learning. For example, Bracket et al. (2011) delineate classroom climates as emotional, instructional and organisational, posited the first of these as the extent to which teachers promote positive emotions and make students feel comfortable. Hamre and Pianta (2007), in their 'Teaching Through Interactions Framework', described the components of such a positive emotional climate as a) teacher sensitivity to student needs, (b) warm, friendly, respectful, and nurturing teacher-student relationships, (c) regard for students' perspectives and encouragement of active participation, and (d) the absence of abrasive disciplinary

practices and cynicism. Doubtless, these are the environmental conditions that any student teacher wishes for.

Of course a teacher education programme includes several student teacher environments, notably the school placement classroom, the whole-school and the university campus (where the programme is a university/school partnership). During placements, the school environments will be most prominent. Cross and Hong's case study (2012) found Bronfenbrenner's ecological system (1994) to be a useful framework for examining these immediate and more distal teaching and learning environments and concluded that teachers' internal characteristics transact with external environments to produce emotions. So the environment effects emotions, as well as the other way around.

The framework implies that the emotional responsibilities as well as rights of the student teachers will be instrumental in creating positive emotional ecologies within those areas of the learning partnership where they have influence. Viewed this way, emotional ecologies may be the glue which holds learning partnerships together. The emotional aspects of a student teacher's practice is a factor in positive emotional ecologies, creating effective learning partnerships. This could apply to all individuals involved in a learning partnership (from wealthy academy school sponsors to nursery school toddlers), but within the parameters of this research my focus is on student teachers and their mentors.

'Emotional ecologies' are constructs which perceive emotional climates as a stewardship and responsibility. Coined by Frost, Dutton, Worline and Wilson, (2000:26), they were the subject of narratives about compassion in organisations that "create an emotional ecology where care and human connection are enabled or disabled". This notion of care and human connection is illustrated in Farouk's study of primary teacher's restricted and elaborated anger (Farouk, 2010); finding that elaborated anger lasts longer and is triggered by parents and colleagues rather than pupils, he concludes that within the same education system some

primary schools are better at dealing with this staff anger through a fair, constructive and supportive school culture for their staff. Of course, such emotional climates exist within the environment of a classroom, a whole school and indeed the school/university environment in which student teachers are learning to teach.

Zembylas adapted the concept of emotional ecologies to teaching in a theoretical frame arising from his ethnographic studies of teachers. He defining emotional ecology as "a teacher's (or a learner's) emotional knowledge in a particular social and political context, including the rich connections to emotional experiences, and relationships with others over time" (2007:357). To a student teacher 'others' would be the people they encounter professionally on their programme, such as mentors, pupils and parents in school, tutors if there is a campus-based part of the programme, and student peers in either or both settings. Theses emotional ecologies of teaching were presented as three overlapping planes: individual, relational and socio-political (Zembylas, 2007: 358).

These planes are theorized as having positive or negative features. His research purpose was to use emotional ecology to filter and categorise the emotional interactions in the teaching environment. This enabled analysis of each teacher participant's developing emotional knowledge in a context that extends beyond a classroom into the wider socio-political context. If a student teacher's engagement with emotional knowledge deepens, it will contribute positively to these ecologies.

The nature of these positive and negative emotional ecologies can be illustrated by using Robin Alexander's botanical metaphor to describe primary education. His positive analogy is of a garden in which growth occurs amidst order and authority in a protected, harmonious environment (1995: 13). In contrast, growth in the jungle is captured by 'tensions, dilemmas, conflicts and paradoxes' (Alexander, 1995: 41)'. He goes on, to set the model in the context of three levels: the inner psyche, the classroom level and the societal level.

Zembylas considers the relational meaning of emotional knowledge to other teachers and adults in the school as well as the pupils, grouping emotion knowledge into categories– individual, relational and socio-political. His argument is that the teacher can improve those ecologies through use of emotional knowledge or damage them by not using emotional knowledge.

His perception of this layered nature of teaching and teacher education certainly suggests a relationship between emotional aspects of teaching and the moral and ethical decision-making of teachers, including student teachers. Within these layers each student faces the challenge of developing their own professional identity as they manage these ecologies; Boyd (2014) suggests identifying role models within the school workplace.

The importance of a positive classroom environment is emphasised early in their programme, the data collected for this thesis was to show some resonance between student teachers and mentors and the characteristics which define emotional ecologies (Zembylas, 2007).

2.3 Approaches to researching emotional aspects of learning to teach

Research into emotions and teaching has certainly increased rapidly over the past fifteen years (Shutz and Zembylas, 2009; Pekrun and Linnenbrink-Garcia, 2014; Chen, 2016). Because only a minority of these findings relate to learning to teach, a better indicator of this are the articles concerning emotions and teachers/student teachers in TATE (1985-2014). Uitto et al (2015: 125) used the search term *emotion* OR feeling* OR affective* OR mood** in the title, abstract or keywords as a filter to find 149 articles, which were further reduced to 70 articles in which emotion had more than a marginal role in the abstracts. The search term approximate to the theoretically differing concepts discussed in section 2.1.2, used by Uitto and in this thesis to capture something of the multifaceted idea of dealing with emotions. Although I found 56 more journal articles that report on preservice teacher

education, they were less prolific, more regionalised or both. TATE was therefore best matched to research reports relating to student teachers and teacher education. 6 articles were published between 1985-2002, 23 from 2003-2008 and 38 from 2009-2014. Using the same search terms, I have found a further 20 articles published in 2015-2016, less than 2 years since Uitto's review, suggesting that this affective turn (Pekrun and Linnenbrink, 2014) and the growth of interest in teachers and emotions is unabated.

Uitto et al. inductively sort the articles into seven groups of emotional focus, then identifying the research approach reported in each article. These are summarised below (125-127):

1. Emotions in teacher identity and professional learning: 12 qualitative, 1 quantitative, 1 employing mixed methods and 1 theoretical essay

2. Emotional exhaustion among teachers: 12 quantitative, 1 essay review

3. Teachers' emotions and relationships: 10 qualitative, 1 quantitative and 1 article combining a quantitative and qualitative approach

4. Teachers' emotions in historical, political and societal contexts and educational reforms: 6 qualitative, 2 applying both quantitative and qualitative approaches and 3 theoretical

5. Teachers' impact on student emotions: 6 quantitative, and 1 theoretic.

6. Teachers' emotional intelligence, skills and knowledge: 5 quantitative and 1 drawing on empirical examples gathered during previous qualitative studies

7. Teachers' emotions and regulation of emotions: 5 qualitative and 1 theoretical.

Because student teacher participants were not included within the articles in groups 5 and 7, those categories could be seen as less relevant to this thesis. However, those groups are included here because firstly, they give a more complete overview of the authors' approach to classifying the articles and secondly, research methodologies used with serving teachers could also be appropriate for pre-service teachers.

Each group of articles reported on empirical research with approaches that were predominantly qualitative or quantitative as follows:

Qualitative: Emotions in teacher identity and professional learning; Teachers emotions and relationships; Teachers' emotions in historical, political and societal contexts and educational reforms; Teachers' impact on student emotions; Teachers' emotions and regulation of emotions.

Quantitative: Emotional exhaustion among teachers; Teachers' emotional intelligence, skills and knowledge.

Mixed methods (qualitative and quantitative) were reported in 5 articles, spread across the main themes, thereby showing no apparent pattern of themes deemed to be best suited to mixed method enquiries. In one of those articles employing mixed methods, , entitled 'Promoting peaceful coexistence in conflict-ridden Cyprus: Teachers' difficulties and emotions towards a new policy initiative', Zembylas et al (2011: 335) explain that they came up with two main questions to guide the research. They then employed a quantitative methodology to answer the first and qualitative for the second, as shown below:

1. *What are the main tendencies regarding Greek-Cypriot teachers' perceptions and emotions generally towards reconciliation and specifically towards the objective for peaceful coexistence*? By using a survey questionnaire, they were able to numerically chart the unknown terrain of teachers' dispositions towards a government initiative. This quantitative phase also helped the authors design their main qualitative research.

2. *What are the main challenges of Greek-Cypriot teachers when dealing with the prospect of peaceful coexistence and how does this affect their emotional readiness to implement the new objective?* The qualitative phase involved a set of in-depth interviews with teachers that further explored some tendencies documented in the

quantitative phase, focusing on complexities and interconnections between the

reported difficulties and emotional resistances.

This question-driven rational for methodologies serves to illustrate the approach taken in

this thesis. This explanation will be expanded in the next section (2.4) and the following

chapter (Methodology and Methods).

Self-reporting by the subjects is an indispensable method of assessing emotions themselves

in education (Pekrun, 2016: 44). Indeed, because emotions comprise various components –

affective, cognitive, motivational, physiological and expressive (Shuman and Scherer, 2014) -

self-reporting is the only way to assess emotional feelings and thoughts (Day and Harris,

2016: 55).

Raths and McAninish ask "If knowledge is socially constructed, does the social location of

the knower matter, the discourse communities in which the knower participates, the social

power the knower occupies, the point of view of the knower from a particular social

standpoint?" (2004: 3). They contextualise the matter by pointing out that these questions

circulate through debates about what counts as knowledge in teaching and teacher

education. My view of 'emotional knowledge' is influenced by my:

- teacher and teacher education experience (see researcher positionality; section 1.6)

- epistemological view of the socially-constructed nature of knowledge created by

  teachers and researchers

- intent to go further, to empirically test the idea of emotional knowledge.

-

2.4 The research purpose: from aim to question to data-collection questions

This literature review was conducted with the broad aim of finding out *''How could the*

emotional aspects of learning to teaching be better addressed by teacher educators and

student teachers?'

Theories and research approaches have been shared, some of which have sharpened the focus of the research. Emotional aspects of teaching encompass many concepts. This literature review has addressed those with some relevance to student teacher school placements and narrowed the focus down to the use of emotional knowledge. Informed by the review, the hierarchy of research questions, following Punch's model (2015: 58) now moves from abstract to concrete, from general to more specific.

The literature review argues that the existing theoretical frameworks are not well suited to the experiences of teaching. There is also a lack of consensus about what these emotional aspects of teaching are, general agreement being limited to being aware of and managing emotional aspects of working. This divergence of views has prompted my proposal of this concept of a type of knowledge that is part of a wider body of teacher knowledge and informs how a teacher is responds to situations involved the emotions of themselves and others. It needs to have relevance to all who are learning about teaching, student teachers and those in teaching.

My role as a teacher educator gave me opportunities to locate my inquiry in school placement settings and recruit student teachers and their mentors as research participants. My familiarity with the formal and informal processes of school placements was an asset when planning and conducting the inquiry. I already had working relationships with some of student teachers who were in my personal tutor group and some of the mentors who worked within a geographical cluster of schools that I often visited to support and monitor placements. There were advantages that enabled me to represent their view accurately from the raw data that they provide. Interwoven with these opportunities were my professional responsibilities to support these embryonic teachers and their mentors.

Up to this point, the general question was *'How could the emotional aspects of learning to teaching be better addressed by teacher educators and student teachers?* This question

guided the literature review. At this stage the broad idea of 'emotional aspects' of learning to teach has been narrowed to the use of 'emotional knowledge' when learning to teach. This adds focus to the inquiry, identifying a phenomenon to investigate. Essentially, this research tests the concept of 'emotional knowledge' as it is experienced by participants introduced to that framework (Table 1, p64).

My analysing of the literature has resulted in a reconceptualization of the emotional competence inventory categories (Hay McBer, 2005) as emotional knowledge. The clustered categories of emotional 'competences' have characteristics in common with the idea of emotional knowledge. These include identifiable personal practice (Connelly, Clandinin and He (1997), triggering and being triggered by emotions (Frenzel, 2009), being propositional or declarative and also procedural or functioning (Gibbs, 2004: 42). Teacher knowledge can, at a general level, be described as theoretical and practical and has in several research studies been understood as teachers' thinking and teachers' acting (Hegender, 2010: 151).

The decision to use an original framework of emotional knowledge was made because emotional knowledge is both malleable and relevant to initial teacher education. Zembylas described emotional knowledge as "a teacher's knowledge about/from his or her emotional experiences with respect to one's self, others and the wider social and political context in which teaching and learning takes place" (Zembylas, 2007: 356). The eighteen personal and social categories of the framework were a good fit to this description of 'emotional knowledge.' In contrast, retaining the idea of that framework as 'emotional competence measuring emotional intelligence' would have been to test for the existence of intelligence, an inappropriate focus as 'intelligences' have not been shown conclusively to be other than fixed assets which are not changeable. Therefore, exploration of student teachers' development through this thesis is better served by exploring a framework for emotional knowledge because it offered the student teacher learners the prospect of growth and achievement.

The thesis was to empirically test this framework with participant student teachers and their mentors. The literature review had informed the formulation of a more specific purpose, encapsulated in the question:

'*What meaning does 'using emotional knowledge when learning to teach' have for student teachers and their school placement mentors?*'

To design a methodology for exploring emotional knowledge, the purpose needed to be clear. Data collection questions were therefore compiled by breaking down the above question into more concrete questions which data collection and analysis could address . The use of draft data collection questions to guide the choice of data collection methods was not entirely linear however. It was an iterative process of revising those questions as the potential of those methods became clearer, one in which the data collection questions below were the product of an ongoing revision. Nonetheless, despite the continual analysis of the questions as well as the data, the basic structure and relationship between the questions remained.

Q1 How well were the emotional knowledge categories understood by the student teachers?

Q2 How did student teachers make use of the emotional knowledge categories?

Q3 To what extent was the emotional knowledge framework challenged by the emergence of additional or alternative features from the data?

Q4 *What were the participant evaluations of the emotional knowledge inquiry?*

The research is further narrowed to four objectives, embedded within the questions Q1 to Q4 above. After the data needed to answer those questions is collecting and analysing, these questions also provide the structure for the Results and Discussion chapters. The research questions also informed the choice of research methods, described in the next chapter.

Chapter 3: Methodology and Methods

To recap, I trawled the research literature for enquiries into teaching and emotions, seeking answers to the broad question '*How could the emotional aspects of learning to teach be better addressed by teacher educators and student teachers?*' This was the overall aim of the research.

I was looking for emotional aspects of learning to teach that might offer tangible assets for teachers, an inquiry seeking ideas to use in teacher education for the benefit of student teachers. The literature review (Chapter 2) included a critical engagement with the literature to a point at which the theoretical framework of 'emotional knowledge' emerged (section 2.2.5). From there, the research questions moved from the more general notion of 'emotional aspects of teaching' to become more specifically about 'emotional knowledge' - *What meaning does emotional knowledge have for student teachers and their school placement mentors?*'

I used a research questioning structure advocated by Punch, that of separating out data collection questions from the more general research question. Mindful that the question development stage of educational research could be "messy, iterative and cyclical" (Punch, 2015: 62), the inclusion of a hierarchy of questions added a structure that was helpful in managing the iterative nature of the inquiry.

I saw 'emotional knowledge' as a theoretical construct that could be an asset with potential to raise student teacher awareness of emotions (their own and those of others) and how to use that awareness effectively when teaching. How would it be understood by student teachers and their mentors in primary school classrooms though? The question above was then sub-divided into a data-collection level of questions (Q1-Q4), specific enough to guide me in the data-collection and data analysis choices I was to make.

Q1 How well were the emotional knowledge categories understood by the student teachers?

Q2 How did student teachers make use of the emotional knowledge categories?

Q3 To what extent was the emotional knowledge framework challenged by the emergence of additional or alternative features from the data?

Q4 *What were the participant evaluations of the emotional knowledge inquiry?*

My personal ontology, my epistemology and this question-driven strategy have determined my use of a qualitative methodology. They have also guided my choice of mainly (but not totally) qualitative methods for data collection and an interpretative analysis. I set out to discover important patterns, themes and digressions associated with emotional knowledge and inter-relationships between itself and other aspects of learning to teach This inductive approach of looking for new patterns and themes was not restricted to the data collection. It was central to the data analysis where it generated new theory emerging from the data.

The chapter is presented in four main sections: epistemological assumptions, methodology, chosen methods and ethical issues. The explanation of the chosen methods is presented as three sub-sections (research design; data collection methods and a plan for analysis of the data.)

3.1 My research philosophy

This section continues from my statement of ontology and researcher positionality (see Chapter 1: 1.4 and 1.5) by explaining what counts as legitimate knowledge to me. This is crucial because "what counts as knowledge determines how meaningful knowledge can be generated" (Braun and Clarke, 2013: 28). When discussing epistemology, one of the main issues is whether reality is conceived as an external or objective truth independent of individuals or groups or whether it is embedded in the belief of a group of people.

The constructionist perspective entails that belief that knowledge is deduced through reasoning and that new knowledge is created by combining existing sets of

information(Kimble, 2013). Knowledge that is embedded in social groups holding the same epistemological beliefs is thought to be an interpreted reality (Révai and Guerriero, 2017) This view entails that knowledge is socially negotiated and "constructed", and thus suggests a constructionist view of knowledge (Kimble, 2013).

I do indeed believe that knowledge is constructed through interaction with others. This concept of social construction has shaped my research approach, underlying the methodology and the data collection and data analysis methods used within this study. My interest in teacher experiences as social constructions drew me, as Kelchtermans puts it (2016: 35), towards a qualitative and interpretative research methodology.

My beliefs as a person and teacher preceded my review of the existing research into the emotional aspects of teaching. In my view, the knowledge that this thesis is seeking is socially-constructed and this affected my understanding of the literature, the shaping of the questions and the research design shared in this chapter. I stated in the introduction my ontological belief in a world constructed by the individual and different experiences of people, not existing externally and independently of how each of these people perceive it to be. Consequently my view of knowledge is that truth is constructed from how each person sees something. Furthermore these multiple versions of knowledge are not isolated but are reshaped by interactions with others, creating truth as a social construction. The researcher and participants are linked in this thesis, constructing knowledge together. In the same way the contribution of this study to what is already known about emotional aspects of teaching will be part of an ever-changing changing and socially-constructed reality. I understand this not as the construc*tionism*, Papert's notion of children development and making things in learning (Ackermann, 2001), but as a model of individual and social construc*tivism* that Pass offers as a combination of the views of Piaget and Vygotsky (2004).

The theoretical framework emerging from the literature is centred on emotional knowledge. The study was designed to focus on the use of emotional knowledge itself by student teachers. I needed a design that could lead to better understanding of the framework offered - the emotional knowledge of student teachers. My definition of knowledge allows this framework to be changed only through collaborative reconstruction, a new meaning created by the student teachers themselves, their school-based practicum mentors and of course myself, a researcher tasked with interpreting those participant views. To understand the perceptions of emotional knowledge by student teachers and their experienced teacher mentors, I need to focus on the relationship between those people as research participants and their experiences of emotional knowledge. I want to know what they understand about the idea of emotional knowledge, understandings that will become a social construct – a combination of participant perspectives and my researcher interpretations.

In summary, my approach to research is based on knowledge as a social construction. These constructionist assumptions are fundamental to the methodology procedures that I used for this study.

3.2 A qualitative and interpretivist methodology

By 'methodology', I am referring to the choices I made in planning and executing this research study (Silverman, 2010; 110). The rationale for this methodology is that socially-constructed knowledge, as described in the previous section, is the outcome of collaborative thinking. This essentially determined how I was to find out more about emotional knowledge. This methodology arose from my whole approach to research, my ontological position (section 1) and the epistemological assumptions I hold (section 3.1).

De Lisle talks of "an explicit philosophical stance and design framework for organizing the inquiry" (De Lisle, 2011: 90) and my stance is a constructionist view of knowledge (referred

to in sections 2.1.2 and 3.1). That said, there are several methodologies that lay claim to support researchers with this epistemic position.

The thesis builds upon the literature review and evaluates a theoretical framework around emotional knowledge. The research questions seek to understand what emotional knowledge means to the participants. This was practitioner research, drawing on some quantitative data through a survey but mainly qualitative methods and analysis. Educational researcher Gorard affirmed, when discussing a combination of methods historically associated with either quantitative and qualitative approaches:

> First of all, the Q words are not paradigms. Types of data and methods of data collection and analysis do not have paradigmatic characteristics, and so there is no problem in using numbers, text, visual and sensory data synthetically in combination (Gorard, 2013: 6).

My view that emotional knowledge, like any knowledge, is socially constructed. Several commonly-used approaches were consistent with this perspective. As such, each of the approaches below use methodologies with merits.

The process of grounded theory, starting with data collection and then coding and categorising it to create theory (Glaser and Strauss, 1967), was inappropriate because, although inductive analysis was used to code the textual data as new themes, I began with a starting point for data collection and for deductive analysis of the emotional knowledge categories within the theoretical framework.

A case study approach had the attraction of generating rich detailed data from only one or two participants but would require a study of greater longevity than the one-year window that I could manage (Barbour, 2007: 60).

An ethnographic study would have enabled me to gain more of an insider perspective by being positioned within a placement school (Hartas, 2010: 148). However, the logistics of securing sufficient time in a school settings were too challenging.

The benefit to a post-structural inquiry to explore emotional knowledge was the inherent examination of the role of power and culture during school placements (Zembylas, 2003). Despite this potential to learn more about emotional knowledge in terms of social justice and morality, I decided that, because emotional knowledge was such an emergent concept, it needed an approach to answer more basic questions.

I wanted to find out about emotional knowledge itself through the experiences of the participants. I did not though want to lose sight of that intention amidst the complexity of their experiences – pedagogical practices, relationships and a myriad of other school placement discourses. In short, I needed to interpret the participant understandings and perspectives of emotional knowledge within their school placement experiences.

Phenomenology "attempts to understand the essence of a phenomenon from the perspective of participants who have experienced it" (Eddles-Hirsch, 2015: 251). The inquiry did indeed emphasise what the participants and their experiences could tell the researcher about the meaning of emotional knowledge (Merriam and Tisdell, 2015). However my study has deductive and inductive phases, both testing a theoretical framework and seeking emergent themes. A phenomenological approach would use a methodology appropriate for inductively creating themes from the data but not for testing a predetermined researcher hypothesis (Smith and Osborn, 2010: 55)

Each of the above research approaches are associated with methodologies under the umbrella heading of qualitative and interpretative inquiry. Therefore a qualitative methodology was needed in order to explore the way in which participants perceive emotional knowledge in the school placement setting.

Emotional knowledge was an unfamiliar teaching concept to student teachers and mentors. To use it added a new dimension to the already-complex social situations of school placements. Nonetheless I had realistic ambitions for this new area of research; findings that describe what is happening, rather than trying to explain it (Punch, 2015: 22).

As Miles and Huberman remark, "explaining something satisfactorily is hard until you know what it is"(1994: 91). That 'something'- emotional knowledge - at the centre of a theoretical framework that was to be tested to find out 'was it is' from the perspective of student teachers and mentors.

The emotional knowledge framework was represented as a four-cell matrix (section 2.2.3; Table 1, p64). One of the dimensions is awareness and management; the other was personal and social. Therefore, as well analysing the survey results, I would be scrutinising the written and interview narratives for evidence of self-awareness (EK1 cluster) or social-awareness (EK3 cluster) as well as for descriptions of self-management (EK2 cluster) or relationship-management (EK4 cluster).

The student teachers would tacitly or explicitly be engaging with the framework, hopefully starting to make sense of it. The survey was designed to capture this meaning with each category being an idea that the student teachers grasp (or not) and also being part of their own teaching that they believe they can (or cannot) measure. This showed in their understanding of the emotional knowledge categories as ideas as they graded themselves against levels for each category as they assessed their own use of emotional knowledge.

At the same time this research was an inquiry to capture how the students and mentors perceived the impact of explicit engagement with emotional knowledge. Using the theoretical framework, a practical tool was designed to identify and develop the emotional knowledge of teachers in school placement settings.

My understanding of emotional knowledge, and indeed knowledge of emotional knowledge, is that it is a social construct, the meaning of which will vary from one person to another. This led me to a predominantly qualitative research design which:

- used written and spoken language (mainly narrative rather than numbers)

- spanned several phases of experience on the path to becoming a teacher, completing the collection of data over one year

- collected mainly narrative accounts from small numbers of participants

In a search for socially constructed knowledge, we are all actively involved in the process of meaning making rather than finding *the truth* (Punch, 2015) As such, this study has an approach which is both qualitative and interpretivist, a direct contrast to a positivist orthodoxy (Bryman, 2001: 12). It was an interpretivist approach in acknowledging that "there may be multiple explanations for actions and is interested in the meanings people ascribe to their actions – the reasons why particular people do what they do" (Mukherji and Albon, 2015:25).

3.2.1 The participants

The sample of participants were student teachers and their school-based mentors, working within school placements. While some of the student teachers had previously been teaching assistants or unqualified teachers, many joined the course with only ten days observer or helper experience in a primary classroom. Of course the pupil learners - classes of children - have an equally central place within school placements but I chose not to include pupils or other adults as additional set of participants. Feedback could have been sought from pupils, other teachers, teaching assistants and any other persons well-placed to give helpful perceptions of the emotional knowledge demonstrated by the student teacher. However this 360-degree feedback would have exposed the student teachers to a range of views, threatening the high level of trust needed for such a relationship. In consideration of the

sensitive nature of emotional aspects of teaching and the risk of emotional harm from untrusted or insensitive feedback, the range of participants was not broadened to include pupils and other adults in school.

To reiterate the aim of the inquiry, it was to gain and interpret student teacher understanding of emotional knowledge on school placements. The choice of participants was driven by the research questions at the beginning of this chapter.

Student teachers and emotions

The school placement is a time when student teachers are vulnerable and focused on survival and classroom management (Norsworthy, 2002). One of the factors which produces emotional responses in student teachers' is "their perception of the success or otherwise of their relationships with significant others such as pupils, mentors and teacher-colleagues" (Maldarez et al., 2007: 237). To participate in research which explores those emotional responses is a tall order for student teachers, akin to allowing the probing of a painful tooth which the dentist hopes will resolve the problem. This placed a sizable responsibility on me to manage the research morally and ethically (see section 3.4)

The student teachers participating in this study were all well versed in practices to facilitate their capacity for reflection, not just through a few months of this postgraduate teacher education programme, but when they were undergraduate students, albeit at a lower expected level. The underpinning philosophy is foregrounded by critical reflection as a key element in learning to teach, a mantra continually voiced by teacher educators such as myself. Would they, if they saw any value in the idea of having emotional knowledge, seek to develop it through critical reflection?

One possible factor flagged from previous studies is the prevailing image of student teachers seeing themselves as rational professionals needing to manage their emotions and also somewhat control their students' emotional expressions (Schutz and Zembylas, 2009, Boler,

1999). Or as Ovens and Tinning warn, if the dominant discourse is one of management and control, the chances of student teachers enacting critical reflection on or during emotional aspects of teaching might be seriously limited in contexts like the school placement (Ovens and Tinning, 2009). Indeed a related issue was to emerge from the data; emotional knowledge was to show up around behaviour management, evident within contrasting discourses of control and relationships.

Mentor teachers and emotions

Hawkey, in the context of teacher education, considered that learning about the impact of the emotions on learning may be useful for researchers, mentors and student teachers in raising self-awareness, but that "it is not clear… that it would impact on the thinking or behaviour of either mentor or student" (Hawkey, 2006:141). The student teachers participating in my study were informed volunteers and therefore likely to be receptive to changes in thinking or behaviour, even seeing themselves as collaborators in the research. On the other hand, the mentors were asked to join their student teacher in the research. While no mentor refused this request, I was aware that they might take part only in a spirit of compliance and be less receptive to changes in thinking and behaviour. This indeed appears to be what transpired.

Hawkey (2006) also identified the dangers and pitfalls of using an emotional lens to look at the activity of mentoring in pre-service teacher education. She emphasised the importance of the school-based mentors who would be preparing student teachers to manage these emotional aspects of the job. If emotion is a central feature of learning to teach, it must be in terms of the student teacher's reactions to starting teaching and in terms of the mentor's management and support of the student teacher through this process.

Recognising the pressure that mentors have to manage, my researcher responsibility includes supporting the mentors in this foray into new territory. These are professionals who

face the challenge of maintaining a duel identity as teacher and mentor (Burn, 2007) and who can experience their own vulnerabilities while supporting and assessing student teachers (Bullough, 2011). Helping the participating mentors in their use of the emotional knowledge framework is part of my ethical responsibility to them.

The sampling decisions

The participants, on a one-year postgraduate programme, had school-based teaching placements in autumn, spring and summer, interwoven with campus-based learning. The key outcomes were passing the placements for Qualified Teacher status and passing two Masters-level modules for their post-graduate academic award (see Table 2)

Table 2: The characteristics of the student teacher sample

Student	Gender	Age	Ethnicity & P.O.B.	D placement school	D placement class	E placement school	E placement class	C&EC	RP
A	M	28	White, England	Village Primary, 243 pupils	5-6 age, 34 pupils	Rural Primary, 38 pupils	7-11 age, 22 pupils	60	65
B	M	33	White, England	Village Primary, 52 pupils	7-9 age, 18 pupils	Rural Primary, 95 pupils	5-7 age, 30 pupils	64	62
C	**F**	**22**	**White, England**	**Rural Primary, 29 pupils**	**7-11 age, 16 pupils**	**Rural Primary, 141 pupils**	**9-11 age, 27 pupils**	**72**	**75**
D	**F**	**27**	**White, England**	**Urban Primary,* 217 pupils**	**5-6 age, 25 pupils**	**Rural Primary, 46 pupils**	**5-6 age, 13 pupils**	**67**	**67**
E	M	34	White, England	Semi-urban Primary,* 173 pupils	8-9 age, 28 pupils	Withdrew from course	Withdrew from course	55	53
F	**F**	**26**	**White, England**	**Urban Primary, 306 pupils**	**5-7 age, 27 pupils**	**Urban Junior*, 226 pupils**	**9-10 age, 30 pupils**	**72**	**65**
G	F	22	White, England	Urban Infants, 240 pupils	5-6 age, 25 pupils	Urban Infants & Nursery, 211 pupils	3-5 age, 30 pupils	62	69
H	**M**	**33**	**White, N. Ireland**	**Urban Infants, 315 pupils**	**6-7 age, 30 pupils**	**Village Primary, 138 pupils**	**5-7 age, 28 pupils**	**71**	**72**
J	F	26	White, English	Urban Primary, 168 pupils	5-7 age, 27 pupils	Village Primary, 152 pupils	6-7 age, 29 pupils	65	67
K	F	24	White, N. Ireland	Semi-urban Primary, 212 pupils	5-7 age, 31 pupils	Urban Primary in NI, 426 pupils	6-7 age, 28 pupils	61	72
L	M	31	White, Australia	Rural Primary, 93 pupils	5-7 age, 28 pupils	Urban Primary in NI, 312 pupils	9-10 age, 29 pupils	52	65

Bold type: Student teachers who participated through all phases of data-collection (survey to interview)
*located in area of high social and economic deprivation
M Level modules *Creative and Effective Curriculum* and *Reflective Practice* require a 50% pass mark.

This inquiry was looking for insight into this particular cohort rather than making wider generalisations. The sample contains student teachers who were diverse in terms of gender, age, school placements and the marks they received for their course assignments. The sample did have some common features in terms of PGCE students on a university-based course in England, notably the wide age range of the participants. Nonetheless the participants were not representative of PGCE students on courses in England.

Variables included a higher proportion of males, higher average age, higher likelihood of being given a placement with a mixed-age class in a rural school and high assignment marks (nearly all participants above the normal bell curve peak of about 58%)

Successful Masters level study requires a highly reflective approach. Consequently, one implication of the high assignment marks was that the findings were likely to include some deep reflection on their teaching practice – including the emotional aspects.

Another implication for the findings was that this sample had a substantial amount of prior experience to draw upon. An average age of 28 indicated existing knowledge of dealing with emotions at work, valuable experiences when contributing to this inquiry.

These characteristics equipped them better than most to integrate a framework such as emotional knowledge into their reflections on learning and teaching. As the purpose of the thesis was to find and interpret student teachers' emotional knowledge, the participation of so many reflective practitioners as willing volunteers was very welcome.

For the first part of the data collection (a survey), I had access to a full cohort of 119 postgraduate primary student teachers. With a 70% response rate, this resulted in a group of 84 student teachers with a similar gender mix (4 female to 1 male) to that of the national statistics for such courses in England.

Their participation in the inquiry began after the autumn placement and, for those participating for the full duration of the inquiry, concluding with an interview the following

autumn, near the end of their first term as a qualified teacher. As Barbour puts it, "the goal of qualitative sampling is not to produce a representative sample, but rather to reflect diversity" (Barbour, 2008: 53). The volunteers to participate beyond the survey were a mix of gender, age and prior academic and teaching experience.

The full cohort of student teachers were invited to complete the numeric survey data. I correctly anticipated a smaller response to my follow-up request for further participants. At the next data collection stage the student teachers would agree to have the emotional knowledge of their teaching observed in a school placement setting. As anticipated, there were a much smaller number of participants for the second phase – eleven student teachers (see Table 2). This was no surprise, given that observation by a university tutor on school placement is usually viewed with considerable apprehension by student teachers. A much-reduced number of participants was consistent with recommended qualitative data collection methods. Smaller numbers of participants and amounts of data were needed for successful analysis of the rich narrative data . Had the number of volunteers been greater, I would have selected a group of participants from the volunteers based on their diversity, as mentioned above. In successive data collection phases, the participant student teacher numbers dropped further, concluding with four (former) student teacher interviewees, enough to generate data that was both useful and manageable.

Finally, there is no unique guidance on sample size needed for thematic analysis (Guest et al., 2006; Emmel, 2013). This flexibility was welcome in planning a study that began with survey participants and moved on to collecting narrative data from student teacher and mentor volunteers whose numbers fluctuated during the different phases of the inquiry.

3.3 The chosen methods

The methods of collecting and analysing data were mainly qualitative in an approach that started with survey and followed with the collection of written and spoken narratives.

These methods were:

- Student EK Self-report survey

- Student 1st Week Reflection

- Student Weekly Reviews

- Student response to tutor feedback on EK

- Mentor End-of-placement Reports (2)

- Focus Group (Research Workshop)

- Individual Interviews (Student teachers and Mentors)

This choice was influenced by the existing research into the emotional aspects of teaching and the related idea of teacher knowledge. Research into teachers' emotional intelligence has applied almost solely quantitative approaches whereas research exploring teachers, emotions and relationships have been predominantly qualitative inquiries (Uitto et al., 2015:132). Only one article reported a mixed quantitative and qualitative approach, using questionnaires and semi-structured interviews to explore teachers' emotions towards a new policy initiative (Zembylas et al., 2011). In a similar trawl of articles between 1984 and 2014 on 'teacher knowledge' spanning 1988 to 2009, Ben-Perez noted that the enquiries were mainly qualitative and interpretative, with the authors seeking the concrete views and experiences of student teachers and teachers (Ben-Perez, 2011: 9).

My data collection and data analysis decisions resulted in mainly qualitative methods, but has not been restricted to a single dichotomous choice of either qualitative or quantitative methods (Tashakkori and Teddlie, 1998; Onwuegbuzie and Leech, 2006). The data collection questions themselves were a major factor in my choice of methods.

The first of the four data-collection questions was:

Q1 How well were the emotional knowledge categories understand by the student teachers?

This question was approached by the quantitative approach of using a student teacher survey, using the online survey tool Bristol Online. This tool was chosen for its familiarity with student teacher, tutor and school mentor users and for the easy conversion of data from Bristol Online to Microsoft Excel, where it could be managed and analysed more flexibly.

The student teacher self-reported some evidence of how they rated their own use of emotional knowledge, although this was not the main purpose in requesting that data. Besides, the notorious unreliability of self-reports of emotional aspects of performance would render such data as questionable (Brody and Hall 2008, Lopez-Zafra and Gartzia, 2014).

The value of asking for the self-report was as a prequel, leading to the follow-up question which sought to find out how confident they were in making that self-report; in other words, whether some categories of emotional knowledge were easier or more difficult to understand. In this way, the survey was designed to establish how well, having self-assessed themselves against the emotional knowledge categories the student teachers thought they initially understand those categories. The survey was an instrument to chart the unknown territory of student teacher emotion knowledge, enable numerical mapping of the student teacher self-reports to find out about the characteristics of emotional knowledge in the context of teacher education.

The survey was not primarily to gain insights into how emotional knowledge was, or was not, used by individual student teachers. It was designed with triangulation of data in mind, mixing initial quantitative results with a raft of qualitative results to informing the findings of the other three data collection questions. Those questions were:

Q2 How did student teachers make use of the emotional knowledge categories?

Q3 To what extent was the emotional knowledge framework challenged by the emergence of additional or alternative features from the data?

Q4 *What were the participant evaluations of the emotional knowledge inquiry?*

A key consideration at this point was a 'fit for purpose' balance of subjective self-reporting and the more views of others who are nonetheless close to the student teacher placement experience. Self-reporting on its own would not have generated sufficient data to answer these questions. On a teacher education programme it is widely regarded as good assessment practice to use both self-reporting and feedback from others (Black, 2003; Wiliam, 2009 and Biggs, 2011). My research design was to model such good practice in finding out about emotional knowledge by use of self-report and feedback from others. The feedback was to be given following the observations of experienced teachers - the student teachers' mentors and tutors. For the student teacher participants, this was to be part of their meta-learning about assessment - as a learner as they seek qualified teacher status and as a teacher managing the assessment of pupils on placement. As such, the design was an inquiry within the programme as well as an empirical exploration of emotional knowledge.

A qualitative approach was to be used to analysing narrative contributions of student teachers and their placement mentors. The aim of collecting the data was firstly to establish whether and how much the student teachers actually used emotional knowledge and secondly anything else that could be found out about emotional knowledge through data about the school placements.

Q2 How did student teachers make use of the emotional knowledge categories?

Q4 *What were the participant evaluations of the emotional knowledge inquiry?*

The above questions address whether the theoretical framework of emotional knowledge has a basis in practice as well as theory. The data collection instruments - explained in the 'data collection' section below – were designed to test the framework. Collecting and

analysing this data would ultimately lead to the confirmation (or lack thereof) of this theory of emotional knowledge. Captured through a thematic lens as written reporting and interview data, the data revealed much about the use of emotional knowledge in practice.

Q3 To what extent was the emotional knowledge framework challenged by the emergence of additional or alternative features from the data?

This part of the study began with the specific observations and measurements that were made, detecting patterns and regularities in practice. This inductive approach led to the formulation of tentative hypotheses (within the 'Discussion' chapter) and ultimately to a reconstruction of the emotional knowledge theory.

The focus group was held after the first and before the second and third phases of data-collection. It was not designed to address any of the data-collection directly. The main purpose was to review the inquiry alongside the student teacher participants, amending the data collection methods if necessary.

3.3.1 Data collection

The data collection is designed to enable students, mentors and tutors to show their understanding of emotional knowledge. The interpretative approach sought explicit and implicit understanding of emotional knowledge. Therefore the collection instruments were designed to give access to two types of reflection:

- Naturally occurring data which already existed as part of the student's school placement assessment record, those student reflections and mentor reports on the students, completion of which is required for every placement on the programme and specifically designed to address the national teaching standards (Department for Education, 2011).

- Those which are designed for this research, researcher-provoked (Silverman, 2014) with an overt focus on emotional knowledge of teaching.

The value of using the former lies in capturing unconscious reflections on emotional knowledge. These were embedded within the comments of students and mentors, presenting links between the emotional knowledge categories and the teaching standards (DfE, 2012). While Edwards questions the reflective capacity of postgraduate student teachers (Edwards, 2007) , these participants were on a programme where Masters-level reflection on practice and theory was expected of all of them. The combination of data-collection tools was designed to prompt, not just reflection on their practice, but also reflection on a theory of 'emotional knowledge' that was new to them. A high level of participant reflection has implications for the research findings too; it results in a richer source of data to analyse and interpret to validate the findings.

The data collection instruments and analysis methods were designed to be, above all, fit for purpose in answering the research questions (Denscombe, 2006:119). Combining methods also exploits the complementary strengths and non-overlapping weaknesses of each (Johnson and Onwuegbuzie, 2004:18). The validity of my findings was enhanced by triangulating findings across methods for each student, exploiting another major benefit of choosing methods irrespective of whether they are labelled as quantitative or qualitative (Teddlie and Tashakkori, 2009:286).

Row 1 of the overview of data collection methods (Table 3) summarises the collection sequence from left to right, taking place over one year from December to November. Much of the data was collected during a postgraduate teaching programme running from September to July, with participants being revisited after they had begun teaching employment.

Row 2 are descriptions of each set of data collected. These are elaborated below.

An example of the data labelling for each of the participants is given in Row 3. All items of

data have a student code (A-K) and gender (f/m) with identities of those participants stored

Table 3: Overview of data collection methods

	After beginning placement December	During Developing placement January-February				On campus March	During Extending placement April - July		3 months into student teachers' first teaching job (as Newly Qualified Teacher) November	
2. Data sets	a) Student EK Self-report survey	b) Student teacher 1st Week Reflection	c) Student teacher Weekly Reviews	d) Student teacher response to tutor EK feedback	e) Mentor Report (1)	f) Focus Group (Research Workshop)	g) Mentor Feedback on EK Data not used	h) Mentor Report (2)	i) NQT Interview	J) Mentor Interview
3. Data Identity codes (e.g.)	Hm	HmIWR	HmWR	HmLR1f	HfR1f	Hm		HfR2f	HmINQT	HfMIf
4. Naturally occurring or Researcher-led data	Natural occurring data	Research led data	Natural occurring data	Researcher-led data	Natural occurring data	Researcher-led data	Researcher-led data	Natural occurring data	Naturally-occurring and researcher-led data	Naturally-occurring and researcher-led data
5. Quantitative or Qualitative	QUANT	QUAL	QUAL	QUAL	QUAL	QUAL	QUAL	QUAL	QUAL	QUAL
6. Data responses	84/119	9/11	11/11	10/11	11/11	7/11	6/6	8/11	4/6	5/6

securely. Each segment and type of narrative data is also labelled (e.g. WR – Weekly Review)

and, where the data source is a mentor or tutor, the coding adds their gender at the end.

The purposes of this coding are to retain anonymity (see Ethical Issues: section 3.4) and to

capture key contextual information to aid comparisons by analysing within and across the

types of data.

Row 4 shows how the data collection was designed to include both the naturally-occurring

data described above, which that was not explicitly about the use of emotional knowledge,

and researcher-led data which drew participant attention to the framework of emotional

knowledge.

The predominance of qualitative methods is shown in Row 5, with only the survey collecting

numeric data. This was to facilitate triangulation - explaining more fully the richness and

complexity of emotional knowledge by studying it and making convergent or divergent

comparisons from more than one standpoint (Cohen and Manion, 2000: 254).

An overview of the participant numbers at each phase of the data collection is provided in

Row 6. After 70% of the full student teacher cohort completed the online survey, eleven of

them volunteered for the developing placement phase. Each cell in the row shows how many

of those participating at that point provided the requested data.

Emotional knowledge self-report survey (2a)

This quantitative tool (Figure 2) was used alongside a lecture presentation to the whole

cohort of 119 student teachers. The purpose of the survey was to extend this introduction to

the 'emotional knowledge' framework to the student teachers who chose to complete it

and, perhaps, participate in the next phases of the research. The survey was explained and

understood as such by those who chose to participate and consequently it had adequate

face validity as such. The survey was not designed as an instrument for in-depth statistical

analysis with a high level of construct validity.

The survey combined with the subsequent qualitative methods to generate greater

understanding of this newly-theorised concept. Using the Bristol Online Survey tool (2016), I

invited the whole cohort to not just grade themselves against each of the eighteen

emotional knowledge categories but also to show how well they thought they understood

the categories of emotional knowledge as they attempted to grade themselves.

Strengths of this method included the technical simplicity of the survey and the timing of its
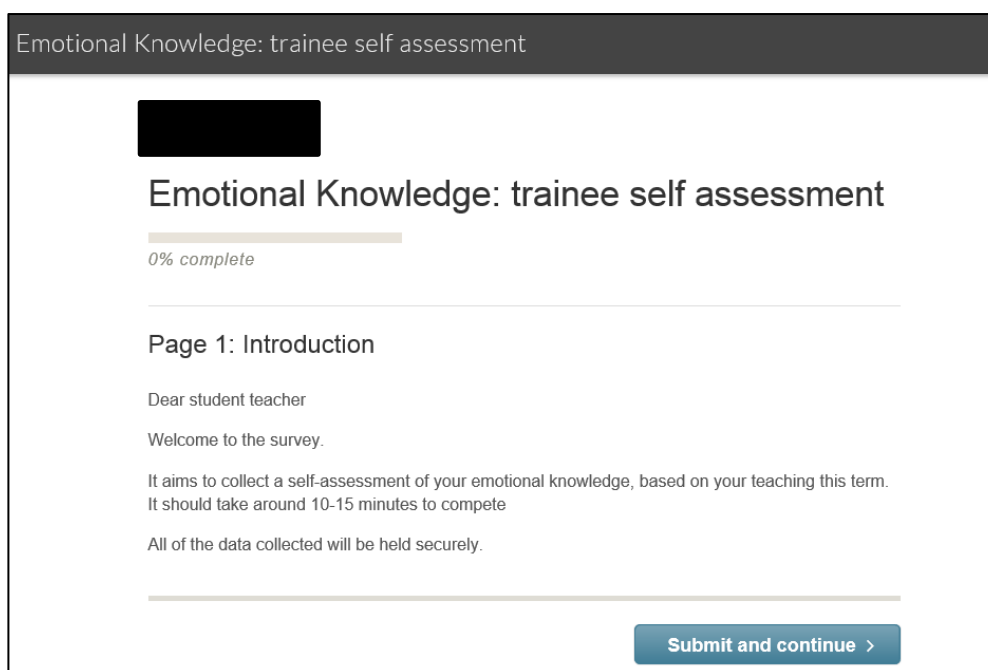
completion after an introductory lecture.

A weakness is that it is not clear to what extent these self-reports were authentic.

Participants might have tried to 'fake good' or 'fake bad' their responses, telling me what

they think I may have wanted. However, as this is an aspect of construct validity, it has limited impact on the effectiveness of the survey.

The format was an online survey, used by student teachers after their 4-week 'Beginning' placement. It was a tool to firstly capture self-reports of their use of the emotional knowledge categories on beginning placement and, secondly, how well they thought they understood each of those the categories. The self-reports were designed to discover more about the emotional knowledge framework in relation to student teachers and also to provide a baseline for the inquiry that followed. Evaluating their own understanding served the dual purpose of capturing the meaning (or lack of it) that the student teachers made of each emotional knowledge category and giving an indicator of how much validity they attached to their emotional knowledge self-reports.

Figure 2: Emotional Knowledge Self-report Survey

A placement briefing lecture for the full cohort included a short introduction to the research, flagging that every student could be a volunteer participant who would self-report their emotional knowledge at end of the placement.

Each of the emotional knowledge categories were graded 4 up to 1, 'not yet showing' the EK category' up to 'very good' use of the EK category. This grading was used because it was a familiar structure to the students from the beginning school placement that they had just completed; it was used on every placement to assess their teaching against each of the eight national teaching standards. Students varied in terms of how quickly they progressed meeting the standards. Nevertheless there was a typical key assessment point progression that the students understood;   'satisfactory (3)' at the end of beginning placement, 'good (2)' at the end of developing placement and 'very good (1)' at the end of extending placement.

Each response was accompanied with an indicator of how reliable they felt that grade to be – in whether the criterion was easy or difficult to understand and to assess. The form concluded with a request for students to volunteer as participants in the research during the forthcoming months. Eleven did so, completing an agreement, part of which included the steps I would take to ensure ethical practice.

The survey shows how well the students graded themselves for every category of emotional knowledge, on a four point scale of 4 (not yet possessing), 3 (satisfactory), 2 (good) and 1 (very good).

The results also provided student teacher perceptions of how valid they think their own assessments are. This was achieved through choices of whether they easily understand what the category means and can assess their own use of it, whether they understand but find it difficult to assess their own use of it or whether they simply do not understand it.

These two sets of data are compared to each other and to extracts from the narrative data for similarities and variations. The cited narrative data is annotated by letter-coding each student plus additional contextual information. The responses draw upon placement experiences across a range of primary schools although limited generalisations can be made from findings which sampled from one university campus and one teacher training route.

1st Week Reflection from student teacher (2b)

This was open-ended writing designed to generate a flowing narrative response. See Appendix 2 for an example. Completed after the first week of 'Developing' placement, it was emailed to me. Using drop-down menu choices, the student writing began with choice of one of four broad prompts e.g. 'feelings I want to share', ending with a choice of emotional knowledge categories that they judged to be most closely related to the teaching or learning issue raised in their writing.

Figure 3: 1st Week Reflection

The purpose of this data was to capture student reflections on their own feelings and those of others in the school setting. The prompt to write about a placement matter important to the student presented opportunity for deeper engagement.

A significant strength in this method is the open-ended encouragement of participants to choose the content of their written reflection in the knowledge that any sensitive, emotive revelations would remain confidential reflections. The requests to also share a context and

Figure 4: Weekly Reviews

STUDENT'S PLACEMENT WEEKLY REVIEW
Revised Sept 2012

This form is to be completed by the student prior to a weekly tutorial.
This review should refer to the descriptors in the 'Common Framework' Criteria- commenting on your progress on previous weeks targets:

Placement:	Beginning	Developing	Extending	Week: 1 2 3 4 5 6 7 8
Student:				
Associate Tutor:				
School / Setting				

Reflect on the following standards & consider your teaching experience & whether your folder contains appropriate evidence.

S1. Set High expectations which inspire, motivate and challenge pupils
S2. Promote good progress and outcomes by pupils

S3. Demonstrate good subject & curriculum knowledge
S4. Plan & teach well-structured lessons

S5. Adapt teaching to respond to the strengths and needs of all pupils
S6. Make accurate and productive use of assessment

S7. Manage behaviour effectively to ensure a good and safe learning environment
S8. Fulfil wider professional responsibilities

Proposed Targets- (To be confirmed / agreed in weekly tutorial)

Student Signature:		Date:
AT Signature:		

an emotional knowledge category that the writing most closely relates to was productive in making the interpretation of emotional knowledge easier when I analysed that data. A limitation is that the instrument did not invite participants to give reasons for their choice of emotional knowledge category.

Weekly reviews from student teacher (2c)

The weekly review is a form completed by all of our students on school placement at the end of each week. It prompts students to demonstrate how their teaching during the previous

week has been successful in terms of the eight national standards, concluding with new targets for the following week. The primary purpose is for student teachers to use the reviews to reflect and formatively self-report. These reviews were also accessible to the student teacher's mentors, with the possibility therefore that some students may be guarded in writing for the person who assesses the outcome of their placement. An example of a completed weekly review is included as Appendix 3.

While recognising the likelihood of student teachers demonstrating some retinence when writing the reviews, the purpose of collecting these reviews was to discover if students made tacit unconscious connections between emotional knowledge and the national teaching standards or indeed whether they noticed any such links. Using this familiar placement document avoided drawing attention to emotional knowledge, thereby reducing the possibility of participants focussing solely on emotional knowledge because they thought that was what I wanted to read, a strategy to avoid socially desirable bias (Gordon, 2015).

The naturally-occurring nature of the weekly review was a strong point because it drew upon participant reflections at regular intervals, writing which was part of the student teacher professional file and unlikely to include content contrived to include emotional knowledge. On the other hand, a limitation is that the weekly review proforma guided the student teachers towards only the teaching standards and only achievements, which while positive excludes the rich emotional experiences that we experience through failures and mistakes.

Student teacher reflection after lesson observation with emotional knowledge focus (2d)

This was written by the student teachers following the lesson in which their tutor observed their teaching specifically for categories of emotional knowledge. The task was explained to the student teachers as a written response to the partnership tutor's observation of emotional knowledge and the feedback that the tutor gave at the end of the lesson. This writing was likely to be less guarded and more open than the weekly reviews. Like the Initial

Week Reflection, this emailed writing was confidential to researcher and student. The data was collected to allow comparison between tutor and student teacher views of the observation experience.

The feedback on emotional knowledge given by the lesson observer to the student teachers was itself withdrawn. It was therefore not data used directly in this inquiry because I reconsidered the ethicality and validity of that data set. *The feedback* to the researcher from the student teachers whose emotional knowledge was, however, included in the data analysed.

Strengths of this method were that it enabled frank evaluations from participants, thereby empowering them to individually question the validity of those observations, and that, through analysing this data at an early stage, this reflective writing was a catalyst for improvements made to the subsequent phases of data collection and analysis. A weakness with this method was that it had limited ecological validity because it was not part of the normal written requirements of that placement.

Mentor Report (1): Developing placement comments and gradings (2e)

Comprising a mix of comments and gradings, this report showed the progress made by the student against the nationally-required standards for teaching on school placement. A set of descriptors (called the common framework) maps out these standards in terms of how they apply to students working towards Qualified Teacher Status (QTS), described in section 1.6.

A strength of the end-of-placement mentor reports on the student teachers was that, as naturally-occurring data rather than responses to researcher questions, they avoided the problem of researcher leading the mentors. The method thereby reduced the risk of the researcher influencing those parts of the reports that are related to emotional knowledge. On the other hand, a weakness was that this reduced the amount of data that was rich in connections to emotional knowledge.

Figure 5: End-of-placement report on student teacher by mentor

Focus Group: Research Workshop (2f)

A planned collaboration between researcher and the student teacher participants, this was a meeting of 7 student teachers. All 11 participants who provided narrative data were invited. This gave greater opportunity for the development of socially-constructed knowledge, giving these student participants some empowerment and significant ownership of the research, (Smithson, 2010) and provided access to participants' concerns (Breen, 2006). Back on university campus after 'Developing' placement, the students were invited to a focus group which gave them some information about the research so far, while maintaining anonymity. This enabled them to share views on the research and to propose ways of progressing the research from that point. To audio or video record the workshop would have jeopardised the students' openness and spontaneity. Therefore I made my own notes during and after the workshop, ensuring validity by comparing them to notes made independently by one of the students and then emailed to me.

The participant student teachers had an allocated partnership tutor to support them throughout their school placement. This support mainly comprised of telephone or email contacts with the mentor and student teacher. However it also included one visit to quality assure the school support for and assessment of the student teacher. placement that included a lesson observation. The tutors participating in the research adapted their planned lesson observation to centre on the emotional knowledge categories. Verbal and written feedback to students was also given, with the intention that it is submitted as narrative data for the research.

However, it became clear, through both student teacher feedback after observation of their teaching and the focus group, that there was a problem with these tutor observations of the emotional knowledge shown while teaching. Some student teachers had limited trust in these tutor perceptions of their emotional knowledge. They did not feel that those tutors knew them and their placement context well enough to make such sensitive judgements; they had more trust in the judgements of their placement mentors, who got to know them far better day-in, day-out for several weeks in the emotional setting of a school placement.

As a research method, the focus group is particularly effective as a way for participants to spark each other's thoughts, creating socially-constructed knowledge from their own priorities and perspectives. It also offers a more concentrated, time-efficient way to collect discussion data than individual interviews with the group members. Limitations are the possibilities of individuals dominating the research process within the group and of some participants being unable to attend the focus group meetings.

Mentor Feedback following lesson observation with emotional knowledge focus

At the focus group, the students requested a change to the research design. This was the additional involvement of their school-based mentor whilst each participant student was on their 8-week 'Extending' placement. I visited each mentor in school to brief them about the

research and they subsequently completed a lesson observation of the student, giving feedback and submitting the data with the online survey tool. The emotional knowledge criteria and gradings were the same as those used for the earlier self-reports and tutor feedback. With these observations taking place near the end of the placement, I believed – correctly as it transpired - that the mentors would not experience difficulty in this regard.

The framework of emotion knowledge categories (see Table 1, p64) were clustered into two quadrants including 'awareness' or 'management'. The awareness criteria are usually internalised, well suited to self-reporting. The management criteria show more easily as teacher behaviours, observable but sometimes unnoticed by the student themselves. This data was important because it solved the problem of recognising emotional knowledge by exploiting another assessment approach, feedback and grading of observed teaching. To better understand emotional knowledge in school placements, this and other data from feedback was collected to be analysed alongside data from self-reporting. The mentors sent a short narrative summarising the verbal feedback they gave the students on the emotional knowledge of their teaching.

Mentor Report (2): Extending placement comments and gradings (2h)

This is the same format as the developing placement report described above, although the placement was twice as long with a much heavier teaching load for the student teachers.

Semi-structured individual Interviews (2i and 2j)

Interviewing newly-qualified teachers (NQTs; formerly student teacher participants)

By returning to the participants after their first three months as a newly-qualified teacher, their views about the emotional knowledge of students would be informed by a period as a 'real' teacher and the benefit of retrospection afforded by that intervening time. The interviews were audiotaped and later transcribed. Had I attempted to write down everything the participants were saying during the interviews, I would have lost the important nuances

needed for a thematic analysis (Braun and Clarke, 2013). Taping and transcribing also ensured the smooth running of the interviews and establishing rapport with the participants. Management of the interviews was semi-structured to retain my focus on the research question while still keeping the flexibility to veer from the linearity of my questions where one of us saw another issue appear that seemed relevant to use of emotional knowledge on placement (see Table 4).

Interviewing the school-based mentors of the student teachers

Again these were individual semi-structured interviews, taped and transcribed for the same reasons. Some mentors who undertook the Extending placement assessment of the students drew upon substantial experience in the mentoring role while the less-experienced mentors had the counter-strength of recent memory of what being on a teacher education programme is like. Having been introduced to the concept of emotional knowledge, they had a different perspective from the students and the tutors. This data set gave another view of the emotional knowledge of teaching to further enhance the validity of any findings.

The first two questions were designed to be open-ended, warm-ups before moving on to more focused questions. These introductory questions had the additional benefit of having no element of being 'leading questions', enhancing the validity of any emergent views that related to the emotional knowledge research questions. If a participant gives an answer relating to a question I had not yet asked, because the answer was recorded I could avoid repeating the question later.

I was able to use probing questions to gather as much information as possible, keeping the conversation focused on emotional aspects of teaching, avoiding tangents. Given the time limitations, completing the list of interview questions was not always necessary. Instead, time was spend on key factors, including what the participant is interested in speaking about.

Table 4: Interview questions

Former Student Teachers (now NQTs)	Former School-Based Mentors
1. How are you doing in becoming a teacher? [*see what emerges in relation to the emotional knowledge research questions*] 2. What were the most valuable learning experiences you had on the PGCE course [*see what emerges in relation to the emotional knowledge research questions*] 3. How relevant (or irrelevant) is the idea of 'emotional knowledge' in your current classroom position? Why? 4. How useful (or not) was the 'emotional knowledge' inquiry during the course? Why? 5. Is there anything else you would like to share?	1. Tell me about the student teacher whom you mentored? [*see what emerges in relation to the emotional knowledge research questions*] 2. How did you feel about mentoring her/him? [*see what emerges in relation to the emotional knowledge research questions*] 3. What did you understand about the research? 4. How did you feel about observing her/his emotional knowledge? What about giving feedback? 5. Do you think this focus should be developed further? Why/why not? 6. Is there anything else you would like to share?

To avoid missing unexpected contributions, I finished by asking the participant if there is anything else they'd like to share.

I kept the questions as concise and specific as possible, avoiding two-in-one questions. The interviews lasted approximately 25 minutes. The questions were ordered to begin with simpler topics and move to those that are more complex, to start with the most concrete issues and move to the more abstract questions (about emotional knowledge – a new idea to then) and start with the least-sensitive questions and move to most sensitive (about emotional aspects of teaching).

The semi-structured interviewing method had several strengths. The design had sufficient adaptability to be well-suited for exploring a sensitive area such as emotional knowledge and allowed opportunities for probing questioning in response to answers. Conversely, because there is some structure, the researcher can ensure that everyone gets the same key questions and that all questions are answered. A weakness in this interview method was the

risk, because the interviews were face-to-face, that researcher bias could alter the participant response; as researcher, I could have given cues that showed my own views and prompted socially-desirable responses.

The timing of the data collection

When the data were collected will have been a factor leading to particular results.

The **survey** was conducted between the first and second placements. So the student teachers had some teaching experience with draw upon in applying the new idea of emotional knowledge. This timing added value to the survey. The **mentor reports** were collected at the end of the placements, the best time for them to make trustworthy judgements about the student teachers. The **written narratives** from the student teachers (1st reflection on developing placement, a weekly review and comments on the tutor observation of their emotional knowledge) were short pieces of writing completed at intervals across the five-week placement) and were therefore not too demanding. The **focus group** was planned to take place between the middle and final school placements, an opportunity to share their views and influence the remaining stages of data-collection. This indeed happened (see p107-108). The **interviews** were conducted when consideration of teaching and emotional knowledge by the (former) student teachers would be grounded in recent experience as a newly-qualified serving teachers. Also interviewing their (former) mentors at this time had the benefit of enriched data from those mentors who had considered the emotional knowledge framework in autumn term after the student teachers had moved on or become employed at the school; a downside was recollecting details of the student teacher placement when interviewed four or five months later. From a wider perspective, the December to November timing of the data collection ensured that participation was manageable for the participants or researcher.

To summarise the data collection methods, the timing of the data collection was planned to be manageable for the participants and there was a balance of data-collection instruments. Some methods used existing proformas and were chosen for their ecological validity - the student teachers' weekly reviews and two mentor reports. The rest were designed to overtly address emotional knowledge - the survey, a short reflection linked to emotional knowledge, student feedback on being observed teaching through an emotional knowledge filter and individual interviews. All provided data to answer the data-collection questions and learn more about emotional knowledge.

3.3.2 Thematic Analysis

 All of the narrative data was scrutinised through thematic analysis (TA), a method for detection, analysis and reporting themes in data (Boyzatis, 1998). A tool widely used in qualitative data analysis (Javadi and Zarea, 2016), TA has been commonly used for about four decades within other analytical traditions (Javadi and Zarea, 2016). Braun and Clarke 'named and claimed' it (2006: 8) as a method of analysis in its own right, a tool which can be applied to produce data-driven or theory-driven analyses, works with a wide range of questions and can be used to analyse different types of data (Braun and Clarke, 2013b).

A key to the analysis was the relationship between codes and themes. The code is the label given to a part of the data that contributes to a theme (Saldaña, 2015); the themes are the outcomes of the coding. In this study, there are two significant features in the way the coding is managed and the themes are reported.

Deductive theory-driven analysis and inductive data-driven analysis

A strength that TA offered for this study is the provision of a method that enables deductive theory-driven analysis (Hayes, 1977) and inductive data-driven analysis (Corbin and Strauss, 2014). Indeed, Braun and Clarke's evaluation of TA (2013: 180) emphasises the interpretative power of using it within an existing theoretical framework. TA is advocated as a clear,

uncomplicated way to organise and describe data (Mitchell et al., 2010; Braun and Clark, 2013). Nonetheless I am mindful that, like any method of analysis, TA requires appropriate questioning and good analysis practice (Javadi and Zarea, 2016).

Firstly, as mentioned above, there is both theoretical TA and inductive TA. Theoretical TA was used to empirically test the theory within the emotional knowledge framework that arose from the research literature. This entailed describing details based on that theory while inductive TA identified emergent features of emotional knowledge.

Semantic explicit themes and latent interpretative themes

Secondly, TA can be used to seek semantic explicit themes and latent interpretative themes (Morse, 1995; Speziale et al, 2011). This study employed both. The eighteen categories within the emotional knowledge framework (see Table 1, p64) were all used as explicit codes to label relevant pieces of data. This led to explicit themes and answers to one of the research questions: *How did student teachers make use of the emotional knowledge categories?* However latent themes were also sought through more detailed analysis of some extracted data. The idea of student teachers using emotional knowledge was new and seen from an interpretivist and constructivist viewpoint which Braun and Clarke (2013: 252) see as necessary to look for latent meanings through TA. This more constructivist and transforming analysis was adopted to answer another of the research questions: *To what extent was the emotional knowledge framework challenged by the emergence of additional or alternative features from the data*? I was after more than "what the participant has said or what is written in the text" (Javadi and Zarea, 2016: 36).

The analysis process was one of firstly sieving all the collected data for evidence of emotional knowledge and then recursively rereading that coded data, recoding to build new emergent themes that were relevant to the research questions. In this way, after collection, the data was analysed and synthesised.

This first step in this thematic analysis was to sieve data with direct or indirect links to any of 18 emotional knowledge categories. These 18 themes were then each integrated into one of 4 clusters of emotional knowledge. This was coding according to existing 'a priori' themes and it used the definition and levels for each category and cluster; for example, 'emotional self-awareness, p137.

Using only those pieces of data labelled for 'emotional knowledge' (and discarding the rest), the second step was the recursive process of re-analysed that data in a search for new themes.

Each subsequent set of data collected was analysed in this way. All the data coded as emotional knowledge was re-analysed for other themes - themes established when analysing any earlier sets of data and those that were still emerging. This constant comparison was a process of re-analysing data from each set if a significant new theme was identified.

I analysed the data in this way over the data-collection period of a year, refining the data as each new set was added (see Table 3, p97). I used Braun and Clarke's six phases of thematic analysis (2006: 202) in a recursive rather than linear manner.

Familiarisation with the data. I read each set of data, noting items of potential interest. This informed my decisions whether or not to adapt the data collection as I went along (Walton, 2000). At his stage I also listened again to the audio tapes, to pick up and note any nuances in tone, meanings that may not have been obvious within the transcriptions.

Generating initial codes with pre-determined themes. I begin with deductive theory-driven analysis, codes that labelled appropriate data within the 'a priori' categories of the emotional knowledge framework (see top of Figure 6). In this way, I sieved all of the raw data, labelling any pieces with direct or indirect links to any of the 18 individual categories of

Figure 6: Thematic analysis: generating initial codes and searching for themes.

Name	Gro...
A Priori - EK Relationship Management	216
A Priori - EK Self Awareness	216
A Priori - EK Social Awareness	208
A Priori - EK Self Management	197
A Priori - Pedagogic Knowledge~	123
Behaviour management	109
A Priori - Subject knowledge	91
Validity of observation feedback on EK	58
Respect	54
Engagement of trainee feelings/emotions	49
Value of EK when learning to teach	35
Signposts for EK research development	28
Trust	21
Behaviour metaphors~	18

When is understanding of EK most useful?	15
Mentors as EK models and assesors	14
School variables	12
Mutual respect	11
Feelings metaphors	8
Initial placement feelings	8
Surprises awaiting NQTs	7
Can teacher EK be inproved?	7
Teacher identity	6
Power	5
Importance of feedback	4
EK - all aspects	3
Trainee peers	3
Emotional labour	2
Self respect	1

emotional knowledge. Each of these pieces of data were then automatically labelled within one of the 4 clusters of emotional knowledge.

The semantic coded of data in these theory-driven themes was to be the richest source of data to answer research question 2 - *How did student teachers make use of the emotional knowledge categories*? Indeed all of the coding and themes were to be dependent on which of the four research question was being addressed (Saldaña, 2015).

As well as coding for these pre-determined themes, I analysed inductively, making data-driven notes about possible emergent themes. The qualitative software tool used for managing the coding summarised every piece of selected data in the same way.

The example below shows the labelling of a piece of raw data that was coded as an experience that linked to self-confidence (a particular emotional knowledge category).

AmLR1.docx - [Behaviour issues arose from in..]   This first line is an anonymised record of the student teacher (A) , gender (m), type of data collection instrument (LR- lesson reflection) and first words of the raw data (Behaviour issues ….).

Codes: [a priori - EK Self-Awareness] [A Priori - EK Self-Management] [Behaviour management]. The second line shows the codes which are attached to the piece of data. This piece of data is coded under two clusters of emotional knowledge (EK) in bold text on the second line. It was also coded under the emergent theme of 'behaviour management'.

A priori - EK Self-Awareness Report: 216 quotation(s) for 1 code. The third line records that 216 pieces of data were coded under 'EK Self-Awareness'.

Every coded piece of raw data was labelled in this manner, providing information to contextualise every quotation reported in the thesis. In this way, I planned for the integration of data generated from different methods to answer the research questions. In doing so, I was still able to take account of the context of any piece of data used, including its source.

Generating codes while searching for new themes. The themes were ordered according to the number of data pieces coded within each. Each piece of data that was coded as emotional knowledge was re-analysed, this time for additional emergent features that may have a link to use of emotional knowledge. Another way of putting this is that I was searching for data that might contribute to answering any of the four data collection questions about emotional knowledge.

Beginning with a long list of codes, similar codes were later brought together- such as Trust and Respect. Indeed some of the potential themes on the right, like Mutual respect, were also to be subsumed into larger themes. This iterative analysis process was undertaken with a constant comparative technique which involved repeatedly rereading the same raw data to check against the new themes that were emerging, repeatedly comparing, contrasting and recoding them. Through this iterative process, data saturation interacted with this constant comparison (Tuckett, 2004: 47) until no new information was forthcoming (Higginbottom et al., 2001). The outcomes of this process are shown later in the Results Chapter.

Reviewing themes. I refined and reviewed themes in a cyclical process until I had a good idea of what differentiated or joined the themes, how they matched and what story they tell of the data (Braun and Clarke, 2006). Nevertheless, when I looked at the coded data grouped under theme headings, some appeared more important in answering the research questions than others – some because there were more pieces of data within the theme, others because individual pieces of data seemed more powerful than others. Vaismoradi (2016) tackles this issue, arguing that in thematic analysis, the importance of a theme is not necessarily dependent on quantifiable measures, but rather on whether it captures something important in relation to the overall research question (Spencer et al., 2003; Braun & Clarke, 2006). The latter perspective is different from the idea that it is possible to reach a theme based on the frequency of its occurrence in the text, an approach that is objective, systematic, and concerned with the surface meaning of the document rather than hidden agenda (Bloor & Wood, 2006). I recognised that the importance of data could be associated with quality and/or quantity.

This choice of methods was a solid foundation on which to integrate data from those sources. This was ensured by using the same criteria for selecting data from each of those sources – the same emotional knowledge categories, same research questions to be answered and the same emergent themes arising from early analysis. This integration was

further strengthened by applying the same iterative process of coding and refining to data from all the narrative sources.

Defining and naming themes. I defined and refined the significant themes, of behaviour management (p177) and trust and respect (p182. I briefly summarising the scope and contents within those themes which was challenging because, in thematic analysis, themes are usually quite abstract, and therefore difficult to define and name (DeSantis and Ugarriza, 2000; Spencer et al., 2003).

Producing a report. Writing up was integral to the analysis. I used directly-quoted data extracts, contextualised in relation to the themes, research questions and literature extracts from the participants in the Results Chapter. Essentially I chose quotations to include in the report because they were illustrative of those themes and were part of my responses to the

Figure 7: Examples of Emotional Knowledge category levels (from level 4 up to level 1)
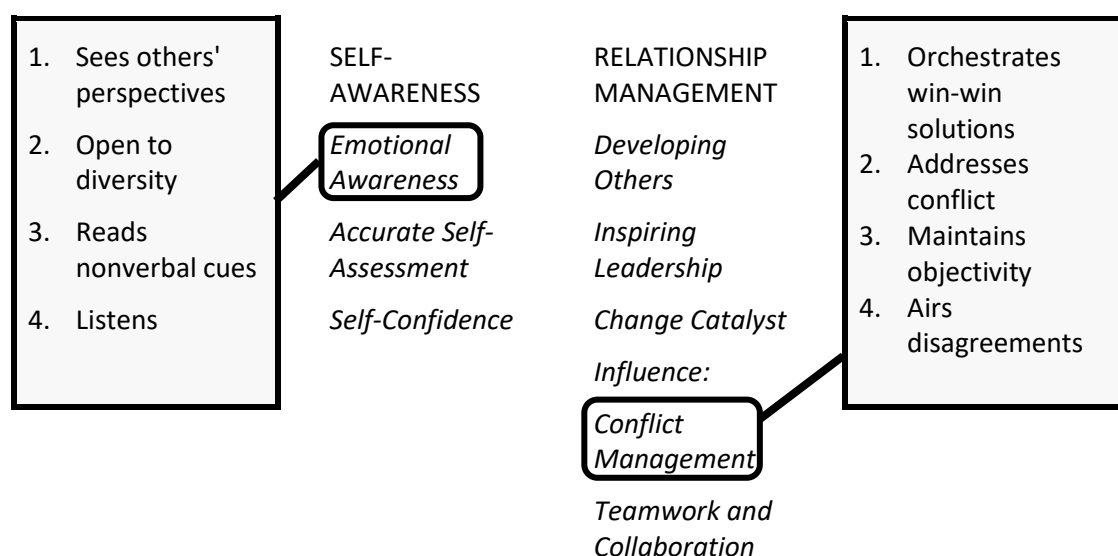
questions. However, those choices were also aided by my knowledge of student teachers, school placements, primary classrooms and mentoring interpretations of the data. That practitioner experience underpinned my analysis and write-up. A set of emotional knowledge level descriptors served as an additional aid to the semantic analysis (see

Appendix 7). This process was make easier because each category of the framework was subdivided into hierarchical descriptors; see Figure 7 for the example of 'emotional awareness' and 'conflict management'. Achievement in each of the eighteen categories within the emotional knowledge framework was described at four levels. These

descriptors were a legacy of the emotional competence inventory (Hay McBer, 2005), from which the structure of the emotional knowledge framework was derived. The guidance afforded by these descriptors made it easier to answer Question 2 by spotting how student teachers made use of the emotional knowledge categories. The research questions sought to identify an emotional aspect of teaching that would be of use to student teachers. The aforementioned level scales were to be used to enhance the detail within the analysis (see Chapter 4: Results).

For two reasons I chose to share the framework with the participants only at the emotional knowledge category level, not with the categories broken down into these level descriptors

Too much additional information would have overloaded the student teachers on busy school placements. Emotional knowledge levelling at each of 18 categories would have placed the student teachers and mentors under undue assessment pressure at a time when they were already being at levels assessed against Teaching Standards (also see ethical issues, section 3.4)

The copyright for the ECI (Hay McBer, 2005), from which the framework structure originated, does not allow unaccredited practitioners. Anyone who has not bought the appropriate license cannot use the ECI framework for testing subjects and giving feedback of test results.

This structure and management of this thematic analysis was also aided by use of a computer-assisted qualitative data analysis tool, the ATLAS.ti software. In a teacher education study using the semi-structured interviews, Larenas and colleagues reported the value of using ATLAS.ti to manage such segmentation, codification and relationship

explorations of the data (Larenas et al, 2012). I similarly valued the software, a good investment of training time.

So thematic analysis was used because it was flexible enough to be a good match to the research questions and the available data, while emotional knowledge category levels and qualitative analysis computer helped the analysis.

3.4 Ethical issues: codes, principles and practice

By 'ethics', I am referring to the comprehensive definition of "theories, codes and practices concerned with ensuring we do research in a moral and non-harmful way" (Braun and Clarke, 2013: 330). This section sets out to contextualise and unpick important ethical issues in this study.

Ethical practice is covered by general codes produced by professional associations and the specific requirements of ethics committees within the researcher's institutions. It is unfortunate that these steps can be seen as simply a hoop to jump though (Fox et al., 2007) with ethics approval being a pass/fail, not a dialogue (Boddy, 2008). Ethical considerations should be an integral part of the research process. Indeed, this makes sense from a pragmatic as well as a principled point of view. Sound ethical considerations can contribute to strengthening the quality of research, and vice versa. (Tangen, 2014). Although I am writing about ethics predominantly in this one section of the thesis, that could be misleading. Dealing with ethics is not a specific stage of the research. Compliance with my institution's ethical code can be seen as an event; my management of ethical issues in a manner consistent with the values and principles that I hold has been an ongoing part of the research journey. Ethics is, as Baarts puts it, " embedded in the totality of scholarly practice"(2009, 423).

Table 5: Management of ethical issues

	Ethical Issue	Frequency	Consequences	Response
a)	Cognitive overload caused by data collection	Potentially all participants - student teachers and mentors	Negative impact on teaching/mentoring performance, student teacher dropping out of placement or research (or both)	Use of naturally occurring data so that collection is not onerous; timings and use of documents required on all placements. Also increased ecological validity
b)	Abuse of researcher power	Rare or non-existent	Potentially harmful to participant Damage to research authenticity	Honour consent form assurances Design includes focus group, empowering student teachers to make changes to methods
c)	Coercion of student teachers to participate	Possibly several participants at early stage	Could be emotionally harmful or beneficial to student Could damage the data and findings	No inducements offered. Clear researcher expectations on consent form.
d)	Student teacher participation harming their teaching/ wellbeing	Difficult to predict; student teacher may not disclose concerns	Unwanted additional pressure on student experience of placement	Look for signs of distress in school and in data submitted Communication processes for briefing and alerting key professionals
e)	Researcher bias	Likely in a qualitative and interpretivist approach	hypotheses closing mind to emergent findings Biased data collection/analysis damaging research authenticity	Interpret meaning from direct quotations Triangulate data

Braun and Clarke talk of the British Psychological Society having a set of aspirational

principles: Respect, Competence, Responsibility and Integrity, describing them as 'ideals that

inform ethics' (Braun and Clarke, 2013: 62). Writing in the British Education Research

Association (BERA), Hammersley suggests that the five most commonly-recognised ethical

principles are: Minimising harm, Respecting autonomy, Protecting privacy, Offering

reciprocity and Treating people equitably (Hammersley, 2012). Clearly such principals

transcend different field of inquiry.

 Nonetheless, Hammersley and Traianou, recognising that ethical principles are subject to

varying interpretations. They cite an example where a participant may be distressed because

of the way they are portrayed in a research report. "Does this constitute harm? And, if it

does, is it a sort or level of harm that researchers should seek to avoid at all costs? The

second of these questions indicates that harm is a matter of degree (Hammersley and

Traianou, 2012) . Presented with such a situation when a student teacher challenged the

feedback received from a tutor who had observed a taught lesson, looking for demonstration

of that student teacher's emotional knowledge. I recognised it as a sensitive issue and one

which had upset the student teacher. While I did not judge the harm to be great – probably

some temporary loss of teaching confidence – I nonetheless withdrew all of the student

teacher feedback on observed lessons from the data corpus, more because I saw a significant

risk of student teacher trust in myself as the researcher being eroded. Essentially I made a

decision that took into account of any present harm to the wellbeing of that student teacher

and potential harm to any or all of the participants. Although other researchers may have

interpreted the situation differently and responded differently, there is, naturally, broad

agreement that 'non-harming of participants' is a valid ethical principle of research, a general

'motherhood and apple pie' approval afforded by all researchers (Denzin and Giardina,

2007).

Researchers should, wherever possible, demonstrate ethical principles in a holistic manner, rather than individually ticking them off. An example is Hammersley's principles of Respecting Anonymity and Protecting Privacy (Hammersley, 2012), also embodied in the educational research ethical guidelines (BERA, 2011: 7). Mindful of my wish to both respect and protect the participants, each piece of their data was also coded to retain their anonymity (see Table 3: Data Collection Methods) and all data kept has been digitalised and stored safely within a secure password-protected university account.

At the outset of this study, the university's regulatory body gave ethical clearance for the project and I identified five issues of particular ethical significance to this study (summarized in Table 5). The management of each of them required some forward-planning.

a) If I placed too many additional tasks upon the student teachers and mentors, there would have been a significant risk of **cognitive overload caused by data collection**.

    Therefore the survey and focus group participation took place away from the geographical and time pressures of school placement. The student weekly reviews and mentor reports were already naturally-occurring requirements of the placement and therefore no extra work (see section 3.3.1). These data-collection instruments had the added benefit of contributing to the ecological validity of the findings because they were real placement materials, crucial to a thematic approach which interprets experiences as realistically as possible.

b) A subjective statement that deliberate **abuse of researcher power** was unlikely to occur in this research is not enough. I understand the necessity for checks through the sort of ethical codes that began with the Nuremburg Code to prevent repetition of the horrific medical experiments that occurred in Nazi Germany (Mandal et al, 2011). Notwithstanding this requirement, I wanted to go further by preventing *unintentional* abuse of my researcher power. The inclusion of a student teacher focus group that could

challenge my research methods proved helpful in this regard. After the Beginning

Placement phase of the research, a focus group - rather than a group interview - was

held on campus in a process that enabled them to directly associate or dissociate with

each other, to extend or elaborate on each other's comments and engage in sustained

dialogue with each other instead of the researcher (Hartas, 2010: 233); my role was

facilitator rather than leader. This empowered the student teachers with a voice and

resulted in the withdrawal of one set of data and a change in data collection methods for

the next phase.   The student teachers placed greater trust placed in school-based

teachers who interact with the them all-day, every-day in a placement classroom than in

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Figure 8: Participant Consent: PhD thesis research with University of Cumbria

The title is: How do beginning teachers engage with the emotional knowledge of teaching?

Data collected includes 5 weekly reviews, one EK lesson observation record, 2 reflective blog entries and one interview in autumn (see email for more detail)

The following ethical practice will be observed:

a) As a participant, any reference to you in the thesis or any published materials will be by pseudonym to retain your anonymity.

b) I will keep all data collected on password-protected university computers, destroying it within 5 years of research completion. Any hard copy data will be scanned, then shredded.

c) Planned access to your data will be as follows :

- Weekly reviews – myself, your AT (school-based mentor) and your partnership tutor
- EK lesson observation assessment - your partnership tutor and myself
- Reflective blogs logs – myself
- Interviews- myself

  You will be informed if of any changes to the above data collection

d) You will, on request, be given published materials and/or a final copy of the thesis.

e) You may withdraw from participation at any point

To confirm your consent, reply to the covering email from your university email account.

Regards

Eamonn

university-based teachers who are with them mainly on a university campus. The role of lesson observer looking for the emotional knowledge within their teaching was given to the student teacher's mentor instead of a visiting university tutor. In addition, the tutor feedback already given was withdrawn as a data set in recognition that the student teachers questioned the validity of their observations. This was a substantial change that occurred only because of a flexible approach and the design of an iterative cycle of data collection and analysis. This served to both redistribute some power from the researcher to the participants and to withhold lesson observation data that the participants believed to be highly questionable.

c) Preventing **coercion of prospective participants** is essentially about ensuring that any participation is voluntary (William, 2005). This was ensured by verbal and written introductions to the research. These outlined the theoretical framework being tested, made expectations clear from the start (see Figure 8, Participant Consent) and are non-persuasive; not, for example, promising enhanced university reference for participants. All student teachers joined the research because they wanted to. A written agreement within the participant consent form prevented any abuse of my power, intentional or unintentional. It informed participants of the nature of the research and their rights to withdraw, to confidentiality and to publication access. As qualitative research is quite open-ended and iterative, the researcher has to be flexible in how the data will actually be collected and analysed (Weatherall, 2002: 534); this understanding was built into the consent form (Figure 8). The research encouraged student teachers to analyse their own emotional knowledge (as well as that of others) before or while they share this analysis with myself. This deepening awareness in such a sensitive area of teaching represented a significant risk of participant vulnerability.

c) Systematic monitoring of students' wellbeing would have identified a **participant who is being harmed by participation** in the research. An 'at-risk' student teacher could feel

coerced or compelled to continue participating, despite it exerting extra pressure that is harming themselves and their placement prospects. A vigilant support network is normal working practice for partnership tutors, personal tutors, mentors and headteachers. The university-based and school-based partners on this teacher education programme need a heightened awareness of their responsibilities for supporting student teachers (Fox and Wilson, 2015). Explicit mentor and tutor training has a positive impact in terms of supportive cultures for relationship-building (Peters & Pearce, 2011) and timely support when the student teacher wellbeing and/or teaching progress causes concern. This is part of the university/school formal and informal systems, with mentors and tutors alerting each other at the earlier opportunity in such circumstances. This was indeed the case with one student participant. The support network kicked in with dialogue between these professionals and with the student teacher, making the circumstances as near to an unrehearsed situation as possible. This assured that data was not being gathered under any duress and the student teacher chose to continue to participate in the research. These were steps in which the participant was not "made to *feel* coerced" (Sture, 2010:3); nor did I, as researcher, "*use* coercion or duress of any form" (BERA, 2011:6).

Secondly in that situation I recognised that I was influencing the data I collect; while being a researcher collecting and using the data generated, it is my job to simultaneously assess the student teacher (including emotional aspects of their teaching) and moderate the mentor judgement of the student teacher's progress. To minimise this bias, the data collection tools have been chosen to enable cross-referencing. This has been between methods such as survey statistics and 'within-method' triangulations (Denzin, 1978: 301). This checked my potential bias, ensuring that I did not compromise the truthfulness of the research.

d) The pitfall of **researcher bias** was a real hazard. My commitment to interpretative research gave me the responsibility to analyse the data with a truthful interpretation of how the participants saw the student teacher use of emotional knowledge.

I had the dual role of researcher and designated school partnership tutor for some of the participants. My practice was therefore particularly sensitised to the interactions between the student teachers' emotional knowledge and their workplace environment. However I was reassured by the understanding that qualitative researcher *are* partial and subjective (Kvale, 1996: 21). I was also guided by the advice that, if my analysis is plausible, coherent and grounded in the data, I can tell a compelling truth about my data and don't need to be claiming to tell the only or absolute truth (Braun and Clarke, 2013: 21-22). Consequently, through methods such as direct quotes which stick to the data, this qualitative and interpretative approach is a strength rather than a weakness by reducing the risk of researcher bias.

3.5 An Overview of the Research Methodology

Data collection began with a survey designed as part of an introduction to 'emotional knowledge', a follow-up to a lecture theatre presentation outlining the framework to a cohort of 119 student teachers. Hereafter, the qualitative and interpretative approach was evident in an iterative data collection and analysis process, written and interview narratives from much smaller numbers of participants being thematically analysed as they became available. A mix of naturally-occurring and researcher-provoked data ensured a balance of school placement reality and a focus on emotional knowledge.

Multiple measure research methods are recommended (Fried, Mansfield and Dobozy, 2015). This was particularly so in this inquiry because the students had just been introduced to 'emotional knowledge' and asked to retrospectively grade themselves based on their

completed beginning placement. Triangulation of findings from these different methods gives this inquiry a high level of dependability.

The methods complemented each other in two ways. Firstly, having student teachers and their mentors as participants provided a mix of self-report and feedback on emotional knowledge. Self-report was the most direct way into students' emotional state; after all, only they really knew what they felt. Reports by other people of students' emotional state were less direct with observers needing to interpret students' behaviour or written accounts. Nevertheless, self-report is not easy to verify. As with any emotional self-reporting by teachers, self-reports have more credibility when supported by external judgement (Sutton and Wheatley, 2003).

Secondly, data was collected through both naturally-occurring and researcher-provoked methods. The former ensured that the data was collected from real-life experiences, accessing what the participants were routinely doing on placement (Silverman, 2010; 131) while the latter added a focus that came from researchers' questions that were more explicitly about emotional knowledge.

I conclude this chapter by reiterating that the study sought to uncover the essence of student teacher use of emotional knowledge. It was approached with a social constructivist approach, an interpretive and mainly qualitative methodology with data-collection methods chosen as a best-fit for the research questions. The data was thematically analysed employing both theoretical and inductive thematic analysis, looking for explicit and interpretative themes, using computer-aided qualitative software. While ethical concerns and decisions were dealt with throughout the study, they have been addressed more overtly in this chapter.

Chapter 4: Results

To recap from the Methodology chapter, the results drew on evidence from these sources:

1. Numerical data from a student teacher online survey (section 4.1)

2. Narrative data from student teachers and mentors, through documents, a research workshop and from interviews (section 4.2).

The results in this chapter reflect the process of exploring the above theoretical framework. They are responses to the first two data collection questions that were set out at the end of the literature review (Chapter 2)

The aim of the research was to test the usefulness (or otherwise) of the following framework within teacher education.

Table 6: The emotional knowledge (EK) of teaching (also see Table 1, p64)

	Awareness	Management
Personal	**Self-Awareness (EK1)** - knowing one's internal states, preferences, resources, and intuitions a) Emotional Awareness b) Accurate Self-Assessment c) Self-Confidence	**Self-Management (EK2)** - managing one's internal states, preferences, resources, and intuitions a) Emotional Self-Control b) Transparency c) Adaptability d) Achievement drive e) Initiative f) Optimism
Social	**Social Awareness (EK3)** - anticipating, recognizing, and meeting customers' needs. a) Empathy b) Organizational Awareness c) Service Orientation	**Relationship Management (EK4)** - knowing how to handle relationships and awareness of others' feelings, needs, and concerns. a) Inspirational Leadership b) Change Catalyst: c) Influence: d) Conflict Management: e) Teamwork and Collaboration:

4.1 How well did the student teachers believe that they understood emotional knowledge? Results from the survey.

The emotional knowledge framework was introduced to the full cohort of about 120 student teachers. All were invited to complete an online survey using the framework; 70% chose to participate. This took place between beginning and developing school placements. The survey collected numerical data in two parts:

- an indicator of how well the student teachers thought they understood each category of emotional knowledge (see Table 8, p134).

- a student teacher self-report showing their perceived level of performance in each category of emotional knowledge on beginning placement (see Table 7, p132)

The main findings from this numerical data were as follows:

1. Student teachers self-reporting their use of their emotional knowledge:

   - Averaged across all categories students rated themselves at the midpoint of the scale – between satisfactory and good (Table 7)

2. Student teacher understanding of emotional knowledge:

   - Two thirds of the student teachers believed they understood the categories and could easily self-report themselves. A quarter believed that, while they understood the categories, assessing their own use of it was difficult. A minority of under one tenth did not understand what categories meant and therefore could not self-report their use of those categories of emotional knowledge. (Table 8)

   - Student teachers reported themselves as having greatest understanding of their own use of 'transparency', and 'initiative'. The least secure understandings were of their use of 'whole school awareness' and 'developing others'. (Table 8)

4.1.1 Student teacher self-reporting their emotional knowledge

Table 7 summarises results from the second part of the survey. The lower the score, the better was the perceived performance. The student teachers' mean gradings across all categories of emotional knowledge was 2.5, midway between 'satisfactory' and 'good'. The highest self-reports were for the category of 'transparency' (within the self-management cluster)

Table 7: Student teachers' <u>self-reported</u> use of Emotional Knowledge

Self-reported grades:
1. 'very good' use of that category of emotional knowledge
2. 'good' use of that category of emotional knowledge
3. 'satisfactory' use of that category of emotional knowledge
4. 'not yet using' that category of emotional knowledge

Clusters of emotional knowledge	Self-awareness			Self-management						Social awareness			Relationship management						
	Emotional self-awareness	Self-assessment	Self-confident	Self-control	Transparency	Adaptability	Achievement drive	Use of initiative	Optimistic	Empathetic	Service orientation	Organisational awareness	Developing others	Inspirational leadership	Change catalyst	Influence on others	Conflict management	Teamwork and	Mean of EK gradings
EK category mean	2.3	2.6	2.8	2.4	**1.7**	2.1	2.5	2.3	2.1	2.2	2.1	2.7	2.7	2.8	2.8	2.5	2.8	2.7	**2.5**
EK cluster mean	2.6			2.2						2.3			2.7						

The cluster mean scorings (2.6, 2.2, 2.3 and 2.7) show that these average grades for clusters of self-management (2.2) and social awareness (2.3) were better than those for self-awareness (2.6) and relationship management (2.7). **No simple pattern emerged of student teachers rating themselves better at either self or social aspects of emotional knowledge. Similarly, this self-reporting showed no such pattern regarding their emotional knowledge in awareness or management categories.**

Transparency was the emotional knowledge category with the highest self-report gradings. The mean grade (1.7) was between 'good' and 'very good' - high ratings considering that the student teachers were at an early stage in their teacher education.

The student teachers generally scored themselves strongly in terms of being adaptable (2.1), being optimistic (2.1) and having a service orientation (2.1). The mean gradings were much nearer 'good' than 'very good', suggesting they believed that they were able to adapt to situations, showed resilience and took personal responsibility for children's needs.

Similarly, the self-reports for having empathy (2.2), showing initiative (2.3) and having emotional self-awareness (2.3) were also 'good', indicating a self-belief that they were open to appreciation of diversity, 'went the extra mile' and understood the implications of their own emotions.

The student teachers scored themselves with mean grades broadly midway between 'satisfactory' than 'good' for achievement drive (2.5), having influence on others (2.5) and accurate self-assessment (2.6).

The rest of the mean gradings, nearer 'satisfactory' than 'good', were organisational awareness (2.7), developing others (2.7), creating teamwork and collaboration (2.7), showing inspirational leadership (2.8). self-control (2.8), conflict management (2.8), self-confidence (2.8) and being a change catalyst (2.8).

The purpose of the survey was to introduce the emotional knowledge framework to the student teachers, rather than to generate data for analysis. Nonetheless, it was noted that the highest self-reports digressed from the narrative data findings which showed no evidence of the highest level of emotional knowledge being shown for those categories of emotional knowledge. See p151 for Adaptability, p158 for Optimism and p165 for Service Orientation.

So, how well did student teachers initially understand the emotional knowledge categories?

ın short, the student teachers believed that they had high levels of understanding of emotional knowledge as it was presented to them within the framework. Approximately two thirds of them were able to understand the categories well enough to self-report in terms of one of four levels. With an mean rating of 2.3 - nearer 'good' than 'satisfactory' - they also graded their own emotional knowledge highly.

4.1.2 Students teachers' perceived understanding of Emotional Knowledge

Means were calculated across all of the emotional knowledge categories and across all of the respondents. At this most general level, 64% of the student teachers *believed* that they understood the categories and could easily self-report themselves. 27% believed that, while they understood the categories, assessing their own use of it was difficult. 8% did not understand what categories meant and therefore could not self-report their use of those categories of emotional knowledge (see Table 8).

Table 8: Students teachers' <u>perceived</u> understanding of Emotional Knowledge

Level of understanding:

1) Easily understood category, easy to self-report
2) Easily understood category; difficult to self-report
3) Difficult to understand category; difficult to self-report

Clusters of emotional knowledge	Self-awareness			Self-management						Social awareness			Relationship management						
	Emotional self-awareness	Accurate Self-assessment	Self-confident	Self-control	Transparent values/actions	Adaptability	Achievement drive	Use of initiative	Optimistic	Empathetic	Service orientation	Organisational awareness	Developing others	Inspirational leadership	Change catalyst	Influence on others	Conflict management	Teamwork and collaboration	**Mean - all categories**
%: 1. Easily understood, easy to self-report	79	54	68	68	86	77	55	83	76	81	80	54	44	49	44	48	56	52	**64**
%: 2. Easily understood; difficult to self-report	18	42	30	24	10	20	32	12	20	17	18	26	35	43	33	44	36	30	**27**
%: 3. Difficult to understand; difficult to self-report	4	5	2	8	5	2	13	5	4	2	2	20	21	8	23	8	8	18	**8**

The student teachers seemed to show greater understanding of 'transparency', and 'initiative' than any of the other categories. The most limited understandings were of 'organisational awareness' and 'developing others'. So two thirds of the student teachers understood the categories and felt that it was easy to complete the self-report, a quarter of them claimed to understand the categories but found the self-reporting difficult and less than a tenth struggled to understand or self-report.

Over four fifths of the student teachers professed that they found it easy to understand and easy to self-assess their **transparency, initiative**, **empathy** and **service orientation**. At the lower end of the spectrum, fewer than half of the student teachers felt it was easy to self-report their **inspirational leadership**, their **influence** on others**,** their **development of others** and being a **change catalyst**, while one fifth did not even understand these last two categories.

The results of **accurate self-assessment** can be viewed at a meta-level, that of how well the students think they know the accuracy of their self-assessment. Almost half of the students felt they struggled to self-report this. On one hand, it draws into doubt the accuracy of their self-assessment against all of the other emotional knowledge categories. On the other hand, paradoxically, that admission of needing help is itself an awareness of strengths and limits - an initial sign of accurate self-assessment.

The most significant finding from this aspect of the survey is that student self-reporting alone was not a trustworthy way to gather data on the use of emotional knowledge by student teachers. It justifies my collection of data about student teachers' emotional knowledge not just self-reported from the student teachers but also from in the form of feedback from other sources.

In the next section, the bigger picture of these survey results will be broken down into results for each of the eighteen categories of emotional knowledge. Presented alongside the narrative results from the written and oral submissions of the participant student teachers and their mentors, this enables comparison and triangulation of the numerical and narrative data.

4.2 Did student teachers make visible use of the emotional knowledge categories?

These results draw on the narrative data, using theoretical TA of the emotional knowledge framework. The themes are the clusters of categories and the sub-themes are the individual categories of the framework. The themes and sub-themes are named and each are defined.

Each category is grouped within a cluster. Secondly, each category is introduced with a brief description, sharing the definitions used for each of them, a key feature of thematic analysis. Thirdly, each emotional knowledge category can be exhibited at one of four levels. Any particular category is representing by four levels of behaviour. So there are 72 behaviours (18 emotional knowledge categories times 4). For each category of emotional knowledge, the four behaviours are listed in a hierarchy of increasing difficultly and complexity - 4 (the lowest) to 1 (the highest). This helps me to identify evidence of each category of emotional knowledge, although the participants did not have access to those level descriptors (see p119). These behaviours are derived from a sample test demonstration of the Hay Group Emotional Competence Inventory (Hay Mc Ber, 2004). Fourthly, the survey results for individual categories of emotional knowledge are presented together with the written reflections and interviews.

4.2.1 Emotional Knowledge: Self-awareness cluster (EK1)

Self-awareness concerns teachers knowing their internal states, preferences, resources, and intuitions. This cluster comprises three categories.

EK1a: Emotional Self-Awareness

Emotional self-awareness relates to a student teacher knowing his or her emotions, recognising those emotions when they occur and also the effects of those emotions on themselves and others, typically children in their class. Signs of emotional self-awareness are when the student teacher:

4. Is aware of own emotions

3. Is aware of triggers

2. Understands implications of his/her emotions

1. Has emotional insight

Emotional self-awareness was identified on two levels. There was limited evidence of the student teachers recognised triggers for their own emotions although some of them demonstrated an understood of the impact of those emotions upon others, particularly the children they were teaching.

One participant was exceptional in demonstrating an emotional insight. She articulated an understanding of emotional knowledge as a bank to hold previous experiences.

> So being more emotionally aware and being able to say 'this is how you could feel'; 'this is how you've dealt with it previously' [Female former student teacher, now NQT, interviewed]

The implicit meaning was that knowledge of how she had felt and responded before had helped her to show emotional self-awareness on subsequent occasions.

Many of the student teachers understood the implications of their emotions for the children in their class:

> I have been enthusiastic when teaching this week and this has helped to inspire and motivate the children [Female student; developing placement, Week 3 review]

This student teacher went on two weeks later to describe the effect of her emotions in more detail:

> I was enthusiastic throughout, which I feel helped to motivate the children. Running an activity which lasted for two days and included a lot of pupil choice and pupil lead was what I felt a big risk to take but it clearly worked and the children enjoyed it and learnt from it. [Female student; developing placement Week 5 review]

The greater detail in the second entry suggests some sort of achievement in her emotional self-awareness.

The school-based mentors were also able to notice when their student teachers were using this higher level of emotional self-awareness, as in this example:

> She knows that a teacher's emotions can have a big effect on the nature of a class and the atmosphere and learning that takes place within it [Mentor of female student F, after conducting the EK lesson observation]

Enthusiasm was an oft-cited emotion, highly valued by students and mentors. The student reflection above was typical in this respect. Indeed, a 'struggling' student, reflecting on the lesson observed by his tutor, wrote of it in aspirational terms:

> I would always visualize the way I should act while teaching a lesson and the reality would often be different to what I had imagined. It was a real turning point in my development as a teacher and in my own emotional maturity about how I approached and delivered my lessons. I am pleased I challenged myself. [Male, reflecting on observed EK lesson, developing placement]

One student teacher later visualised her emotional self-awareness as knowledge that she would draw upon as she moved from being a student teacher to a newly-qualified teacher:

> I think going into it, having this emotional awareness or having this emotional knowledge, it might help me manage all the different parts like my self-awareness, etc., etc. so that kind of decreases in new situations. I don't think emotional knowledge is a constant thing. I think,

especially when you're going away to have a baby you lose a lot of your confidence and when you're out of the classroom situation so I think being aware of all of this stuff, you know, personally and socially, I think that will help me so it will be relevant because I can kind of remind myself of how I did feel and how I overcame certain obstacles that present themselves to me [female NQT, interviewed]

This former student teacher was heavily-pregnant with three months of supply teaching work at several schools behind her. Her understanding seemed to be that emotional knowledge needs to be rebuilt each time there is a change of school settings, challenging any belief that emotional knowledge can only be gained but not lost. She visualised emotional knowledge as developmental but also, when the teacher is not settled in one school setting, emotional knowledge can be transient.

To summarise, most student teachers talked and wrote of the emotions they experienced themselves (level 4) without showing recognition of the triggers that prompt those emotions (level 3). Some student teachers understood the impact of their displays of emotion on their pupils (level 2). One participant showed the emotional insight (level 1) by recognising the need to draw on memory of previous experiences to be emotionally-aware, a finding that was not typical of the survey results.

EK1b: Accurate Self-Assessment

Accurate self-assessment involves a student teacher using knowledge of his or her emotions to help realise their own strengths and limitations. Signs of accurate self-assessment are when the student teacher:

4. Is aware of her/his strengths and limits

3. Is open to feedback

2. Has a sense of humour about herself/himself

1. Solicits honest critiques

In some cases, students identified strengths and limits that were also recognised by their mentors or tutors, illustrated within the difficulties experienced by one student:

> I have to get everyone sat down, ready to start. This is always a struggle in year one, but I do need to improve my peripheral vision. Behaviour issues arose from inactivity within the children. I need to keep children at this age busy, and be more enthusiastic combined with controlling [Male student; developing placement; reflection on tutor lesson observation].

> I know that I am not being engaging enough due to my pitching some concepts too high, which can be rectified, and that maybe it's that it's late in the day and they can sense that it is time to go home, but I'm not sure what to do [initial reflection by same student at end of first week; linked by student to 'knowing one's strengths and limits'].

It is clear at this juncture that the student sees weaknesses in his teaching, but is suffering the frustration of not being able to take the action needed. As the placement proceeds, his self-awareness grows but does not seem to lead to corrective responses as his weekly reviews against the teaching standards show:

> Routinely set behaviour expectations - need to transform these into positive reinforcement [Standard 7: behaviour management].

> Still trying to implement good advice. [Standard 8: wider professional effectiveness]

> Have begun to help out at the gymnastics club [same student; placement Week 3 review].

> Resources are clearly differentiated, plus question sheets are designed so that copying cannot be done. [Standard 3: subject knowledge and Standard 4: planning and teaching well-structured Lessons].

> After comments were made in my formal observation, I have attempted to integrate such tips into my teaching practice [same student; placement Week 4 review].

The accuracy of the student self-assessment is validated by his mentor. At the end of the placement her written report on his progress includes the following:

… a very reflective individual who is keen to talk about the successes and failures in his lessons.

He does however need to make sure he applies the positives regularly into his lessons and make

sure that he learns from his failures.

Strengths: Good subject knowledge, very reflective, prepared to listen to others and ask for

advice

Priorities for improvement: Improve his classroom presence, be able to engage the children,

pitch lessons at the appropriate level [Mentor report on student: developing placement].

The mentor appreciates reflective practice that contributes to self-awareness as a valuable

asset. By 'being prepared to listen to others and ask for advice', the student teacher was

going beyond just taking feedback to proactively asking for advice or 'soliciting honest

critiques' (level 1). On the other hand, the report from his mentor implies that accurate

self-assessment is only a means to an end. He could be more reflexive to improve teaching

and enable greater pupil progress by applying positives and learning form failures.

There was very little evidence collected that showed student teachers having a sense of

humour about themselves. While this was less likely to emerge through the written

reflections of the student teachers, neither was it apparent in the interviews or the mentor

reports on the students' teachers.

There was also a tendency for student teachers to play down their strengths and

concentrate relentlessly on their weaknesses. One student teacher, unlike most, showed

that she recognised this, and also that she recognised an emotional part of the self-

assessment – the frustration expressed as 'kicking herself':

It's quite easy to be negative on yourself. If I make a mistake I'm kicking myself after it but if I make

a positive I'm not making as much of it as I do. I do with the children so I'll praise and positive all

the time but I need to start doing it for myself [Female former student teacher, now NQT,

interviewed].

This self-assessment was in marked contrast to their efforts to be positive in their feedback

to the children.

In conclusion, the student teachers all engaged in assessing their own strengths and limitations (level 4) mainly reflecting on their limitations. There was no evidence of emotional awareness giving student teachers the confidence to laugh about themselves (level 2). The most reflective of the student teachers sought honest feedback from their mentors (level 1) but in the main, mentors and student teachers recognised that accurate self-assessment is not enough to become a successful teacher. Although beyond the bounds of this category of emotional knowledge, such self-assessments must also be acted upon.

EK1c: Self-Confidence:

Self-confidence refers to a student using knowledge of his or her emotions to maintain or develop a strong sense of their own self-worth. Signs of self-confidence are when the student teacher:

> 4. Is confident in job capability

> 3. Believes in himself/herself

> 2. Is self-assured

> 1. Has presence

The narratives included many references to feeling 'confident' or having 'confidence', or conversely, the absence of that state. This suggests that self-confidence was highly valued as a contributant to effective teaching. The way that students recognised the emotions that were associated with self-confidence (or lack of of) is exemplified by this example where the student teacher knew that she experienced some fear:

What I learned from the feedback is that I am a lot less confident than I thought. I have certain ideas on how well I am doing but am often a little scared to speak up about them to people 'in

power'. I think this might be a 'getting observed' issue, I am very confident in class and don't show many signs of nerves but I do get very stressed out before an observation [Male student; developing placement; reflection on tutor lesson observation].

This recollection was typical too of the levels of student teacher self-confidence. At that point the student teacher was confident in his capability to teach (level 4), perhaps had belief in himself (level 3), but certainly would not be described as self-assured (level 2).

Four months after completing the course two of the former students reported differing experiences of self-confidence as they moved on to the challenges of post-training employment as a teacher.

So at the beginning I was sort of pitching maybe a little bit above them but I think I've started to get it right now so my confidence has come back and I'm feeling more organised in myself [Female student interviewed later as an NQT].

Her view of self-confidence as a temporary asset, one to be lost and then regained, is associated with failure then success in a new teaching environment. She talked of a return of confidence in her first months of teaching. While she chose to reflect on her recent experiences, another student looked further back in reviewing her confidence over the duration of her student programme.

By the end of the course my confidence was high and I felt I had much more awareness of my capabilities but I didn't know if that was because on placement over time, you get more confident and, especially when you feel like you're coming to the end and you're wrapping everything up but I wondered if that emotional awareness would still be there, this self-awareness would still be there when put in a different situation like getting a new job or I wasn't sure whether or not that would see me right through but I did feel more confident towards the end and I felt like I knew that I was a good teacher by the end of the course [Female student interviewed later as an NQT].

While identifying her growing confidence as she progressed through her school placements, this student recalled the uncertainty of whether she would retain the high level of

confidence she had on completion of the course. This was not surprising because she was in the latter stages of pregnancy and had chosen to wait before applying for teaching jobs. She highlighted continuity of teaching experience as a factor with a big impact on retention or growth of emotional awareness and self-confidence.

So the student teachers frequently refer to 'self-confidence' as being essential to their teaching practice and that feedback on their use of it was important. In the main however, their narratives did not demonstrate the higher level behaviours of being self-assured (level 2) or having presence (level 1). Self-confidence was also perceived as transitory, especially in unfamiliar situations where continuity is lost and emotional states change. Their stories showed some awareness of knowing their emotional states at point of low and high self-confident.

4.2.2 Emotional Knowledge: Self-Management cluster (EK2)

This refers to student teachers knowing how to manage their internal states, impulses, and resources. The cluster comprises six categories.

EK2a: Emotional Self-Control:

Emotional self-confidence concerns a student teacher using knowledge of his or her emotions to keep disruptive emotions and impulses in check. Signs of emotional self-control are when the student teacher:

> 4. Shows restraint

> 3. Has patience

> 2. Responds calmly

> 1. Stays composed and positive

The mentors however all understood and could assess the self-control that a student showed or did not show. One demonstrated the importance of self-control, particularly in very challenging circumstances.

> Her contribution during our Ofsted inspection was particularly appreciated….. she stayed calm and composed throughout. [Mentor of female student; extending placement report]

Clearly this student teacher showed the highest levels of emotional self-control through responding calmly to the inspection (level 2) and retaining her composure (level 1). Not all mentors regarded their student teacher's self-control so highly. One recalled the need for more consistency from her student teacher:

> You could definitely - you know you could tell when he was less unsure or if something happened and he maybe wasn't 100% sure how to react to it or adapt, then that was when he kind of - he was very self-critical and he would feel that it had then gone wrong and he wasn't doing things right and then that affected how he responded to the children and he became quite - not snappy - but he was quite short and less approachable with the children.

> I remember talking and saying particularly his self-control and sort of emotional awareness - that was an area that he needed to work on because he did get quite nervous and anxious and that showed in his teaching. He became quite uptight and reacted to the children differently to when he was more relaxed and felt in control so I certainly talked about those areas [Female mentor interview]

This mentor's experience was that lack of self-control showed, even if the student teacher was unaware of it. While showing some restraint (level 4) by being 'not snappy', the student teacher had not demonstrated the higher level behaviours – he was 'quite short and less approachable'. It was also notable that his mentor said she had talked to him about 'his self-control and sort of emotional awareness', associating awareness with self-control. Mentors also acknowledged the need to model self-control themselves:

> it's just manic and there's so many things going on, getting ready for Christmas production and

things like that, I know that my emotions are quite fraught at the moment and if I'm not careful, you know, then the children are going to be on the receiving end [male mentor; interview]

This mentor was demonstrating knowledge of his emotions even as he was speaking to me, knowledge which was contributing to his self-control at a time of year notorious for pupils and staff being tired and fractious.

Classroom moments were also cited by student teachers themselves, recalling how they sought to keep self-control at the time. In these examples, the student teachers were mindful of their emotions as well as their self-confidence.

Recent illness has led to me being over-tired which is something of a drawback but, in this initial week, I have noticed a pattern of feelings that I seem to have when first entering a school. First off, there are the 'Am I going to like my teacher, will they like me?' feelings. Then, 'What if the class are disruptive', followed by the- 'I don't feel good enough to be a teacher' thoughts that I know can only be overcome by throwing myself into it, which is something I have done - and will do when I teach. [Female student; weekly review]

Then the class began, my head was spinning a little, I didn't want to fail. I think doing the register really helped to settle my nerves. I was able to get the students sitting as I wanted [male student; reflection on tutor's lesson observation]

Both recognised emotions that seemed to them to be a barrier to emotional self-control, problems to be overcome by 'throwing myself into it' and 'doing the register'. Another student had recognised a lack of emotional self-control on placement:

During beginning placement, I noticed that how I present myself in front of the class can change depending on the situation. In the final week, the class teacher was being observed teaching a science lesson by the head teacher and the science co-ordinator. She had planned for me to work with a group on a particular activity… it struck me that my demeanour was much different from when I was teaching. I found myself more light-hearted and joking with the children; definitely much more 'myself.' By being this way, I found that the children got much more out of the activity

which the class teacher had planned. It struck me then that because of the pressures of planning and managing the classroom that I had become uptight, uncharacteristically so. [Female former student teacher; interviewed as NQT]

She recounted success in controlling her emotions, recalling the benefits to the children on an occasion when she did not feel pressure. Even though two other teachers were observing the lesson, she did not carry the responsibility of being 'the teacher'. She also knew the difference between the 'light-hearted' emotions she felt when supporting the teacher in a teaching assistant role and the 'uptight' emotions felt when she had the responsibility of being the teacher.

When beginning my developing placement, I set myself a personal target that I would take a step back when I felt myself becoming uptight, re-evaluate the situation and try to tackle it differently. During the first week of this placement, I found myself much calmer about planning and preparing for lessons but when being observed, I retreated back to feeling uptight. I believe that that I can tackle this effectively during my time in placement and as long as I am aware of it, I should be able to learn to relax and become less of a 'task manager' and more of a 'concept builder'. [Female student; initial week reflection]

She saw that self-control while having her own teaching observed was still a hurdle to overcome. So in the support role she was composed and positive (level 1) and responding calmly, indeed jokingly (level 2), but when in the more pressured role of teacher, had not attained those levels of self-control. Interestingly, she also saw growing self-control as an attribute of a teacher who is a concept builder rather than a task manager, a teacher who shows a deep approach to children's learning rather than a tick box focus on what the teacher does (Twiselton, 2004).

Therefore emotional self-control was recognised by the student teachers and used with varying success, depending on the challenge of the situation and on the student teacher themselves. Some showed composure and positivity (level 1) while teaching under

pressures such as inspection; others struggled when something went wrong to go beyond showing restraint (level 4) to showing patience. Self-control was observable by mentors and formed part of their feedback to student teachers. Knowledge of their own emotions by the student teachers and mentors was an important prerequisite, leading to strategies for them to develop self-control. Indeed, one student teacher saw this self-control as a contribution towards her growth into a teacher with a 'concept builder' pedagogy.

EK2b: Transparency

Transparency refers to a student teacher using knowledge of his or her emotions to maintain their integrity and act congruently with their values. Signs of transparency are when the student teacher:

4. Keeps promises

3. Brings up ethical concerns

2. Publicly admits to mistakes

1. Acts on values

One student teacher showed that transparency is an emotional matter. His ethical concerns were aired (level 3) because a game of football seemed to him to be dominated by one boy.

> These incidents generate an emotional response from me because of my experience and strong feelings on this particular subject. Whilst I acknowledge the need to include and encourage a talented and gifted footballer, it seems such a shame to witness the impact this has on the other pupils. And I must admit leaves me feeling sorry for the other pupils and making an extra effort to include them and make them feel valued.

> I feel strongly about the role PE and football can have in the classroom in terms of building relationships between me and the pupils and between the pupils themselves. It seems such a shame that the price for encouraging this one gifted pupil is the frustration and exclusion of the other pupils.

[Male student teacher; 1st week reflection]

This perceived unfairness was associated with the inclusion of all children and led to action by the student teacher (level 1). The emotional knowledge behind the comments (and the action) was awareness of how this situation tested his values and made him feel.

When one student had her teaching observed for emotional knowledge by the university tutor, there was clear disappointment that her transparency was not recognised:

> I feel like I am transparent in the classroom but the interpretation of this in the observational context maybe didn't transpire. Being marked down for this on the feedback doesn't make me feel very confident; it's something I want to be seen as. [Female student; developing placement; reflection on tutor lesson observation]

Of course, the student is right insofar as behaviours such as keeping promises (level 4) and publicly admitting mistakes (level 2) will not always be evident in a particular lesson. The high stock placed in transparency by student teachers was equally obvious in another student response to observation feedback.

> I have been marked highly for transparency and self-control and I hope that to be a true assessment. I have given one hundred percent to the school and feel I have contributed and therefore gained trust and respect. It has been hard work and at times the work load has been very challenging but I always try to display a professional and controlled front. I am a very conscientious person and am aware I need to give everything to my placements so I was happy to see that this was easy to assess and that my PT [tutor] agreed. [Female student; developing placement; reflection on tutor lesson observation]

This student teacher reflection shares why the lesson feedback on transparency was so important to her and why she believes herself to be transparent as a teacher and person. She also associated transparency (and self-control) with student teachers earning respect and trust.

The student teachers highly valued the term transparency. They took feedback on

transparency very seriously – good or bad, it was taken personally. Indeed, it was

associated with earning respect and trust. It was associated with personal emotions by

student teachers - not surprisingly as it is requiring challenging unethical positions (level 3)

and championing one's own values (level 1). There was no evidence of keeping or

breaking promises (level 4) or publicly admitting to mistakes (level 2).

EK2c: Adaptability.

Adaptability relates to a student teacher using knowledge of his or her emotions well enough
to be flexible in handling change. Signs of adaptability are when the student teacher:

4. Adapts or changes strategy

3. Handles unexpected demands

2. Adapts to situations

1. Is open to new ideas

Most student reflections showed awareness of when they should have changed planned
activities or approaches. Sometimes they looked back in realisation that they had missed an
opportunity to improve the lesson by adapting, as in this example:

> I had meticulously planned for the lesson, but during my opening warm-up game I felt that it was
>
> going on for a little too long, but instead of changing it or stopping it I was afraid that it would
>
> indicate that my planning was incorrect or my ideas were silly and so the game continued. Looking
>
> back, I should have had more confidence and changed it a little. [Male student; developing
>
> placement; reflection on tutor lesson observation]

The student was not just writing with hindsight about the lesson. He had considered the
decision-making he had made during the lesson and the choices he considered at the time.
During the lesson, he was being 'open to new ideas' (level 4) but not having the self-
confidence to step up by 'adapting to the situation' (level 3). The emotion that he could

remember feeling was fear - 'I was afraid that .'. However, it is unclear whether he had that emotional knowledge at the time.

Other students also reflected on the self-confidence needed to adapt a lesson. They realized a need for these aspects of emotional knowledge (self-confidence and adaptability) to go hand in hand in a reflexive practice that is, as Schön put it, "a dialogue of thinking and doing" (1983: 61)

One mentor also demonstrated the need for emotional knowledge in situations when she needed to adapt.

> I've touched on some of this when I did my Leadership Pathways training … a module on yourself as a leader and that looked at the emotional side of it … something that came out that I wasn't particularly strong - I was quite an emotional person and that kind of led how I worked through the day and my kind of my journey as a teacher …. as a leader I think it is important to kind of recognise those things and react to them and adapt and things [Female mentor; interview]

Her view was that her emotions led how she worked as a teacher but that this was unsatisfactory. She realised it was important to have a conscious emotion knowledge of herself that would help her to adapt. She went on to generalise about all teachers (including student teachers) needing to adapt:

> … and I think it's also important to all teachers because you are in there with people and people change and you change and you have good days and bad days and I think you have to be aware of yourself in all those different situations and how you handle that. [Female mentor; interviewed four months after end of student extending placement]

Here she positioned adaptability as a reaction to situations, particularly people, by seeing and acting on the need to 'handle unexpected demands' (level 2). Again she emphasises the need for emotional knowledge of one's self, recognition that the personal emotions of teachers change in 'different situations'.

All student teachers were open to new ideas (level 4) in a teaching situation. Some reactively 'adapted to situations' (level 3). This adaptation, and also 'handling unexpected demands' (level 2), required the teacher to have to hand knowledge of one's own emotions in that moment – in other words, emotional knowledge. Adapting beyond being open to ideas seemed to be linked also to having self-confidence (EK1c) to take the risk of changing from what was planned. There was no evidence of student teachers demonstrating an 'adaption or change of strategy' (level 1)

EK2d: Achievement Drive:

Achievement refers in this context to a student teacher using knowledge of his or her emotions to strive to improve or meet a standard of excellence. Signs of achievement orientation are when the student teacher:

4. Improves performance

3. Sets challenging goals

2. Anticipates obstacles

1. Takes calculated risks

There was little evidence of emotion connected to the student teachers' striving for achievement. This comment was typical in its clinical analytical tone:

> My feedback on my taught maths lesson this week highlighted my clear introduction which included differentiated questions and built on prior learning. When giving feedback on their graphs I gave them their two stars of positive feedback stating what they had done well and they then had to add on their own wish concerning what they would do next time to make their work even better. This helped to develop their self-assessment and enabled me to see the types of targets which they set for themselves. I have used my plenaries to assess what the children have learnt in the lesson by asking open questions [Female student; 2nd weekly review]

The narrative above was centred on the pupils' learning, aligned to Teaching Standard 5

(adopting teaching to respond to the strengths and needs of all pupils) and Teaching Standard 6 (making accurate and productive use of assessment). The student teachers generally measured their teaching by its impact upon pupils learning.

The mentor reports on the student teachers however were more directly focussed on the student teacher performance. They summarised the effort and progress that the student teachers had demonstrated on placement. These recognised the 'improved performance' (level 4) and, as in the example below, the 'setting of challenging goals' for themselves (level 3), implicit in the appraisal that the student teacher was 'constantly moving forward':

> Throughout her placement, she maintained a detailed and reflective placement file. She took on board suggested areas for development and knit these into her planning for the next lesson. She reflects honestly on her lessons and ensures that she is constantly moving forward. [Mentor report on student teacher; end of developing placement]

This was praise for acting on her reflections, being reflexive. There were fewer examples of the higher 'achievement' behaviours (levels 1 and 2), an exception being this student teacher whose class has spent two days on board games:

> I was enthusiastic throughout the two days which I feel helped to motivate the children. Running an activity which lasted for two days and included a lot of pupil choice and pupil lead was what I felt a big risk to take but it clearly worked and the children enjoyed it and learnt from it [Female student teacher; review week 5)

'Taking a calculated risk' (level 1) paid off in terms of achievement for the student teacher and her pupils. She also recognised, on reflection, the importance of her own 'enthusiasm'- to the achievement, though it was unclear whether she was aware of this at the time.

The data from student teachers and mentors shows that they valued effort and attainment highly, with claims of student teacher achievement usually measured in term of the Teaching Standards and hinging on the progress that their pupils made. Most achievement

evidence was of student teachers improving performance (level 4) and setting goals (level 3) with examples of 'calculated risks (level 1). However, there was no clear evidence of emotional knowledge itself contributing to student teacher being achievement-orientated.

EK2e: Initiative

Initiative refers to a student using knowledge of his or her emotions in readiness to act on opportunities. Signs of initiative are when the student teacher:

4. Addresses current opportunities

3. Seeks information

2. Makes extra efforts

1. Initiates actions for the future

Several of the participant students demonstrated their own view of how well they used initiative when teaching. One wrote as part of a reflection on her own progress against teaching standards 1 and 2 (high expectations of pupils and promoting good pupil progress and outcomes):

Something for me to improve on according to my observation, I am pleased it has been highlighted to me. I think I can accomplish this by taking more risks in my teaching, using more initiative and refraining from being scared to make mistakes. [Female student; 3rd weekly review]

She remembered and appreciated the feedback after observation by her tutor of the emotional knowledge within her teaching. In doing so, she flags fear and an aversion to risking mistakes in the classroom as barriers to using her initiative. Another student used the tutor feedback to view this aspect of her teaching afresh:

It wasn't until [my tutor] highlighted it that I realised that I had focused too much on the activity and least on the actual learning objective. Instead of just learning how to create a story map, the children should have been aware of the skills involved for example, labelling, punctuation etc. I let

the activity run away with the objective. On first thought, I realised that I had just gone on the instruction of the teacher. [Female student; initial week reflection]

This showed that another obstacle to using initiative, whether perceived or real, was an instructional approach by mentors to student teachers who wanted to try something new, addressing a current opportunity (level 4). At the end of these initial reflections, the students were asked to select one of the 18 categories of emotional knowledge that which most closely links to the reflection. This student chose 'using initiative' for the above text. She also recognised the part played by tutor feedback, a finding at variance from the survey data which suggested four fifths of those students could comfortably self-report their use of initiative.

All of the mentors noted their students' level of initiative and most, like the two examples below, praised it in the student teachers' end of placement reports.

Strengths: 1. Relationship with staff and children. 2. Willingness to take advice. 3. Understanding of different learning styles. 4. Ability to co-ordinate other adults in the class. 5. *Willingness to try something unfamiliar.* [Female mentor; developing placement report on female student]

Here there was credit given for opportunities being taken (level 4). The next extract shows appreciation of a student teacher using initiative in a more planned and sustained manner:

Km has worked hard and shown an enthusiastic willingness to learn. He has *demonstrated an excellent ability to work from his own initiative and I have felt confident to allow him the freedom to plan and organise learning knowing he will organise effective and creative lessons.*

[Female mentor; developing placement report on male student]

The praise suggested that he sought assessment information such as pupils' prior understanding (level 3), making extra efforts to plan creatively (level 2) and planned for lessons to be delivered in the days maybe weeks ahead (level 1). In this case the mentor removed a constraint to using initiative because she trusted the student teacher enough to

allow him freedom to plan and organise 'effective and creative lessons'.

By the end of their extending placements, the students had accrued a total of 20 weeks of teaching experiences, rather than 10 weeks at the end of developing placement. It was not surprising that, in the main, the students were able to use more initiative on extending placement than during developing placement. This report captures this progression in terms of using initiative:

> When she first arrived, she *didn't hesitate* in interacting with and getting to know the children. She also showed that she was very observant, as she spotted children who were struggling within lessons and *gave them assistance, without having to be asked to.*
>
> The lessons that she teaches are *often creative* and regularly involve the children carrying out a practical activity, rather than having the class simply sitting reading or writing all the time. *Another example of her willingness to try new things with her teaching was when she was offered the chance to organise a class assembly, which she agreed to without hesitation*.
>
> [Female mentor; extending placement report]

Early on, this mentor noticed that the student teacher took current opportunities (level 4) and sought information through observation (level 3). She went on to make extra efforts like organising a class assembly (level 2) and initiate future actions (level 1) by planning creative practical activities 'often' and 'regularly'. This description is of the sort of autonomous action that is expected of a serving teacher and indeed the student teacher had at that point been employed at that school for the following academic year.

The mentor comments ranged from recognising immediate opportunities being taken (level 4) up to a systematic use of initiative when planning ahead (level 1). Student teacher use of initiative was influenced by the level of trust invested in them by their mentors. Indeed, the student teacher belief that it is easy to assess their own use of initiative was countered in the participant narratives which valued the feedback on their use of initiative from tutors

and mentor. Student teachers were able to identify the negative emotions they were experiencing while considering whether to take initiative. However, it was unclear whether emotional knowledge was actually used by showing initiative at the time or whether there was only awareness, realised in hindsight, that initiative was not used.

EK2f: Optimism

Optimism involves a student using knowledge of his or her emotions to persist in pursuing goals despite obstacles. Signs of optimism are when the student teacher:

4. Has positive expectations.

3. Is optimistic about the future

2. Is resilient

1. Learns from setbacks

The most useful narratives were through the open-ended prompts of the initial week reviews and the interviews, both of which were confidential and not shared with their mentors. This encouraged a sharing of student teacher thoughts and feelings, such as this reflection about how persistence is needed to pursue a teaching career:

> Going in to this week I am feeling nervous, I have no concept of how others perceive me as a teacher- I know I have a good grade from first placement, and I have surprised myself with marks from essays and presentations etc but feedback is normally constructive - implemented to make you do better next time. I understand this is significant but no amount of firsts in written assignments is going to give me confidence in my teaching- if for every negative comment there was a positive one it might be better, however, getting my head around the constant critique that comes with a career in education is a goal for this year - along with improving my practice, getting better at lesson planning, understanding fully what meaningful learning is and accepting that things must come one step at a time and I can't be the teacher that I know I will be, just yet.
>
> [female student teacher; developing placement; initial week reflection]

The 'just yet' added to the end speaks of positive expectations (level 4) and optimism about the future (level 3). Perhaps there was also resilience (level 2) behind her management of the 'constant critique' that comes with a teaching career. Implicit within another student teacher's reflection were some sort of setback on the previous placement:

> All told, I feel emotionally able to cope with all the roles and responsibilities of a teacher largely due to the criticism and advice given to me by my mentor, tutor and class teacher. This placement has put me in a far more positive frame of mind in regards to my development as a teacher [male student teacher; reflections after tutor observation of EK]

It is unclear whether the increased optimism from the student teacher was due to him learning through the setbacks on beginning placement (level 1) or simply benefitting from better feedback on this placement. Either way, his 'more positive frame of mind' as a prospective teacher certainly showed an optimism for the future (level 3). However, another of the participants, interviewed when she passed the course and had secured a job, was at a low ebb:

> I think I'm doing well. I'm having like bi-weekly meetings with my NQT mentor, just telling me to be a lot more positive. . After this first well three quarters of the first term, I'm being quite negative on myself and I think I'm not properly looking at the positives I'm making. [Female NQT, interviewed four months after finishing course]

She did not appreciate simply being advised to be a lot more positive. However, she was optimistic to the extent that she did believe that she was doing well and should be looking at the successes she had achieved. There was no indication of actually having positive expectations (level 4) or optimism for the future (level 3) or how that would change.

A large majority of student teachers surveyed believed that they were optimistic. Narratives consistent with the survey results showing them to be optimistic enough to pursue their goals at difficult times. This included reflections showing optimistic about the future (level 3) and resilience (level 2), but little evidence of ability to learn from setbacks

(level 1). There was no mention though of recognising their personal emotions to manage or create this optimism.

4.2.3 Emotional Knowledge: Social Awareness cluster (EK3)

This refers to how teachers know how to handle relationships and awareness of others' feelings, needs, and concerns. The cluster comprises three categories.

EK3a: Empathy

Empathy refers to a student using knowledge of other people's emotions to help sense the feelings and perspectives of those they interact with, taking an active interest in their concerns. Signs of visible use are when the student teacher:

4. Listens

3. Reads nonverbal cues

2. Is open to diversity

1. Sees others' perspectives

Mentors and student teachers understood being a good listener (level 4) as an important basis for using and developing empathy.

He listens carefully to the children's ideas and makes them feel safe and valued [mentor report on developing placement]

knowing when to ask questions to pupils with special educational needs (L is a selective mute so I would ask her questions in small groups and making sure I can understand E who has speech problems, making him repeat answers and really listening so I can respond encouragingly and appropriately. [female student teacher, weekly review 2, developing placement]

One mentor commented on her student teacher's reading of non-verbal cues (level 3) to recognise the 'struggling' feelings of children in her class:

> When she first arrived, she didn't hesitate in interacting with and getting to know the children. She also showed that she was very observant, as she spotted children who were struggling within lessons and gave them assistance, without having to be asked to [mentor report; developing placement]

Openness to diversity (level 2) was demonstrated by this student teacher:

> it's got a very diverse catchment area. You've got like kids from the council estate; you've got kids from posh estates … you've got all sorts: kids from the country - so having that diversity within your classroom you have to bring more personality to do it, I find [female NQT; interviewed four months after passing the course]

The wider set of narratives about and by this student teacher (initial reflection, reviews, reports, interview) show that she celebrated the differences between children in her class, whether they be socio-economic background, behaviour, gender, ethnicity or any other differences.

One student teacher who had progresses to being an NQT could clearly sense the feelings of one of her troubled pupils:

> Her behaviour as well over the other subjects has eased down a bit. I think she's not feeling so frustrated because we have Maths before lunch so sometimes - but maths and lunch which kind of just overload her whereas now she's kind of achieving something in maths; she can go into lunch a bit happier; a bit more content and then just have a nice break and come back again in the afternoon feeling a bit refreshed, whereas before I could see she was getting really frustrated and going into lunch and then she'd snap at someone and something would happen [Male former student teacher; interviewed as NQT]

In my experience, seeing another's perspective (level 1) in this depth is not typical of a student teacher and it may be significant that this teacher had at this point become a

classteacher with more time to get to know her pupils than she had on her placements.

This student teacher was amongst the large majority who believed that they had empathy, taking it as an essential asset for an effective teacher:

> .. and it's like 'I'm empathetic'. Of course I'm empathetic! I want to be a teacher and putting pupils first, especially, I think I realised that being emotionally knowledgeable helped that … I felt like I could learn it more. [Female former student teacher; interviewed as NQT]

She also seemed to view emotional knowledge as something that exists and 'helped that' [her being empathetic]. All of the participants had of course been given the emotion knowledge framework at the beginning, but only a minority showed this conceptual understanding.

The mentors similarly affirmed that understanding children and their emotions was of paramount importance when learning to teach. One such comment used an analogy:

> It's hugely important, having a mutually trusting and respectful relationship with children and being able to read their emotions and how they're feeling; how they're going to respond to you; how they're going to react to you and in turn how you should respond too, to them or a situation that they're in and to be fully in control of your emotions at all times. [Female mentor; interview]

The 'reading' of children's emotions is a substantial part of showing empathy, whether it be interpreted as 'reading nonverbal cues (level 3) or seeing others' perspectives (level 1). The metaphor above suggests that this mentor's view of empathy is that, like a person's ability to read, there are different levels and that it can be developed.

The student teacher accounts showed belief that they had good or better levels of empathy. They and the mentors viewed empathy as an essential attribute when learning to teach. They talked and wrote of empathy as something that can be developed and it was identifiable in at different levels, from listening (level 4) up to seeing other perspectives (level 1).

EK3b: Organisational Awareness

Organisational awareness refers to a student using knowledge of other people's emotions to read a group's emotional currents and read power relationships.

Signs of visible use are when the student teacher:

    4. Understands informal structure

    3. Understands climate and culture

    2. Understands organizational politics

    1. Understands underlying issues

The findings indicate that the student teachers were largely unfamiliar with the notion of emotional currents and power relationships when they were on the course. In contrast experienced mentors were able to show this organisational awareness.

Organisational awareness by the students teachers was mainly recognised in feedback from these more experienced teachers. This is exemplified through one student who received this feedback on successive placements.

> She mixes well with all the adults in school - other teachers, non-teaching staff, Governors and parents who she has always treated with the greatest of respect and professionalism. [Mentor of female student; developing placement report]

There is no specific reference to organisational awareness by the mentor in this report. However organisational awareness is implicit in the praise the student teacher receives for her relationships with the range of adults in school. The student teacher must have understood the informal people structure of the school (level 4) and the climate and culture of the school (level 3) to build such relationships. It was only when the students became more experienced and were employed by schools that their organisational awareness seemed to more overt.

> Yeah I had a really good relationship with the Head there [supply teaching] and you know she's a tyrant as well is the Head, and all the staff there know it too, so as a supply teacher, that makes it so much easier. [Female student teacher, interviewed as an NQT]

This former student teacher understood the organisational politics (level 2) - the way the school was led, how the rest of the staff perceived this use of power and relevance of having a strong relationship with the headteacher.

The student teacher narratives showed a pattern of using some organisational awareness in school (at levels 4 and 3) but it was stronger when, with more school experience to draw upon, they were interviewed later as newly-qualified teachers. Mentors, in their reports on student teachers, showed a better ability to assess this awareness in the student teachers. There was no evidence of understanding the emotions of themselves or others before supporting organisational awareness.

EK3c: Service Orientation

Service orientation relates to a student using knowledge of other people's emotions to anticipate, recognise, and meet children's needs. This research positions every pupil as a customer and their education as the service being provided. Signs of visible service orientation are when the student teacher:

4. Makes herself/himself available

3. Monitors satisfaction

2. Takes personal responsibility

1. Matches customer needs

By the time they had completed the survey, the students were highly aware of the teaching standards relating to making accurate and productive use of assessment (Standard 6) and adapting teaching to the needs of all pupils (Standard 5). While the term 'service

orientation' was new to most of them, the description of it as 'anticipating, recognising, and meeting children's needs' was well understood. Student teachers showed service orientation through the extent to which they met those two Teaching Standards.

A male student teacher wrote a succession of weekly reviews which he labelled as Teaching Standards 5 and 6. In them he showed the extent of service orientation:

S5. I made a point of identifying the lower and higher ability pupils at the beginning of the placement in order to support them. S6. Records are maintained - verbal feedback constant [2nd weekly review]

S5. Now that I have got to know the individual needs of pupils in year 1, my planning takes into account their strengths and weaknesses. S6. Planning and resources promote independent learning. [3rd weekly review]

S5. Have now attempted to implement questioning in plenaries on an individual level. Targeting individual pupils. S6. Have made good use of questioning in starters this week. [4th weekly review]

S5. I am able to now adjust lessons on the fly to meet the differing needs of individuals. S6. Learning sequences have been apparent in my lessons all this week. [5th weekly review]

In week 2, he made himself available (level 4) by ability grouping pupils and giving constant verbal feedback. He went on through week 3 to week 5 to progressively plan and teach for assessment of each pupil, through planning, plenary questioning and greater provision for individual needs (rather than those of groups of pupils). By week 5, adjustments were made while the lesson is in progress ('on the fly'). This is indicative of taking personal responsibility for meeting pupil needs (level 2). However, there are no signs of pupils assessing their own learning. This would have enabled him to see how the pupils felt about their learning - monitoring customer satisfaction (level 3). This does challenge the notion of service orientation levels being hierarchical.

Another student teacher reflection describes good formative assessment practice in which

she did check how well each pupil thought that they are learning.

> This week I have self-assessment as well as teacher assessment during my literacy lesson. I asked the children to do simple thumbs up action if they felt that the questions they had asked had allowed them to find out more information and therefore meet the learning objective. This was a quick way for me to see who felt confident at questioning following the session and allowed me to identify if any further work was needed. I have planned clear introductions to my lessons, particularly in my first literacy lesson of the week where I used some drama to set the scene - this really engaged the children. I have also used plenaries to recap on concepts from the lesson and to check understanding [Female student teacher; developing placement; 3rd weekly review; Teaching Standard 5 - Adapting teaching to all learners and Teaching Standard 6- using assessments]

This weekly review entry does illustrate service orientation by the student teacher 'monitoring satisfaction' of the pupils (level 3) with thumbs-up and plenary checks and also 'taking personal responsibility' (level 2) by identifying if further work was needed. There was however insufficient evidence however that any of the student teachers were actually meeting pupil needs (level 1). By gauging how confident the pupils felt during questioning following the session, she was building up her emotional knowledge of others - the pupils -, thereby being better placed to show a service-orientated approach (by identifying if any further work was needed)

I've got one or two pupils who I think would be recognised as having SEBD [Social, emotional and behavioural difficulties] and like just having an idea of their triggers and what they're like as I get to know them emotionally, it's helped me a lot with their learning so if I know that perhaps one of my children isn't feeling - I know she hates maths so I've had to like when it gets to maths time I can see her getting a bit angsty [sic.] so I've sat her against friends to kind of like ease her in; I've moved her down a group to help with her confidence and I've seen it now in her learning [female student teacher; interviewed as an NQT]

The significant aspect here is that this newly-qualified teacher has 'an idea of their triggers',

this 'idea' being knowledge related to the emotional states of individual pupils at particular times. Her emotional knowledge did however seem to be *linked to* her 'service-orientation', rather than *being* service orientation.

Despite the detached impersonal tone of the term 'service orientation', this category of emotional knowledge was widely recognised by the participants because it was identifiable in Teaching Standard 5 (adapting teaching to all learners) and Teaching Standard 6 (using assessments). However, the levelling structure of the 'service orientation' behaviours was challenged by the data. When student teachers wrote or talked of how they served their pupils, the descriptions sometimes showed how important their knowledge of pupils' emotions was if they were to behave in a service-orientated way to meet the needs of their pupils.

4.2.4 Emotional Knowledge: Relationship Management cluster (EK4)

This concerns teachers knowing how to use skill or adeptness to induce desirable responses in others. 'Relationships' within primary education and within this study is used as a broad concept – good relationships, positive relationships, relationships with children, relationships with adults. The cluster comprises six categories.

EK4a: Developing Others

Developing others in this study refers to a student using knowledge of other people's emotions to sense their development needs and bolster their abilities. Signs of visible use are when the student teacher:

4. Recognises strengths

3. Provides support

2. Gives constructive feedback

1. Acts as a mentor

In the comments relating to 'developing others', the most evident teaching behaviour was 'recognising strengths'. Some student teachers, like this example, recognised strengths (level 4) and also provided support (level 3) with the aim of developed their pupils:

> When giving feedback on their graphs I gave them their two stars of positive feedback stating what they had done well and they then had to add on their own wish concerning what they would do next time to make their work even better. This helped to develop their self-assessment and enabled me to see the types of targets which they set for themselves. [Female student teacher; 2nd weekly review]

Student teachers and mentors frequently identified constructive feedback (level 2) given to pupils. This example illustrates the purpose of doing this:

> I really take the time to write personal, accurate and useful feedback to the children so they really see why it is worthwhile to try hard in each piece of work [Male student teacher; 3rd weekly review]

Here a mentor shows how her student teacher's use of constructive feedback is one part of good formative assessment practice:

> I have also been impressed with the way she has offered constructive feedback to children during independent activities using 'tickled pink and green for growth' as well as the way she tries to incorporate self and peer assessment in to her practice [Mentor; Developing placement report]

Another student teacher valued the constructive feedback and wanted to improve his use of it with pupils:

> Targets: 1) Deploying other adults in class as effectively as possible 2) Continue to develop my constructive feedback skills [Male student teacher; self-set targets within 3rd weekly review]

Unsurprisingly the student teachers did not demonstrate the development of others by 'acting like a mentor' (level 1). Their role of course was that of learner teacher with a mentor of their own and had yet to build enough teaching experience to be a mentor themselves.

Working with a teaching assistant is expected of student teachers, but that is seen as management of a human resource to support pupils' learning and not a responsibility to mentor or develop that person.

There was no explicit evidence of using emotional knowledge of pupils to develop them. However, in the case below, the student teacher did need to 'carefully consider' knowledge of the pupils social and emotional characteristics as well as recognising their strengths (level 4). Only then could she plan effective support within well-chosen groups (level 3) and give constructive feedback throughout the activity (level 2).

> When coming up with the groups for the dragons' den activity I had to *carefully consider which class members worked well together and which did not* and had to consider their ability in a range of areas in order to create groups which were of mixed ability and included a range of strengths. Once they children had planned, made and presented their games I asked them to review their own game and their own contribution to their team and also asked them to think about a target for what they would do next time. I also spoke to each group and gave them feedback throughout the activity days [female student teacher; 5th weekly review; Teaching Standard 5 - Adapting teaching to all learners and Teaching Standard 6- using assessments]

A mentor talked of 'awareness of everything' that a teacher has to take into account in class:

> Just have to make sure that you're aware of everything around you because it impacts - you know, for the same child you might have to change .. depending on their emotional needs and dependency. [Mentor of male student teacher; interview]

This mentor made an implicit reference to a teacher needing emotional knowledge about a child, a knowledge of 'their emotional needs and dependency'.

Remembering that the survey was baseline data, the narrative responses showed that all of the student teachers had a growing understanding of what the 'development needs of others' are and how those needs are met. All of the references were to the development of pupils by the student teachers, with many associated with teaching standards concerning

individual pupil needs and assessment of their progress. Most however talked of systematic assessment practice such as observation, marking and record-keeping as ways of recognising those needs, rather than being able to 'sense' those needs.

So student teachers did demonstrate 'developing others', 'others' being their pupils. The student teachers did this at all but the most intense level – that of acting as a mentor (level 1). These actions were invariably associated with meeting individual pupil needs and good formative assessment practice. Present in some of the data was the student teacher's knowledge of each pupil's emotions and how this supported the student teacher in developing each pupil.

EK4b: Inspirational Leadership

Inspirational leadership refers to a student teacher using knowledge of other people's emotions to inspire and guide individuals and groups. Signs of visible use are when the student teacher:

4. Leads by example

3. Stimulates enthusiasm

2. Inspires others

1. Communicates a compelling vision

There were frequent references to use of the above leadership behaviours. As the examples below show, some used the term 'leadership' while other were less explicit. Leading by example (level 4) was recognised in an observed lesson:

Strengths were … modeling leadership by showing positive values and emotions to children [Tutor feedback from lesson observation to male student teacher; near end of developing placement]

The student teachers recognised the importance of stimulating the enthusiasm of their pupils (level 3). Many, in their weekly reviews, associated this with the setting of high

expectations - Teaching Standard 1:

> I have made good progress this week and the pressure of Ofsted pushed me to stimulate and
> engage pupils more so than I ever thought I could [Female student teacher; 4th weekly review;
> Teaching Standard 1: Set high expectations which inspire, motivate and challenge pupils and
> Teaching Standard 2: Promote good progress and outcomes by pupils]

Some references to leadership behaviours were noted in the mentor reports and tended to emphasise the positive impact on the pupils. One acclaimed the inspirational effect upon the pupils (level 2):

> DfR2.During the placement, she has motivated and inspired pupils to achieve their best. She has
> maintained high expectation and achieved good standard of behaviour and work from the
> children [Mentor report on student teacher; developing placement]

Another went further referring to consistent practice that I would interpret as communicating a compelling vision (level 1):

> He consistently demonstrates the positive attitudes, values and behaviour expected of all pupils
> who accept and follow his leadership and direction. [Mentor Report on male student teacher;
> end of developing placement]

It was easy therefore to discover evidence of the teacher behaviours that constitute inspirational leadership at different levels. It was more difficult though to find emotional knowledge behind those actions. The exception was this mentor, talked of leadership as part of teaching:

> I've touched on some of this when I did my Leadership Pathways training. I was quite an
> emotional person and that kind of led how I worked through the day and my kind of my journey.
> As a teacher you change and you have good days and bad days … you are in there with people and
> people change … and I think you have to be aware of all those different situations and how you
> handle that [Interview with mentor of male student H]

She understood her own emotions and those of other people as being changeable. She also

perceived this knowledge of emotions to be a prerequisite of inspirational leadership behaviours.

Inspirational leadership was understood by the student teachers, their mentors and their

tutors; the examples given spanned leading by example (level 4) up to communicating a

compelling vision (level 1). Leadership was associated with 'having high expectations

which inspire, motivate and challenge pupils' (Teaching Standard 1). one experienced

mentor also perceived knowledge of the pupils as an underpinning of the leadership

behaviours shown by her student teacher mentee.

EK4c: Change Catalyst

Being a change catalyst refers to a student using knowledge of other people's emotions to

initiate or manage change. Signs of visible use are when the student teacher:

4. Defines general need for change

3. Acts to support change

2. Personally leads change

1. Champions change

The only references to student teachers being proactive in creating change were in two

mentor reports:

The children were put in control and enjoyed producing their own assembly, with guidance.

Strengths: - *Enthusiasm to try new things* -Team work - Ability to see a problem [Mentor Report on

female student B; end of extending placement]

She has an excellent relationship with pupils and adults and the children have benefitted from her

fresh approach to teaching. Strengths: - Understanding of different learning styles …. *Willingness to*

try something unfamiliar. [Mentor Report on female student J; end of extending placement]

The student teacher behaviours that the mentors referred to were both personally leading

change (level 2), going beyond seeing a need for change (level 4) or supporting the actions of the classteacher or mentor (level 3).

Proactively leading or championing change (level 2 and level 1 respectively) require considerable risk-taking for student teachers at an earlier stage of their learning to teach. It is notable therefore that these comments were from reports completed at the end of the student teacher programme. This contrasts with the reactive nature of flexibility or adaptability referred to earlier (EK2c). On the other hand, knowing the pupils' feelings about a situation or issue will enable the student teacher to make a more informed decision about change, thereby reducing the risk.

There were no indicators of emotional knowledge being recognised by the student teachers to be part of their being a change catalyst. There was awareness, firstly through a tutor observation and secondly through a mentor interview, that emotional knowledge of children could make them agents of change in the classroom.

> Just making sure that you're aware of everything around you because it impacts on how you teach, the strategies that you use that you might have to change - you know for the same child you might have to change strategies depending on their emotional needs and dependency and your own. [Mentor interview]

> Area for development: making changes - recognising and responding to change in class mood - children wanted to join in with your story-reading... let them in some way? [Tutor feedback after observation of teaching; developing placement

Initiating or managing change was a difficult concept for student teachers to apply to their teaching. However, it was recognised by their mentors and tutors. Being a change catalyst involves risk taking and was more evident when the student teachers has more experience. Mentors and tutors also observed knowledge of the pupils' emotions as a contributant to the student teacher acting to become a change catalyst.

EK4d: Influence

Influence refers to a student teacher using knowledge of other people's emotions to wield effective tactics for persuasion. Signs of visible use are when the student teacher:

    4. Engages audience

    3. Anticipates impact of actions or words

    2. Uses indirect influence

    1. Develops behind the scenes support

Narrative references to student teachers using 'influence' were mainly couched in other words. This mentor gave her student teacher a compliment that suggested she certainly engaged her pupil audience (level 4) and probably anticipated the impact of her manner on the pupils (level 3):

> She has a lovely way with the pupils. She is gently spoken but resolute and firm. [Mentor Report on female student teacher; end of extending placement]

One piece of student teacher narrative stood out as an example of how knowledge of a pupil's emotions helped him to persuade the pupil to strive for high standards:

> Throughout the week the student in question was *often distant* during the classes; I decided that on Friday I would give her extra support to try to help her re-engage with the learning. During handwriting she, as witnessed before, rushed through her work and had produced some less than acceptable work. I sat with her, asked her to look at the examples and then asked her whether she thought that her work was the same. After some thought she said that her work was not the same, I asked her to do it again but this time slower. About ten minutes later she came over to me and showed me her work; it was fantastic, she had done a great job, and she actually *looked surprised* that she could do such good work. I told her that I knew that she could do this standard of work, I asked her to move her name sticker up on the class rainbow (charts good work and the class teacher gives awards accordingly). *Looking disappointed* she told me that her sticker was lost, I

told her that because her work was so good that I would make her a new one, *this pleased her even more*. Then during the plenary I made sure that I told the class teacher of her excellent work and her fellow classmates gave her a round of applause. It was after this that she ran over to me and hugged me. [Male student teacher; initial week reflection]

Most teachers will have experienced, witnessed or heard of such situations where student teachers take account of how pupils are feeling when seeking to persuade them of a particular course of action. This uplifting story is here because the author committed it to writing at a depth that shared the incident at an emotional level. It serves as an illustration of a student teacher using emotional knowledge of a pupil's feelings to influence her indirectly (level 2). He ensuring praise and rewards for the pupil's best work; partly behind the scenes with the classteacher and other pupils (level 1). In this way the student teacher had motivated this girl .. and earned a hug.

Student teacher influence over pupils was highly valued and the subject of many evaluative comments, ranging from engaging pupils (level 4) to developing behind the scenes support (level 1). One participant reflected on this in detail, giving a recollection that captured the part played by knowing how a child is feeling when seeking to influence that child.

EK4e: Conflict Management

Conflict management relates to a student teacher using knowledge of emotions to negotiate and resolve disagreements. Signs of visible use are when the student teacher:

4. Airs disagreements

3. Maintains objectivity

2. Addresses conflict

1. Orchestrates win-win solutions

There was little evidence of conflicts with staff, pupils or parents within the student teacher weekly reviews. As these narratives were also accessible to the mentors who held the power to decide their placement outcomes, this is not surprising. Neither however was the student teachers' conflict management mentioned in the mentor reports. It was only addressed by former student teachers, talking a few months later as NQTs. The first recounts the response to a troubled pupil running out of school during the day:

> Interviewee: Right .. what can I do to build this relationship quickly? What do I need to do to resolve this conflict before it escalates even further? Unfortunately, no one managed to get through to him and he's not here anymore or his brother but we didn't half try and I really had to think then about these sort of things to think 'how on earth can I get through to him'?
>
> Interviewer: You can't see this on the audio tape but you're waving at the social aspect there?
>
> Interviewee: Yeah the social and the relationships bit. [Student teacher, interviewed later as an NQT]

Though ultimately unsuccessful with this pupil, this former student teacher had an understanding that emotional knowledge of the pupil ('these sort of things' and 'the social and relationships bit') was important.

Asked how well her beginning placement had worked, another former student teacher replied:

> Well it didn't. I got by alright but I didn't enjoy the classroom experience as much because I felt like I was being pushed into being a certain type of teacher that I didn't want to be, a really loud, shouty one and I think when you bring aggression to a child they meet you with aggression and she [the classteacher] would just be louder than that child and I didn't like that so I found it quite difficult. [Student teacher, interviewed later as an NQT]

The course of action she chose addressed the conflict (level 2) although it appears that she had to adopt an approach she did not believe in and therefore was not able to orchestrate a win-win situation (level 1)

This mentor with several years teaching experience recalled how her participation in the research guided her response in a conflict situation:

> I've just recently had to deal with a situation of two children during a lunch break and one of them had come to me, quite upset, quite worried and nervous to tell me that she had upset another child and before seeing this model of questioning your own emotions, I would have just jumped in feet first and said 'right what's gone on?' 'What's happened?' 'Why have you done this, that and the next thing?' but actually I took a step back and thought this child is very nervous, very worried but is confident enough to come to me with their concerns - it's not the right approach to take with them. So I took a step back and thought I need to deal with this differently so rather than jumping in feet first, I sat calmly with them and talked them through it … and actually we discussed the other child's emotional behaviour as well. She said she has upset this child. She wanted to apologise but he wouldn't listen to her. So I had to explain to her that he is perhaps the type of person that it takes a while for him to calm down and he's quite angry at the moment so perhaps he needs to be left until he's calmed down and had a chance to think about how he feels and he is a lot calmer and then try and approach the situation rather than badger him because it would just increase his anger. So it was dealt with in a very calm and sensible way so I think the outcome of that would be more positive than if I had just jumped in feet first and sort of shouted at everybody [Female mentor of student teacher; interviewed four months after end of student teacher extending placement]

She seems to have orchestrated a win-win situation for both pupils (level 1) and attributed this response to the use of emotional knowledge that she held about each pupil and herself. She believed that this knowledge led her to this more positive response.

The conflicts managed by student teachers involved themselves and pupils, themselves and school staff and peer conflicts between pupils. The narrative evidence of this emerged not during the placements but later, recalling the actions of mentors and the former student teachers. The participant student teachers and mentors also perceived that knowing how they and others felt contributed to effective conflict management.

EK4f: Teamwork and Collaboration

Teamwork and collaboration refers to a student teacher using knowledge of other people's emotions to work with them towards shared goals and create group synergy in pursuing collective goals. Signs of visible use are when the student teacher:

4. Cooperates

3. Solicits input

2. Encourages others

1. Builds bonds

There were numerous references to student teachers contributing to school as a member of the staff team, taking part in staff meetings, school events, even school inspections. Sometimes there was acknowledgement of peer teamwork when a student teacher was sharing a placement class with another student. The comments below - examples that refer to cooperation (level 4) - were typically of comments within mentor reports and from the student teachers themselves.

> She has proved to be a good team player while working with her fellow student and the established Y1/2 team in school. [Mentor Report on female student teacher; end of developing placement]

> I do see myself as a good team member and I find it easy to adapt into other communities. Within this school it has been easy to become part of the family and I am glad this was obvious to the tutor [Female student J; developing placement; reflection on tutor lesson observation]

However, there was more opportunity within the student teacher role to create teamwork and collaboration amongst the pupils than amongst the adults in school. In planning and teaching through a business enterprise activity, one student teacher solicited the input of her pupils (level 3):

When coming up with the groups for the dragons' den activity I had to carefully ability in a range of areas in order to create groups which were of mixed ability and included a range of strengths. Once they children had planned, made and presented their games I asked them to review their own game and their own contribution to their team and also asked them to think about a target for what they would do next time. I also spoke to each group and gave them feedback throughout the activity days. [Female student teacher, 5th weekly review; Standard 5: Adapting teaching to all learners and Standard 6: Using assessments]

These reflections on a project designed by the student teacher with the reviews classified according to the Teaching Standards covering high expectations, pupil progress, adapting to meet the needs of all pupils and using assessments of learning. Indeed, the teamwork and collaboration between pupils that was elicited by this student teacher was of the highest order as she encouraged pupils (level 2) and built bonds between them (level 1).

This week I planned and delivered a dragons' den themed two days' activity where the children had to plan, design and make a dragon themed board game and then pitch it to the dragons. This really motivated and challenged them and they were all enthusiastic about the task. I set high standards for behaviour and time management and made it clear them what I was expecting of them. Due to the pupils enjoying the activity days they were always on task. The activity days also allowed the children to work on many skills such as communication, presentation, team work and organisation. All children were able to achieve something during the two days and everyone felt they had worked really hard. [Female student teacher,5th weekly review; Standard 1: High expectations and Standard 2: Pupil progress]

The high level of success appears to have been achieved by careful groupings and targeting collaborative skills as learning outcomes. However, her perspective of what the children gained goes further than this. Her knowledge of how the children were feeling is also imbedded within these descriptions. She refers to their 'motivation' and 'enthusiasm', though if the Dragons Den project was challenging as described, it is implicit that she will have also have been noticing and responding to a range of emotions such as frustrations,

curiosity and delight. This was part of her approach to create and maintain collaboration between the children and sustain the momentum of the project.

Significantly, the student teachers' creation of opportunities for teamwork and collaboration from cooperation (level 4) up to building bonds (level 1) is not just good teaching practice that overtly addresses several of the Teaching Standards. The student teachers and mentors also believed that teachers who know and monitor the emotions of their pupils are better placed to model and facilitate collaborative learning amongst the pupils in their classroom.

4.3 Q3: To what extent was the emotional knowledge framework challenged by emergence of additional or alternative features from the data?

The previous section shared the results from the deductive coding of each piece of data, identifying those relevant to the visible use of each category of emotional knowledge. Whereas those results were the product of theoretical thematic analyses, the responses to the question above are the outcomes of inductive thematic analysis of the data. The emergent themes are mergers of sub-themes which in turn are collections of coded data. Data is labelled as with a code because it has some associations with the emotional knowledge framework. As in the previous section, the themes and sub-themes are named and defined to capture the essence of each. Both types of thematic analysis involve the code labelling and identification of themes charted in section 3, where it is illustrated in Figure 6, showing the computer-aided coding process, leading to sub-themes and themes.

 Two of these features arose though coding pieces of narrative data – firstly behaviour management (coding labels leading to one theme) and secondly respect and trust (coding labels generating two sub-themes, later merged into one theme)

The third feature emerged later. This was a realisation that there was a 'cause and effect' relationship between many individual pieces of narrative data, showing emotionally-knowledgeable behaviours that fitted within both 'awareness' and 'management' clusters of the framework. This section addresses these three features in turn

4.3.1 Emotional knowledge and behaviour management

There was a wealth of narrative data which identified emotional knowledge in the context of student teachers and mentors managing pupil behaviour. After sieving all of the data for emotional knowledge categories, 109 of those chosen pieces of data were associated with behaviour management, as shown in Figure 6, p117.

The 'behaviour management' that emerged was that described in the English Teaching Standards Standard 7 (DfE, 2012), as "managing behaviour effectively to ensure a good and safe learning environment". Four sub-headings expanding this description to include:

a) classroom rules and routines

b) high expectations of behaviour by [student] teachers

c) classroom management that involved and motivates pupils and

d) good relationships with pupils while asserting authority and acting decisively when necessary.

Several student teachers shared their otherwise-hidden understandings of behaviour management through their use of metaphors.

Pupils at this level, they are quite hard to control. There are lots of behavioural difficulties relating to noise (mostly shouting out). It is like spinning plates - steady one wobbly plate and the rest start to slip. [Student teacher; male, initial week reflection]

Have managed to have a firmer grasp of low-level disruption…. [Student teacher, male, 5th weekly review, standard 7 prompts –Behaviour management].

Scanning of class for disruption – particularly during carpet time. [Student teacher, male, 2nd weekly review, target for next week]

These two student teachers presented behaviour management as the exercise of control - grasping, spinning plates, scanning for trouble. They used metaphors of control as the desired outcome of behaviour management.

Of the four female mentors interviewed, none spoke explicitly of behaviour management and one briefly mentioned it in the context of a student teacher managing their own emotional awareness and responses (clusters EK1 and EK2). In contrast the male mentor talked at length about the student teachers' behaviour management, offering this advice:

A lot of them will come and they'll say I've got to get the class to like me because that's how I'm going to get them to do the work for me and it's just not the way ……

It's sort of like they seem to think that the emotions of the child, they've got to be really nice to that child to get a nice emotion back and you don't need that. There is a way of getting that without you having to go down that line.

Children start seeing them as a friend rather than a teacher and then it can be quite difficult to backtrack if they start getting over-familiar and pushing the boundaries like they would do with their friends, which makes the teaching of your lessons become more difficult …

You don't have to be an ogre, but you just have to say 'you're doing that; that's just not what I expect, let's get on with what we should be doing.

[Male mentor of female student teacher; interviewed four months after extending placement]

This implies that student teachers are unsuccessful if they try to buy behaviour management and commitment to learning. The first transaction is emotion for effort; in return for being friendly to the pupils, they will work. The second transaction is emotion for emotion, the pupils feeling good by 'being really nice' and in return behaving well to make the student teachers feel good. The mentor argues that good behaviour by pupils is not negotiable in this

way. He refers to 'going down that line', implying that the student teachers gain no control by following the wrong path.

One male student teacher reported the advice of his female mentor that his relationship management was commendable and that could be used to his advantage:

> I was told that while my ability to build a good relationship with children was great, I need to use this to my advantage by switching to a strict, authoritarian occasionally just to let the children know that I am the boss. [Male student teacher, developing placement week 3 review; Standard 7: Behaviour Management].

The implication was that good relationship management (EK4 cluster) impacts positively on behaviour management, although one mentor added a caveat that student teachers need to take an occasional shift from a friendly to firm approach.

Another male student teacher knew that he was calm while being observed teaching but was at risk of losing that calmness, losing his emotional self-control by failing to stay composed and positive (EK2a, level 1).

> I did notice that 'Jack' who often misbehaves during class was causing some disturbance and so I tried to make eye contact with him to try and get him to desist. I must admit I found it quite difficult to remain calm, but luckily eye contact was enough in this instance. [Male student teacher; developing placement; reflection on tutor lesson observation].

He perceived his disruptive emotion as a threat. By keeping his anxiety in check, he was more capable of dealing effectively with this inappropriate pupil behaviour. He understood the implications of his emotions (EK1a, level 2) and responded calmly enough to keep eye contact with the misbehaving pupil (EK2a, level 2), thereby showing effective behaviour management.

This success was contrasted with the emotional struggle of another male student teacher to manage pupil behaviour. This student teacher confided that his struggle was intensified by the need to impress the mentor classteacher who was assessing his placement:

> [it was made] all the more depressing by the fact that when the other student teacher is teaching, and the main class teacher is out of the room, the kids are noisy, as they are with me. [Male student teacher; developing placement Week 4 review].

By contrast some female student teachers acknowledged the emotions of the pupils themselves and thereby seemed to perceive behaviour management differently. This is seen clearly in the case of a student teacher who had a belief that arose from the modelling of her mentor and based behaviour management upon respect for the children's feeling.

> The behaviour policies are blanketed across the school but each teacher clearly has their own classroom rules, I have tried to use M's methods in the classroom because I like the technique she uses, never raising her voice, promoting a 'chilled' atmosphere in her classroom. She has children in the class that don't like noise so, rather than sounding harsh or over-firm when talking to the children, I have used a quiet voice and reasoning- something that appears a success, I will further try out these techniques when I am in control of the classroom.

> [Student teacher, female, 1st weekly review, standard 7 prompt –Behaviour management]

This student teacher understood the emotional state of the children, thereby showing empathy with them to the extent of seeing their perspective regarding noise in the class (EK3a, level 1). She accepted that children are unhappy if there is a harsh tone or loudness to her voice and responded accordingly. This achieves effective behaviour management in a low-key fashion espoused in models such as transactional analysis (Stuart and Alger, 2011), but without any emotional transaction based solely on power. Another student teacher also identified her own emotions as a contributant towards her pupils' behaviour.

> This week I had to ensure that I had set my expectations high and that the children knew exactly the type of behaviour that I expected of them as they were doing a task which involved very little

teacher input and a task which they found fun. The fun aspect of the activity meant that there were no behaviour issues as the pupils were always on task. I ensured that the classroom environment was safe throughout by asking my TA to oversee the use of the D and T equipment such as hack saws and glue guns. [Student teacher, female, 5th weekly review, Standard 7: Behaviour Management]

She needed to feel resolute and work hard in preparation. That in turn would help her feel self-confident (EK1c), though it is unclear at which level. This helped her to achieve a high standard of teaching (EK2d) by setting challenging goals (level 3) and anticipating obstacles such as unsafe use of tools (level 2). Her view seems to be that because of the effort she put into preparation and teaching, the children would be emotionally engaged – having fun while learning - and therefore not misbehaving.

These results suggest a difference in the way the relationship between emotions and behaviour management was understood by student teachers and mentors. On the one hand, some tended to see behaviour management as the securing of control over the pupils, recognised the importance of controlling their own emotions in doing so. On the other hand, when others described behaviour management situations, they did not present them as a securing of control. Instead, their words showed recognition and response to children's emotions, valuing a secure environment for children to continue feeling secure and a lesson where learning is 'fun'.

The implication is that these particular student teachers and mentors do not separate building relationships from the need for effective behaviour management. They value knowing their pupils' emotional states and predispositions (EK3: Social Awareness cluster), using that knowledge to handle relationships with and between pupils and to induce responses from them (EK4: Relationship Management cluster). The male student teachers and mentor differed in this regard; they emphasise good behaviour as an outcome in itself, controllable with the establishment of boundaries and choosing the right path to follow.

They see their Emotional Self-Control (EK2a) as an aid to behaviour management – depending on how well it is exercised.

To conclude, the data shows that some of the female student teachers and mentors associated behaviour management most readily with the 'relationship management' categories of emotional knowledge (EK4 cluster). In contrast, most of the male student teachers and mentor linked behaviour management to the 'self-management' categories of emotional knowledge (EK2 cluster) particularly their 'emotional self-control' (EK2a).

4.3.2 Emotional knowledge, respect and trust.

While they are different concepts, the narrative data showed commonalities and bonds between respect and trust. Both were seen as something given by a teacher (or student teacher) and as something they received from others. In some cases, there was reference to mutuality where a teacher's respect for and trust in others was part of an emotional climate in which the teacher received respect and trust from others. The relation between emotional knowledge and the concepts of respect and trust are presented in this way.

The definitions used here are of 'respect' being the holding of someone in high esteem and 'trust' being a state of believing in someone.

Student teachers giving respect

Early in his developing placement, a student teacher reflected on how to show respect for his pupils:

> I have tried to respect and accommodate individual differences within the classroom by trying to adapt my teaching methods to meet these individual learning differences [Review week 1; Teaching Standard 5: Meeting needs of all Children and Teaching Standard 6: Use of Assessment]

> I have also tried to demonstrate the behaviour which I expect from the students, such as not trying to raise my voice in class and treating the children with respect]

He hoped that his respect for the pupils showed in meeting their needs as individuals (Service Orientation - EK3c) and through adapting his teaching accordingly (Adaptability - EK2c). The emotional self-control (EK2a) in not raising his voice was also seen as an important demonstration of his respect for the pupils.

At the same time another male student teacher was also linking behaviour management with being respectful to the pupils.

> I re-enforced the expectations that I had as a teacher for behaviour during lessons. I always tried to act in a professional and respectful manner towards children and staff. [Review week 2; Teaching Standard 7: Behaviour management]

This was one of several examples which associated student teacher respect for the pupils with their behaviour management. However, recognition of student teacher respect for others was not always accompanied by reflection on behaviour management. In a glowing report one mentor noted that her student teacher:

> … respects and accommodates individual differences between pupils and has a very good understanding of a range of factors that inhibit pupils' ability to learn. She mixes well with all the adults in school - other teachers, non-teaching staff, Governors and parents who she has always treated with the greatest of respect and professionalism. [Developing placement report on female student teacher by mentor]

This mentor described effective relationship management (EK4 cluster) by the student teacher. This included relationships with the full range of adults within the school community. The mentor shows an implicit appreciation of the student teacher's social awareness (EK3 cluster). For example, her 'organisational awareness' is at least at the level of understanding the climate and culture of the school (EK3b, level 3). The social awareness and relationship management of the student teacher is clearly associated with her showing of respect (and professionalism).

Student teachers receiving respect

Where commenting on receiving respect from pupils, there was still awareness of the reciprocal nature of respect. One student teacher suggested knowing each other contributed to pupils showing respect:

> This made me more confident .. for the first time on Friday as I felt I knew the children and that they knew me and respected me [Female student teacher; initial reflection after observed lesson]

Another saw respect from pupils as something that the student teacher had to gain and subsequently felt that she had achieved this:

> In the first week I have tried to ensure I show children that I expect maximum effort and that I gain the same respect as any other teacher [Student teacher, Review week 1: Teaching Standard 1: Setting high expectations]

> Worked hard on my behaviour management and feel confident I have the respect within the classroom now. [Student teacher, Review week 4: Teaching Standard 7: Behaviour management]

However, these reflections reported student teachers received respect from pupils. Because they were not explicit about how they would earn that respect, it was difficult to identify use of their own emotional knowledge.

Student teachers showing trust in others

The act of trusting as showing belief in someone was visibly applied to both adults and children. One student teacher wrote of the impact that that trust can have on a pupil:

> I now realise that sometimes just believing or showing belief in a pupil can have a vast impact on their learning and being there to praise and encourage can sometimes yield better results than other teaching approaches. I am excited about Monday. [Male student teacher; initial week review]

This praise and encouragement, underpinned by true belief in a pupil, indicates a persistent optimism (EK2f), a tuning-in to the pupil's feelings (EK3a) and the capacity to inspire that

pupil (EK4b). In the following case of a student teacher who learned to trust his classroom

teaching assistant, the process was more gradual. Referring back to his self-grading in the

emotional knowledge survey, he confessed:

> Take developing others … it's probably a three to be honest, I mean I'm not very good. I work
>
> really well with my teaching assistant, she's an absolutely amazing person to work with. I mean
>
> it's taken me a long time to - I know this sounds …but - to trust her because I have a way of doing
>
> everything like in my head and like that way of getting things done. She actually does things
>
> better than I do but it's taken me a while to realise that ..it's taken me a while to build trust ..
>
> trust is a lot to do with the people you work with, not just the kids .. trusting the people you work
>
> with to help you do your job properly you know [male student teacher; interviewed as NQT]

This required the student teacher to build-up over time his relationship management (EK4

cluster). He needed to recognise the teaching assistant's strengths (EK4a) and improve how

he worked towards goals that were shared with the teaching assistant (EK4f).

Without actually using the word 'trust', one student teacher illustrated a trust issue between

himself and a tutor who came into school to observe him teach. The feedback focus was the

emotional knowledge in his teaching:

> I just found the nature of the comments and observations very personal, coming from someone
>
> who doesn't really know me. [Male student teacher; developing placement; reflection on tutor
>
> lesson observation]

He pointed out that he had showed emotional self-control (EK2a) by responding calmly to

the children (EK2a; level 2) while the tutor perceived that as a failure to provide inspirational

leadership (EK4b) for the pupils by stimulating their enthusiasm (level 3) or inspiring them

(level 2). In essence he argued that he could not trust the feedback from the tutor because

she did not know him well enough to make judgements about emotional aspects of his

teaching. Because the tutor did not have any accumulated emotional knowledge of the

student teacher, she gave feedback that was based on only a short observation of his

teaching and the student teacher believed it to be unreliable. This matter led to a change in

the data-collection methods with a second observation of emotionally-knowledgeable

teaching being undertaken by extending placement mentor rather than the university

placement tutor.

Student teachers receiving trust from others

In the emotional knowledge survey, the transparency category (EK2b) received the highest

self-reports and it was perceived to be one of the most-easily-understood categories and

easy to self-report. Defined as maintaining integrity and acting congruently with one's

values, transparency was a less direct euphemism for trustworthiness. It was clear that being

deemed trustworthy was very important to the student teachers:

> I feel like I am trustworthy in the classroom but the interpretation of this in the observational
>
> context maybe didn't transpire. Being marked down for this on the feedback doesn't make me
>
> feel very confident; it's something I want to be seen as [student teacher reflection after tutor
>
> lesson observation; developing placement]

While this student teacher was deflated by the failure of a university tutor to recognise her

transparency, others were more concerned about earning the trust of their pupils and school

staff. A former student teacher recounted a conversation with a parent whose child claimed

this teacher had shouted at her:

> ..so I said 'well, her understanding of shouting is different to other people's understanding of
>
> shouting' so it's been really challenging. It's probably been the most challenging thing this year -
>
> building her trust. It seems to be going well now … hopefully…fingers crossed. [Male former
>
> student teacher; interviewed as NQT]

The greatest teacher concern was that the child did not yet trust him although he was

optimistic that this was changing (EK2f). In the same interview, he showed an understanding

of trust as a product of good relationships.

> We have had one of the children in the class … her brother's really sick and her family spend a lot of time with him and less time with her, and she doesn't have a very good relationship with her father. So building a relationship with her has been extremely difficult and challenging but we're finally getting round to it I think. I think it's that she doesn't really trust men because she doesn't have a very good relationship with her father but now she's learning to trust me and she's starting to work pretty well in the class

Again his optimism (EK2f) showed, particularly his resilience (Level 2), as he told how 'difficult and challenging' it was to earn that trust. His view that he is gaining the child's trust is informed by her starting to work well in class. For another student teacher, the evidence of trust in her was in how far the class treated her as they would their usual classteacher:

> By the fifth week the students feel very comfortable in class with me as the class teacher, later on in the placement I have found the students coming to me (instead of the usual class teacher) to ask for help in my lessons, which is important because it shows they know who is in charge and that they can trust me [Female student teacher; Review week 5; developing placement; Teaching Standard 7: Behaviour management]

Here the pattern of associating trust with behaviour management was evident, although it was less apparent how the student teacher had earned that trust, including whether they had used emotional knowledge.

Receiving both respect and trust

Student teachers who earned trust and respect were likely to be accepted within the school staff team. They were highly valued, as illustrated in this mentor report:

> He is loyal, trustworthy and a well-respected member of our team. I wish him well for the future [Mentor report; end of developing placement]

Elsewhere in the same report, the mentor gives reasons given for this accolade:

He has worked extremely hard during this placement and has become a valuable and

committed member of the teaching team. He has been professional, reliable and

trustworthy and a great asset to our school throughout his time here.

Hard work, commitment, professionalism and reliability are the reasons given. They are clues

that emotional knowledge contributed to this appraisal. The most easily-identified category is

'transparency'(EK2b). It is difficult to see how the student teacher would have demonstrated

those qualities without maintaining integrity and acting congruently with - by keeping

promises ('reliability'), bringing up ethical concerns (part of 'professionalism') and publicly

admitting to mistakes .. the sort of honesty that contributes towards a person being

trustworthy.

Conversely some mentors were trusted and respected by their student teachers. One of

them looked back on her developing placement mentor:

She's so nice and she's such a great teacher but she's towards the end of her career - she'll openly

admit 'oh I can't be bothered with this anymore' .. and she's very traditional in that way but the

kids have so much respect for her and they look up to her and they see her as like a grandma

figure… She actually taught me how to, – without completely dampening what kind of teacher I

would be naturally, she encouraged the bits that I wanted to work on.

[Female student teacher, interviewed as NQT, four months after extending placement]

The student teacher shared part of her personal pedagogy, her belief that teachers earn the

respect they received from pupils, talking of her mentor as a model for this. The 'grandma'

comparison suggested she was a caring supportive figure, one who was trusted as well as

respected by the children. As well as showing transparency (EK2a), the mentor seemed to be

empathetic towards the children (EK3a) sensing their feelings and perspectives while taking

an active interest in their concerns. Her protestation 'oh I can't be bothered with this

anymore' referred to the ever-growing expectations of teachers in an education system

driven by an accountability agenda. Her organisational awareness (EK3b) showed understanding of the school climate and culture (level 3) and possibly the higher level understanding of organisational politics (level 2) and underlying issues (level 1).

Mutual trust and respect

There was wide recognition from student teachers and mentors that trust and respect should be two-way processes. This mentor talked of these reciprocal relationships in terms of emotions:

> It's hugely important in terms of having a mutually trusting and respectful relationship with children and being able to read their emotions and how they're feeling; how they're going to respond to you; how they're going to react to you and in turn how you should respond too, to them or a situation that they're in and to be fully in control of your emotions at all times. [Female mentor of male student teacher; interview]

She refers to a teacher's social awareness (EK3 cluster), specifically having empathy (EK3a) with the children and the organisational awareness to read the class's emotional currents (EK3b). She also recognised the need for self-management (EK2 cluster) by retaining emotional self-control (EK2a). Student teachers too understood the value of mutual trust and respect:

> During this first week I have spent time talking to each child to try to get to know more about them and to support them and this has helped me to build up a respectful, supportive and trusting relationship with the pupils. [Female student teacher; Review week 1; developing placement; Teaching Standard 1: Setting high expectations]

I interpret this as giving and receiving trust and respect because she writes about a relationship. However she accepts responsibility for building that relationship. Similarly, another mentor recognised that her student teacher had been proactive in establishing mutual respect with his class.

He has created a safe learning environment based on mutual respect [Mentor report; end of

developing placement]

It is normal for student teachers to have responsibility for the respect and trust within the

classroom learning environment and to be praised when they manage it well. However,

when the relationship is one between student teacher and the class teacher, there is more

acceptance that both parties contribute to the positive development of the relationship, as

this example shows:

Me and my class teacher have developed a trustworthy working relationship, she offers support

when I need it and I feel I can ask her when I need more! [Female student teacher; review week 2;

Teaching Standard 8: Wider professional effectiveness]

The classteacher here was not the designated mentor of the student teacher but was the

teacher who normally taught the class. The description above implies that the classteacher

develops the student teacher (EK4a) by providing support (level 2). With more evidence, it

might have been possible to classify this emotional knowledge category as one of giving

constructive feedback (level 2) or acting as a mentor (level 1).

Trust is viewed as a belief in someone's reliability, truthfulness or ability - the firmer the

belief, the stronger the trust. Thus it is an epistemological notion in which one comes to hold

beliefs because of others rather than on the basis of evidence (Origgi, 2004: 61). However it

can also be seen a form of social capital for the trustee (Fraser-Burgess, 2011). In this study,

it is defined as both a belief about knowledge and an accumulating asset that has to be

earned.

To conclude this section, these narratives indicate strongly that the collective view of the

participants was that mutual respect and trust made effective behaviour management

easier. They strongly associated earning respect and trust with emotional knowledge

categories with most being proactive in showing respect for, and trust in, others and mutual trust and respect was perceived as essential for a safe classroom climate.

4.3.3 Pathways between clusters of emotional knowledge

When selecting a piece of raw data and coding it under the emotional knowledge cluster headings, that data was usually coded under more than one cluster heading.

In conducting thematic analysis, the researcher has to choose whether the prevalence or the importance of the coded data is more important (Javadi and Zarea, 2016). In this case, it was the former because the numbers were particularly large. the repetition of the coding because of 216 pieces of data were coded as 'EK Self-awareness'. 96 of those pieces of data were also coded as 'EK Self-Management' - a notable regularity. This became of greater significance when considered alongside the 208 quotations illustrating EK social awareness (EK3 cluster). 133 of these 208 were also coded for relationship management (EK4 cluster). So overall, about half of the selected pieces of data were relevant to more than one cluster of emotional knowledge.

In this short piece of narrative, the student teacher was reflecting that he had not felt enthusiastic (EK1a) yet needed to act enthusiastically with the children:

> Behaviour issues arose from inactivity within the children. I need to keep children at this age busy, and be more enthusiastic combined with controlling [Male student teacher; reflection after emotional knowledge lesson observation]

This could prompt discussion of the pressure on the student teacher to 'be more enthusiastic' and whether this would be the emotional labour of modelling enthusiasm to the children through false emotion (see Chapter 2: Literature Review). However this short narrative is chosen here to illustrate a pattern of cross-cluster links between the categories of emotional knowledge. The student teacher showed emotional self-awareness (EK1a) as he reflected on the behaviour issue. His intention was to go further than self-awareness and

improve his emotional self-control (EK2a) by actually being more enthusiastic, presumably to motivate the children to learn and thereby have less behavioural problems in the class.

There is a complexity in analysing this reported participant experience though. If reflection itself is a goal, then the failure of the student teacher to act enthusiastically in class is a precursor to greater self-awareness, as shown in the quotation above. If emotional self-awareness is seen as an end in itself, the lack of self-management (EK2) leading to self-awareness (EK1) would be seen as a total success.

Of course, emotional self-awareness is not a goal in its own right. This research is, as well as an inquiry into emotional knowledge, a study intended to support student teacher progress. As such, that goal must be to go beyond reflection and awareness of emotional shortcomings to emotional reflexivity, a process of reflection *and action*. It is the self-management and relationship management that actually improves learning and/or teaching. So, during effective use of emotional knowledge, awareness came first, then management.

However analysis showed emotional knowledge links not just from awareness categories to management categories. There were similar associations between the self and social categories, as the example below demonstrates. This student teacher recalls her enthusiasm when teaching (EK2a), a success through which giving 'a lot of pupil choice and pupil lead' led to development of the children (EK4a) as they 'enjoyed and learn from' the activity.

CfWR.docx - [S3S4wk5 This week the majority..]

*Codes: [A Priori - **EK Self-Management**] [A Priori **– Relationship Management**]*

A Priori - EK Self-Management Report: 197 quotation(s) for 1 code

This week the majority of differentiation has been based on pupil interest ….. I was enthusiastic throughout the two days which I feel helped to motivate the children. Running an activity which lasted for two days and included a lot of pupil choice and pupil lead was what I felt a big risk to take but it clearly worked and the children enjoyed it and learnt from it [Female student teacher;

review week 5; Teaching Standard 4: Planning and Teaching]

Her self-management served as an antecedent to her relationship management with the pupils becoming 'motivated, enjoying and learning'. More specifically, her initiative (EK2d) in taking a calculated risk (level 1) led to her acting with inspirational leadership (EK4b) in stimulating enthusiasm (level 2) and inspiring the pupils (level 3). This experience therefore serves as an example of self-management leading to relationship management.

So the data shows participant experiences of emotional knowledge that cross the cluster boundaries.

The three emergent features of emotional knowledge showed the following:

Behaviour management:

- Use of emotional knowledge is seen by student teachers and mentors as having an essential association with behaviour management.

- Views differed regarding the importance of the personal and social categories of emotional knowledge; some participants associated behaviour management with their own self-awareness (EK1 cluster) and self-management (EK2 cluster) while other participants associated behaviour management with their social awareness (EK3 cluster) and relationships management (EK4 cluster)

Respect and trust between student teachers, mentors and pupils:

- Respectful trusting relationships were seen to make effective behaviour management easier.
  Earning respect and trust was strongly associated with emotional knowledge categories.

- Student teachers and mentors tended emphasised their respect for and trust in others rather than any entitlement to be respected and trusted.

- Student teachers and mentors perceived mutual trust and respect to be a hallmark of a safe classroom climate. Such a trusting and respectful environment is integral to the positive emotional ecologies of a school placement (discussed in Chapter 2: Literature review)

Pathways between clusters of emotional knowledge:

- More than half of the selected 682 written and spoken narratives were coded for both awareness and management clusters of emotional knowledge categories.

- The experiences of emotional knowledge by the participants included combinations of categories from different clusters. Self-awareness led to self-management and social awareness led onto relationship management in situations where the participants were describing successful use of emotional knowledge to impact on learning and/or teaching.

- Where those experiences were less positive, the student teachers (re)visited the awareness categories to reflect on the experiences. In a model of good practice in using emotional knowledge, self or social awareness is a precursor to self- management or relationship management.

Q4 What were the participant evaluations of the emotional knowledge inquiry?

The first formal opportunity for feedback on the inquiry as an inquiry was during the focus group meeting. Here the student teachers were shown several anonymised extracts from their written thoughts shared so far about having the emotional knowledge within their teaching observed. It drew the following responses during the focus group:

It's normal to be nervous before an observed lesson, no matter how well the placement is going

[male student teacher; during the focus group meeting]

This is reassuring - it's normal to have feelings like that then? We [student teachers] are generally not so open about these feelings [female student teacher; during the focus group meeting]

I was annoyed with the observed lesson because others were much better [Male student teacher; reflections after observed lesson on developing placement]

One student teacher participant remembered the workshop when interviewed eight months later:

Yeah I'm thinking, in my case, it was some use because I think as well, the kind of workshops we did talk about how we felt in the classroom and the results from the first round. It kind of helped me realise that - that was around where I was learning and children in my class are learning at the same time so it's like how do they feel with their learning? It's probably similar to how I feel except they don't have the words or perhaps the understanding to express how they feel. [female former student teacher; interviewed as an NQT]

Five of the mentors and four of the former student teachers were interviewed about three months into the next academic year. They were asked for their views of the emotional knowledge inquiry in which they had participated. The respondents are labelled to show the range and relationships of participants cited (see section 3.3.1; Table 3). For example, *HfMI* is the mentor of student teacher *H*, this mentor is *f*emale and the data type is a *M*entor *I*nterview while *HmI NQT* denotes that student teacher *H* is *m*ale and the data type is an *I*nterview with an *NQT*. This labelling also provided an appropriate level of anonymity.

The mentors had of course observed and assessed the emotional knowledge of the student teachers on extending placement. They gave these responses:

I really, really strongly feel that it should be a part of trainee teachers' development because I now question my own emotional behaviour in school towards the children, towards other adults. It's hugely important from what I've seen when I've mentored students professionally and reflected on my own practice [*AfMI*]

I think it is good because the students have so much work and things to do so on the social, you know, how they feel sometimes you might not look at that and see how they're coping [*CfMI*]

It's very important when you're working with children because the relationships you build are very important to their learning outcomes. [*DfMI*]

Quite important to have an understanding and to try and sense what the emotions and dynamics are like in a classroom. [*FmMI*]

It was very useful; it's quite an emotional job and it can take over your life and I think thinking about the emotional side of it is important to be aware of yourself and of all these different things it looked at. [*HfMI*]

One noticeable pattern was that the mentors each connected the experience of observing a student teacher's emotional knowledge to their own practice. Another was that they were all able to give reasons for their views. This articulation of reasoning behind the answer does suggest that the mentors gave authentic replies rather than socially-desirable responses. The same can be said of the replies from the four former student teachers:

If you just asked me how I felt about it I'd probably say 'oh not very', but when I took this away [the framework] and thought about it, actually I think it's probably very relevant and I do maybe semi-consciously think about these things without realising that's what it is that I'm thinking about .. if that makes sense? So actually it has really helped me. [*CfI NQT*]

It kind of helps with the unknown. So being more emotionally aware and being able to say 'this is how you could feel'; 'this is how you've dealt with it previously', not knowing where I'm going to be and not knowing where I'm going to go, I think going into it, having this emotional awareness or having this emotional knowledge helps. [*DfI NQT*]

In terms of my class I'd say extremely relevant. I've got pupils who are recognised as having emotional/social issues; just having an idea of their triggers and what they're like as I get to know them emotionally, it's helped me a lot with their learning. In my own case, it was some use too

because I think of the workshop where we talked about how we felt in the classroom and the results from the first round. [*FfI NQT*]

The exception to the pattern was the fourth NQT, who felt better able to use the framework now than when he was a student teacher, suggesting that a future inquiry with greater longevity could be useful.

Mentors and student teachers believed that the framework was relevance to the teaching of student teachers and experienced teachers.

It's a really good thing and I think any good student teacher – well not just student teachers, teachers who are qualified should definitely be looking at these sorts of things because they are just as important. [*CfI NQT*]

I've been teaching for 8 years so to think 'oh actually I need to question myself and my emotional behaviours and confidence and coping strategies' .. that kind of thing …it's been a really good model for myself not just for trainee teachers; [*AmMI*]

Two mentors associated the inquiry with the placement environment, one within the classroom, the other at a school level.

it's important that every adult considers their emotions when dealing with children in the school environment. It's hugely important. It's very, very interesting. [*AmMI*]

To make people aware of their feelings and other people's feelings can affect learning and the environment in the classroom and things. [*FfMI*]

Two mentors saw the inquiry as a formalising of teaching behaviours which were already happening unconsciously. This contrasted with two of the former student teachers who saw more value in the formalisation of emotional knowledge as reflexive practice.

It's like driving a car – you don't necessarily think about changing gear, you just know that you do it. It's the same when you're in the classroom – a little pointer to remind you of a sign of this and you'll see it and it will jog your memory and you'll say 'yeah oh they are doing that' or 'that's

something you could work on' [*FmMI*]

It's something that I would probably do anyway without actually writing it down. It's something you do as a teacher when you're working with a student teacher; you sort of take in all those things anyway. It's something that I would be aware of so it just focussed it into a more sort of formal format really. [*DfMI*]

These mentors validated the framework in terms of their own pedagogic beliefs which attached importance to the tacit knowing of in-the-moment teaching. They did however then recognise the value of making emotional knowledge explicit. The former student teachers however talking in terms of the meaning of emotional knowledge coming through their reflective practice.

It was sort of cathartic … I know I wrote one of them [the '1st week reflection' data]– I focussed a lot on how I interacted with the children. I'm thinking 'calm down, you're getting yourself hetted up'; doing that blog has kind of shown me that - even though that was like a long-term reflection - even in that short-term, take a minute, count to ten and think about what your emotions are like. I'm quite self-critical so it gave me a chance to just sit back and think 'God, you're taking it out on yourself a bit here. Why don't you just ease up a bit?' – I liked writing the personal blogs because it gave me time to just reflect on things .. things that perhaps aren't covered in the PGCE. [*FfI NQT*]

Yeah, well I like that kind of stuff anyway [the inquiry] so I enjoyed that but I understand it's not everyone's cup of tea. That's very reflective what we did there. It's all reflection and I really enjoy reflection. I enjoy reflective writing. [*DfI NQT*]

The first cited student teacher analysed this reflection on her emotional knowledge as short-term and long term, as in-the-moment and afterwards. She also saw the inquiry as an opportunity to write, writing being a stimulus for this reflection about her emotion-related experiences that perhaps was not included elsewhere in the programme. The second recognised the reflective practice that the inquiry required of the participants. She went on,

late in the interview, to demonstrate that her reflection had been linked to the development of her emotional knowledge:

> my confidence was high and I felt I had much more awareness of my capabilities but I didn't know if that was because on placement over time you get more confident, especially when you feel like you're coming to the end and you're wrapping everything up. But would this emotional awareness still be there when put in a different situation like getting a new job? I wasn't sure whether or not that would see me right through but I did feel more confident towards the end and I felt like I knew that I was a good teacher by the end of the course, which I really questioned initially. I didn't know how well a lesson had gone; I didn't know how well I was doing; I was relying on someone else telling me. By the end I could recognise where I'd done better [*DfI NQT*]

She referred to growth of self-awareness, specifically her emotional awareness (EK1) and her self-confidence and, implicitly, her self-assessment. Reflection fuelled through peer support was also identified as a powerful approach to develop emotional knowledge by a former student teacher and a mentor:

> The workshop when we got together – I know myself and all the others who took part found that really helpful because when you anonymised all of the blogs and you shared some of the anecdotes, there were basically 15 anecdotes paraphrasing the same thinking and all that. [*FfI NQT*]

Here the emphasis was on sharing the emotional experiences of being on school placement. An example was the reassuring discovery at the workshop that, when being formally observed when teaching, most or all of student teachers are similarly pressured and often stressed – it was normal. A mentor too saw peer support as a way of using the framework.

> Having somebody else to discuss it with or having some kind of observation and feedback system would obviously be more beneficial .. having somebody to air your thoughts with and reflect, rather than actually kind of judging … I think it might be better peer-to-peer rather than mentor to student or, you know, have both built into it somewhere. If you had a good enough relationship with a

student teacher to discuss those things, that would be useful because you're both in the same situation, starting out in the profession rather than somebody that's more experienced. *[HfMI]*

This mentor recognised the importance of relationships between student teacher peers or between student teachers and mentors, proposing a non-judgmental approach. She also felt that observing emotionally-knowledgeable teaching was beneficial when the observer knows the observed student teacher well.

Tricky in some ways because you obviously observe so much and there's obviously a lot more going on internally. You can only see the outward signs but I think I knew the student quite well and after a lot of our conversations with our weekly reviews and setting targets and everything like that. I felt like I knew him well enough to base my judgements on his person as a whole, knowing a little bit more about him …[*HfMI*]

Another two mentors affirmed that these observations were straightforward, without adding the above caveat about the relationship between the observer and observed.

When I first looked at the model you first showed me, I did think 'oh I've to try and get my head round that and am I looking for the right things' but actually in terms of observation and making notes, it was incredibly easy to flag up [*AmMI*]

I didn't find it that different to a normal observation really. It's something probably that I look at anyway but I didn't find it that different to a normal lesson observation. I had my focus; you gave me the focus; the areas to focus on so it was clearly outlined so I just looked at those. [*DfMI*]

The checklist structure was indeed similar to that used for the standard lesson observations which assessed student teacher progress against the Teaching Standards. However, the student teacher she had observed set the observation judgements in a wider context:

Yeah just because as my mentor said it wasn't just built on the observation in that lesson, it was what she'd made of me in the whole placement you know, the observation that she'd made of me throughout the duration I was there so I felt like she was in a better position to judge me. [*DfI NQT*]

In that situation, the student teacher had trust in the person giving feedback and the observer can make judgements based on more than the overt teaching behaviours within that lesson.

In the main, the mentors believed that the emotional knowledge framework should be introduced to teachers during their initial teacher education.

> It should become a part of their learning and during their PGCE or whatever route they're taking. It should feature in their learning and coping strategies .. and for the health and wellbeing of a teacher because it is a very stressful job so they need to recognise the signs of different emotions, what triggers them, how to deal with them, cope with them, manage them. [*AfMI*]

> It would be quite good to do it early. As a student I was quite nervous and quiet and that was picked up on. I think if you pick up on it and sort of give them strategies at the beginning, hopefully they're working on that. [*CfMI]*

> It's maybe missing and I think it's very important because this emotional knowledge can have such a big impact on the children. All teachers should be aware of it so it would be better done when they were training. I've come across teachers who aren't aware of this and it has a detrimental effect on their teaching. If students were made aware of it in college, then when they came into schools I think they might find it easier to work with the children. Just to be aware of those things. [*DfMI*]

One former student teacher realised that he understood the emotional knowledge categories better as an NQT with the full responsibilities of being an employed classteacher than he did when he was a student teacher.

> Last year when I did this I didn't really understand what everything meant. I didn't understand the full spectrum of what each of these things meant, things like …ermm … self-control. But being in a classroom every day you get to understand yourself a little so if I did the [emotional knowledge] self-assessment now it would be a lot different. [*HmI NQT*]

Perhaps too there was more that could have been done during the inquiry. One interviewee

suggested specific programme input on those categories of emotional knowledge that were poorly understood:

> Maybe useful to have sessions looking in depth at these [emotional knowledge categories], the ones where people thought they were quite hard to understand and assess, maybe look in detail at them and how you would meet the criteria. After the initial survey if you collected the data and certain areas kept coming up as difficult to assess and things, then maybe run a couple of workshops to cover those so then people would know where they were going. [*CfI NQT*]

Her suggestion is that the whole-cohort survey could be used not just as a data collection instrument but also a formative assessment tool to address commonly perceived as areas of ignorance or weakness.

The juxta positioning of the emotional knowledge framework and the Teaching Standards framework was flagged by one mentor and one former student teacher:

> I think because it is quite a vast spectrum of all the different things; it's not a very straightforward area is it? It's quite complex. Very complex. I thought it was very useful though. It's obviously something that's not really taught or considered really when we are training. It's very much a focus on meeting the standards [*HfMI*]

> Presenting a model like this [emotional knowledge framework] … it would be quite hard to engrain across the whole course the way we did it because you'd have to completely remodel the whole teaching standards thing [pause] .. But I found it quite useful – my mentor loved it so I found it useful having her observe me in this … but when you've got two sets of criteria which you're working against, I'm like 'oh am I ticking every box?' Because they're quite different. [*DfI NQT*]

The first participant recognised that the emotional knowledge framework was wide-reaching and that addressing the Teaching Standards which was a very different framework. The second participant also recognised the complexity of any attempt to integrate the emotional knowledge framework into the Teaching Standards. However she also valued emotional knowledge as developmental, citing social awareness as assets that can grow:

> Looking at it and being assessed against it, makes you more aware of it, so I think that helped me. Another thing is that it's quite relevant – my social awareness. I always felt like quite a socially aware person but I felt like that was a natural thing but towards more the end of the assessment and what we were looking at I felt like I could learn it more.

A cautionary note was added by student teachers and mentors; this was the belief that development of emotional knowledge would take time rather than being addressed as a quick-fix solution.

> These things can be quite hard … finding ways of improving. It can take time but it's good to see a progression and to see areas that maybe – well maybe if I work on that, my social awareness, then maybe this will improve. I like it personally. [*CfI NQT*]

> When it comes to emotional behaviours I think it takes a bit more time and practice and exploration to kind of change how you are and to change the way you react to things and deal with them. [*HfMI*]

In short, participants felt that emotional knowledge was not fixed but could be improved over time.

4.5 Summary of Results

To summarise the results in terms of the key question in this section:

Q1 How well were the emotional knowledge categories understood by the student teachers?

- Two thirds of the 84 student teachers who completed the survey believed that they understood emotional knowledge well enough to self-report a level of attainment.

- Considering the early stage of their teacher education programme, their mean self-reporting of their own emotional knowledge was high with a median nearer 'good' than 'satisfactory'.

Q2 How did student teachers make use of the emotional knowledge categories?

Several findings have surfaced in this section, namely:

- All categories of emotional knowledge were visible within the narratives, with the majority of categories evident through student teacher behaviours at all four levels.

- For some emotional knowledge categories - achievement drive (EK2d) and organisational awareness (EK3b), the was little sign of the harder level 1 and level 2 behaviours which required the student teachers to show increased intensity, complexity, sophistication or completeness.

- Many of the emotional knowledge categories became visible behaviours when cited in an indirect and sometimes unconscious manner by the student teachers and mentors. This occurred within examples of how the teaching met (or did not meet) the national Teaching Standards required for the award of qualified teacher status.

- There was substantial evidence that student teachers and mentors believed that teachers who knew the emotional state of themselves and their pupils - present and historical – were better able to show high levels of emotionally-knowledgeable behaviours.

- Student teachers and mentors often referred indirectly to emotional knowledge, a tacit understanding without being aware of it. This usually occurred as they reviewed or evaluated performance in terms of the Teaching Standards.

- However, they did value emotional knowledge; this was expressed through a belief that those who knew the emotional state of themselves and their pupils were better able to show better self- management and relationship management.

Q3 To what extent was the emotional knowledge framework challenged by the emergence of additional or alternative features from the data?

- Emotional knowledge by student teachers and mentors was linked to **behaviour management**. Some tended to view management of pupil behaviour as control of the pupils, achieved through the teacher's emotional self-awareness (EK1a) and their self-

control (EK2a). Others typically perceived the behaviour of pupils as a by-product of the teacher using empathy (EK3a) and relationship management (Cluster EK4)

- There was a link between behaviour management and mutual **respect and trust** between student teacher and pupils. These trusting and respecting classroom relationships were essential for a safe classroom environment and positive emotional ecologies (see Chapter 2: Literature Review)

- Student teachers usually described situations using **emotional knowledge categories from more than one cluster**. Within single pieces of data, at least two categories were evident. Personal or social 'awareness' (EK1 and EK3) was antecedent to self-management or relationship management (EK2 and EK4). Similarly self-awareness could lead to social awareness and self-management could lead to relationship management. However this pattern was reversed where the student teacher was self-reportedly unsuccessful in demonstrating any of the management categories; here they revaluated their own awareness of self and others.

Q4 *What were the participant evaluations of the emotional knowledge inquiry?*

- There was a positive response to the emotional knowledge framework from the five mentors and four former student teachers who were interviewed after the end of the inquiry.

- The mentors connected emotional knowledge to their own teaching practices, two of them also associating it with the classroom and school environment

- The interviewees believed the framework to be relevant at any stage in teacher development but should be introduced during initial teacher education.

- Two mentors emphasised their emotional knowledge as tacit and unspoken teaching practice; two former student teachers highlighted their emotional knowledge as reflexive practice.

- Observing a lesson and giving feedback on the emotional knowledge of a student teacher is not difficult if the observer has some prior knowledge of the student teacher

- Possible peer support roles include observation and discussion

- There is a risk that using the emotional knowledge frameworks and the Teaching Standards simultaneously could be overly-complex.

- A teachers' emotional knowledge is a potentially sensitive area, discussion of which relies on trust.

- Emotional knowledge can be developed but it takes time.

Overview

There was a high level of student teacher confidence in their self-reporting their emotional knowledge, with evidence of nearly all the tested categories of emotional knowledge being used on school placements. Emotionally-knowledgeable teaching was easily cross-referenced to the national Teaching Standards.

Emotional knowledge, behaviour management and respectful trusting relationships were strongly linked to each other and interwoven within the student teacher's practice.

The data showed links between the participant experiences of the awareness and management clusters of emotional knowledge. Where their descriptions identified personal self-awareness categories (EK1) , they also tended to identify personal self-management clusters (EK2). A similar pathway was found between categories within the social awareness (EK3) and relationship management clusters (EK4).

The next chapter will be a critical discussion of the findings described here.

Chapter 5: Discussion

5.1 Recapping the research questions:

I had a professional concern as a teacher educator. This was to support student teachers through the emotional terrain that they crossed to become a teacher. The literature suggested that although teacher educators (both school-based and university-based) recognised managing emotions to be pa rt of teaching, further research is needed. I sought a way to understand these emotional aspects of teaching that could be an asset to student teachers, thereby adding value to the student teacher experience and improve my own teacher educator practice.

So my initial inquiry, voiced in Chapter 1 (section 1.2) was at a general level, asking:

''*How could the emotional aspects of learning to teach be better addressed by teacher educators and student teachers?*'

This question drove my search for literature, the outcome of which is recorded in Chapter 2. Informed by the existing research, an additional research question was drawn up, one which narrowed 'emotional aspects of learning to teach' down to a more specific theoretical construct:

What meaning does 'using emotional knowledge when learning to teach' have for student teachers and their school placement mentors?

An interpretative approach was used from this point to find the essential attributes of the use of emotional knowledge. This was to be achieved by investigating through the school placement experiences of student teachers and their mentors. The above question was broken into the four sub-questions below. The data collection and data analysis methods, described in Chapter 3, were designed with those questions in mind.

Q1:How well were the emotional knowledge categories initially understood by the student teachers?

Q2: How did student teachers make use of the emotional knowledge categories?

Q3: To what extent was the emotional knowledge framework challenged by the emergence of additional or alternative features from the data?

Q4: What were the participant evaluations of the inquiry?

The results, reported in Chapter 4, have been presented as responses to those four questions. In this chapter, the key findings will be discussed, before Chapter 6 evaluates the inquiry and Chapter 7 concludes with a summary and the implications of the thesis.

5.2 Key findings

This section draws upon the findings as seen from my researcher perspective, that is the viewpoint of someone who has substantial experience of primary teacher education and, before that, of primary school teaching and leadership. As such, I will present the findings as answers to the research question, interpreting them with a commentary that establishes the key findings and then discussing how those key findings are interlinked.

5.2.1. Q1: *How well were the emotional knowledge categories understood by the student teachers?*

Emotional knowledge was easier to understand than self-report

The vast majority of student teacher respondents (92%) claimed to understand the emotional knowledge framework categories although 35% of the respondents found that self-reporting their own emotional knowledge was difficult. The emotional knowledge categories were believed to be both easy to understand and easy to self-report by 64% of the student teachers who completed the survey, while the categories were easily understand but not deemed easy to self-report by a further 27% of the student teachers. So the student

teachers found most of the emotional knowledge framework to be easy categories to understand but less useful as a tool for self-assessing their teaching practice, unless the self-assessment was alongside feedback from mentors.

If the purpose of such an inquiry was to help a student teacher to improve his or her use of emotional knowledge, it may be considered that self-report is the best way to achieve this. The thesis put forward through this inquiry is that, as well as there being more to learn about emotional knowledge itself, student teacher emotional knowledge can improve. This evidence indicates that this is so if there is not full reliance on self-reports. The tool should also be used by those persons giving feedback such as mentors, pupils, and peers.

My own experience as a teacher educator is that programme providers would expect to support the independent learning and empowerment of student teachers while using a range of assessment sources to ensure reliable judgements about the quality of teaching achieved by those student teachers. However, if emotional knowledge was recognised by the institution as an important aspect of teaching, any systematic assessment would need to be a careful balance of self-assessment and feedback because it is a sensitive area, as the student teachers flagged up during the research workshop. It is more likely that the emotional knowledge framework would be seen within the context of developing student teacher capacity for self-assessment.

It should be no surprise that it was difficult to self-assess some aspects of emotional knowledge. However, the statistics were means across 18 categories of emotional knowledge and 84 respondents.

Reporting of lower self-awareness than self-management

The student teachers reported lower awareness and higher action. They reported that they had lower emotional self-awareness, accurate self-assessment and high self-confidence, but

felt more successful in acting with emotional self-control, transparency, adaptability, striving to achieve, using initiative and maintaining optimism.

Within the self-awareness cluster (EK1) student teacher self-assessment (EK1b) and self-confidence (EK1c) was reported as lower than their emotional self-awareness (EK1a). It would be reasonable to interpret this as a natural lack of self-assurance and a novice awareness of the job and how well they were doing, rather than any emotional fragility. A feeling of uncertainty was common at this stage of a one-year course to became a teacher and, if they were like previous cohorts I had taught, the students would know that emotions they were experiencing would include anxiety, hopefully mixed with the euphoria of successful moments! On the other hand, the self-management cluster (EK2) includes one category which was unlikely to get low self-reports. This was transparency, a measure of integrity associated very closely with trustworthiness, a sensitive area for which only the most critically-aware and honest student teachers would give themselves a low rating.

Reporting of higher social awareness than relationship management

Interpersonally they reported more awareness and less action. They had high levels of empathy, organisational awareness (of the climate, culture and politics of the school) and service orientation (being centred on pupil needs) but were less successful in acting to develop others, inspire by leadership, initiate change, use influence, manage conflicts and foster teamwork and collaboration.

By looking more closely at the clusters of social awareness (EK3) and relationship management (EK4), more sense can be made of this finding. While the students self-reported high use of empathy (EK3a) and service orientation (EK3c) their organisational awareness was much lower. Again, this affirms what I would expect, that few student teachers would declare that they do not tune in to pupil concerns or do not put their pupils'

needs first while they are unlikely to state that they understood what makes a school tick after such little time in a school setting.

Bringing these parallel findings together, the mean self-report the relationship management is half a grade lower than that for self-management. To contextualise the self-reporting, it should be remembered that the large majority of survey respondents had no teaching experience prior to the course (see p87) and were completing the survey after only one four-week school placement on which the student teacher had typically taught only one lesson a day. The student teachers knew that the following six months was to include five-week and ten-week placements with a steeply-rising teaching workload. This difference suggests student teachers at the early stages of their programme do indeed act with more emotional self-management than relationship management.

So how well were the emotional knowledge categories initially understand by the student teachers?

Firstly, the self-reports showed a belief amongst the student teachers that their emotional knowledge was stronger in the self-management categories than in relationship management categories.

Secondly, they believed that it was not as easy to self-assess their emotional knowledge as it as to understood what the categories of emotional knowledge are. In keeping with research into teachers' emotional intelligence or emotional competence, this suggested that self-report alone would not generate reliable assessments of emotional knowledge.

5.2.2 Q2 How did student teachers make use of emotional knowledge? To recap, the emotional knowledge framework being tested was a four cell matrix with boundaries between the clusters of self-awareness, self-management, social awareness and relationship management (see Table 9 below).

The overall findings about the theoretical structure showed that this framework worked well

Table 9: Emotional knowledge (1): recapping the tested framework

Self-Awareness (EK1)
Emotional Awareness
Accurate Self-Assessment
Self-Confidence

Self-Management (EK2)
Emotional Self-Control
Transparency
Adaptability
Achievement drive
Initiative
Optimism

EMOTIONAL KNOWLEDGE (EK)

Social Awareness (EK3)
Empathy
Organizational Awareness
Service Orientation

Relationship Management (EK4)
Developing Others
Inspiring Leadership
Change Catalyst
Influence:
Conflict Management
Teamwork and Collaboration

enough; the categories of emotional knowledge were identified in the documents and interviews provided by student teachers and their school placement mentors. The exceptions to this were the 'achievement drive' and 'organisational awareness' categories, neither of which were clearly demonstrated.

The survey also showed that 'achievement drive' was not well understand; neither was it easily-identifiable in the narratives, where the risk-taking element overlapped other categories in the same cluster – adaptability, initiative and optimism – and the goal-focussed aspects duplicated 'service orientation'. 'Achievement drive' was therefore removed from the revised model, shown as Figure 9.

In detail the categories of emotional knowledge were visible. While understanding of organisational awareness was similarly weak in the survey, it is reasonable to attribute that not to a lack of relevance, but to the student teachers' lack of school experience at that point. Consequently, the framework is being revised by excluding 'achievement drive' and reconceptualising 'organisational awareness' as 'school awareness' (see Figure 9)

I did not anticipate that the student teachers' responses would show an understanding of 'service orientation' as essentially putting the children first (see section 2.1.4). Perhaps this transactional understanding of teaching as a service and children or their parents as consumers should not have surprised me given the accountability culture associated with education over the past three decades.

The original framework (Table 9) portrayed separate categories of emotional knowledge. Consequently each of the eighteen categories was a coding theme. The emergent coding however showed a dynamic interaction between student teacher use of the categories, crossing the awareness and management cluster boundaries.

Returning to research into the Emotional Competence Inventory within which my framework had its origins, Goleman and colleagues had found similar pathways between clusters when testing ECI :

"In an analysis of data on workplace effectiveness, Richard Boyatzis, Ruth Jacobs, and I have found that Emotional Self-Awareness is a prerequisite for effective Self-Management, which in turn predicts greater Relationship Management. A secondary pathway runs from Self-Awareness to Social Awareness (particularly Empathy) to Relationship Management. Managing relationships well, then, depends on a foundation of Self-Management and Empathy, each of which in turn requires Self-Awareness" (Goleman, 2000: 6).

He went on to observe that any "distinction between the Social Awareness cluster and the Relationship Management cluster may be more theoretical than empirical" (2001: 28-29). The findings from this thesis study, supported by Goleman's reviews, present an emotional knowledge model that is more dynamic than the initial tested framework. There was continual interaction between categories of emotional knowledge across the boundaries between being clusters. This porous nature of the boundaries between clusters of emotional knowledge shown by student teachers is represented in Figure 9 as broken lines.

To recap, the data shows participant experiences of emotional knowledge that cross the cluster boundaries. These cross-cluster groupings were self-awareness/self-management, social awareness/relationship management, self-awareness/social awareness and self-management/relationship management.

These combinations of emotional knowledge categories, represented by arrows in Figure 9, were found in the reports of successful teaching and learning. As such, the model is one that theorises successful use of emotional knowledge.

Figure 9: Emotional knowledge (2): Permeating cluster boundaries
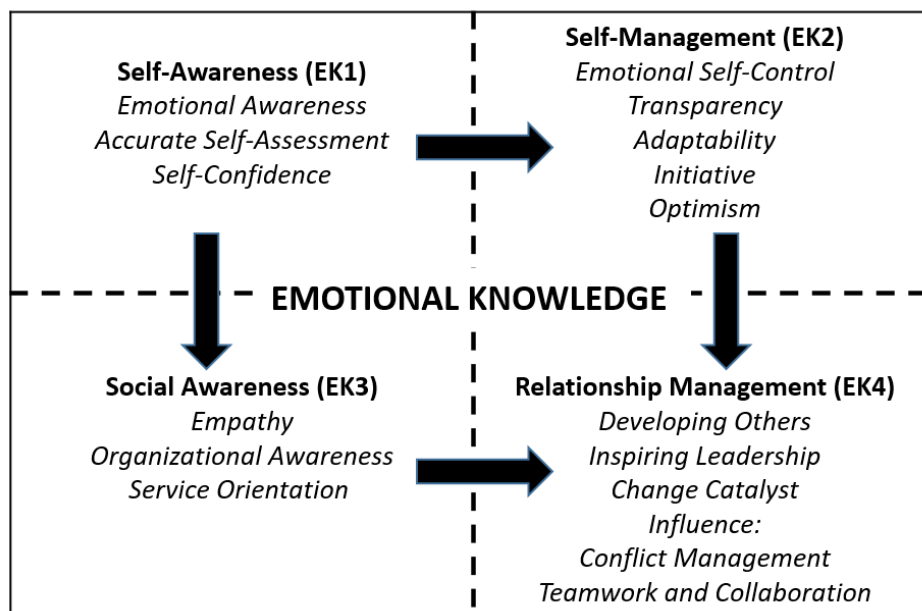
However where the experience (of categories within the management clusters) was unsuccessful, the student teachers nevertheless reviewed their recognition of self and others (specifically as categories within the awareness clusters) before trying again with similar experiences. This was the circular reflexivity of student teachers, described by Matthews and Jessel (1998: 232), as being self-aware within certain moments and situations and leading to a better understanding of those situations through a better understanding of ourselves.

(refer to section 4.3.3)

The permeability of boundaries between clusters is not surprising. The links between self and social aspects however was an emergent finding. Zembylas argues that research into teacher emotions has to "move beyond conceptual schema that perpetuate assumed territorial boundaries between the individual and the social" (Zembylas, 2011: 37). The blurring of the personal and social categories was a distinct feature of my inquiry. Take, for example, a student teacher who told of two successful lesson experiences. In the first she changed a maths lesson in mid-progress by regrouping the pupils as a last resort to enhance their concentration. This memory became emotional knowledge when it improved her self-confidence, making her self-assured (EK1c, level 2) enough to take another risk in the second lesson by adapting in response to an unexpected demand (EK2c, level 2) when a teacher assistant took five pupils out of class for an unscheduled reading test. Her self-confidence (EK1c) underpinned her use of initiative and risk management in adapting the second maths lesson (EK2c).

A link between emotional knowledge and the Teaching Standards was also evident. It could be argued that using the categories of emotional knowledge above automatically helped them to reach the Teaching Standards. It was at least clear that a positive link existed between emotional knowledge and behaviour management (Teaching Standard 7). Many categories of emotional knowledge became visible as the student teachers and mentors wrote or spoke of the placement journey towards meeting the Teaching Standards. In this way, the professional Teaching Standards acted as useful prompts for the procedural actions within the management clusters of the emotional knowledge framework.

The data sources that show this link include documents designed to focus student teacher and mentor on the Teaching Standards, chosen because using those documents and working towards those standards are the reality of school placements. They are ecological valid, as they must be if I am interpreting the reality of emotional knowledge for those participants . These weekly reviews and the end-of-placement reports were true-to-life school placement

documents designed to record progress towards the Teaching Standards, enabling any evidence of emotional knowledge to be easily cross-referenced with those Standards. This cross-referencing was a feature of the findings presented in the previous chapter, where the quoted pieces of weekly review data were annotated with the Teaching Standard the student teacher was writing about.

It is clear that there is a link between emotional knowledge and the Teaching Standards; they do not exist separately and in parallel. However it is unclear whether or not emotional knowledge is an antecedent to meeting these standards or indeed that the demonstration of behaviour required to meet the Teaching Standards contributes to the development of emotional knowledge.

Key findings

The key finding was that student teachers combined categories of emotional knowledge. Awareness (EK1 and EK3) was linked to management (EK2 and EK4). The data showed combinations of awareness with management, or thinking with action as it could be perceived. The framework has subsequently been revised to show how these combinations of emotional knowledge categories are possible through interactions across permeable cluster boundaries (Figure 9). Through dynamic combinations of these categories, the student teachers also made easily-recognisable contributions to their journey to reach the required Teaching Standards.

5.2.3 Q3: To what extent was the emotional knowledge framework challenged by the emergence of additional or alternative features from the data?

Some findings emerged from the data rather than from the theoretical framework to be tested. To recap, the emergent findings were twofold.

Firstly, a trinity of association existed between:

a) student teachers' emotional knowledge

b) their behaviour management and

c) mutually trusting and respectful relationships within the class and school

Secondly, the narratives described situations in which the use of emotional knowledge by student teachers permeated the boundaries between the clusters of awareness, management, personal and social.

In section 4.3.1, one of the four aspects of behaviour management was 'good relationships with pupils *while* asserting authority and acting decisively when necessary'. While this suggests a tension between good relationships and acting with authority, the data suggested that emotional knowledge was used to establish and maintain relationships and authority.

In an education with a dominating national inspection system and high performativity monitoring of teachers, the stakes are too high to allow lessons to be disrupted by poor pupil behaviour. Within this pressured context, some student teachers (and serving teachers) view behaviour management as their first classroom priority, an aspiration to be achieved by overt control of the pupils. After this, learning can occur. While one would expect new teachers to be obsessed with behaviour management in this way, it was surprising that some of the student teachers had an alternative personal pedagogy. that learning is socially constructed and occurs within the positive relationships of a secure, supportive and stimulating classroom environment. If this is achieved, then behaviour management is much easier.

The narrative data showed that some participants particularly valued the personal categories of emotional knowledge such as self-awareness and self-control because they helped them to manage pupil behaviour by ensuring that they can gain or keep power over the class – not letting the pupils sniff fear or indecision is how thy might have put it.

Conversely other participants also valued emotional knowledge but in a more child-centred way, demonstrating the social categories such as having empathy with the pupils and building teamwork and collaboration between them. The latter student teachers rated their own emotional knowledge significant higher in the survey and also received better end-of-placement reports.

Nonetheless there is some evidence that student teachers and in-service teacher mentors attached value to different categories of the framework, depending on their diverse beliefs about teaching and learning. While this thesis focussed on the concept of emotion knowledge and not the placement outcomes of these student teachers, this finding offers some support for claims (Pianta et al, 2005) that teachers who held more child-centred beliefs provided higher quality learning opportunities in the classroom.

It also emerged that emotional knowledge was connected to trust and respect. It is not in itself a category of emotional knowledge but being trustworthy has a strong connection to openness or transparency (EK2a). So it is not surprising that student teachers professed transparency to be the best understood of the eighteen categories of emotional knowledge and that it is also the highest rated category in the self-reports. Transparency - maintaining one's integrity and acting in accordance with one's values – is akin to being trustworthy and something one would expect all teachers to expect of themselves or aspire to.

Engendering trust is also an expectation of student teachers bound up within the Personal and Professional Conduct part of the Teaching Standards. While the word 'trust' is used only once in the whole document, it is a significant one: 'Teachers [are to] uphold public trust in the profession and maintain high standards of ethics and behaviour, within and outside school'. In essence, student teachers (and post-QTS teachers) have to be trustworthy, demonstrating the emotional knowledge to be 'transparent' (EK2b).

This was easily understood and seen as important by the student teachers and mentors. It was warming to hear student teachers talk of having belief in the pupils they teach, a trust that those youngsters seemed to reciprocate. Such trustworthiness or transparency also recurred in the mentor reports on the student teachers. A student teacher's trust in somebody observing the emotional knowledge of their teaching is hugely important, as referred to in the findings. Transparency was the category of emotional knowledge that stood out from the others because it held a clear moral imperative for the participants. This was reinforced by the Teaching Standards where the one reference to 'trust' was in the rationale that appropriate professional and personal conduct by teachers was 'to uphold public trust in the profession and maintain high standards of ethics and behaviour, within and outside school'

This reference to upholding public trust' was followed by a list of five trustworthy behaviours that are required to earn that trust, within which respect is a recurring theme:

• treating pupils with dignity, building relationships rooted in *mutual respect*, and at all times observing proper boundaries appropriate to a teacher's professional position

• having regard for the need to safeguard pupils' well-being, in accordance with statutory provisions

• showing tolerance of and *respect for* the rights of others

• not undermining fundamental British values, including democracy, the rule of law, individual liberty and *mutual respect*, and tolerance of those with different faiths and beliefs

• ensuring that personal beliefs are not expressed in ways which exploit pupils' vulnerability or might lead them to break the law.

(Department for Education, 2012:14)

Respect can be considered as either a feeling of admiration for someone brought about by an ability, quality or achievement that they possess or as a regard for somebody's feelings, wishes or rights. Both are included within the above list of requirements, mirroring the participant views that respect has to be given to be earned, as the findings of this research showed. Relationships between two people are of course two-way and, lest there be any ambiguity about who the responsibility lies with, the requirements include *respect for* the rights of others, making it clear that the student teacher is expected to be proactive, giving respect as well as expecting to receive it. As the findings show, the participants met these expectations through their use of emotional knowledge – most notably emotional self-control (EK2a), adaptability (EK2c) and all aspects of social awareness (cluster EK3) and relationship management (cluster EK4).

There is one other use of 'respect' within the Teaching Standards, included to describe Standard 1 (Setting high expectations which inspire, motivate and challenge pupils) as 'establishing a safe and stimulating environment for pupils, rooted in *mutual respect*' (Department of Education, 2012: 10). This horticultural metaphor presents the classroom environment as something that grows in a culture of mutual respect. It also reflected participant comments about the importance of this 'something', a feel to the classroom variously described by participants as an atmosphere, climate, environment, dynamics and relationships.

With the links between mutual respect and emotional knowledge already established, it is not difficult to therefore associate emotional knowledge and this classroom 'something'. Indeed, the whole school placement environment could be seen as rooted in mutual respect and flourishing with the use of emotional knowledge, 'something' which encompasses relationships between student teacher, pupils and other adults, including for example mentors, classteachers and visiting university-tutors. The discussion will soon elucidate this 'something' when it returns to the literature.

So, returning to the trinity of association I referred to between emotional knowledge, behaviour management and trust and respect, what were the outcomes of this association as part of this inquiry as an emotional knowledge inquiry? Well, emotional knowledge played a part in successful behaviour management, achieved because the participants investigated a hitherto-unexplored emotional area of their teaching practice. Using emotional knowledge also helped build trust in and respect for the pupils, earning a reciprocal trust and respect from those youngsters. The same was evident in the student teacher/mentor relationship.

A further question might explore how teachers make use of their emotional knowledge to achieve behaviour management and a mutually-trusting and respectful classroom. The apparent difference between emphasising self by using personal management (cluster EK2) and emphasising others by using relationship management (cluster EK4) merits further inquiry.

Key finding

The participants believed that emotional knowledge contributed significantly to behaviour management and mutually respectful and trusting relationships, most of which are explicit expectations of teachers within the Teaching Standards.

The participants saw emotional knowledge as a contributant to the positive feel of a classroom and school environment, an association that I will explore further with the aid of literature and previous research.

The narratives show participants having a vision of their classroom and progress towards that vision being enhanced by their use of emotional knowledge. There was some variance in which cluster of emotional knowledge management was deemed most important to achieve this – some emphasised control and self-management (cluster EK2) while others highlighted facilitation and relationship management (cluster EK4) in section 3 of this chapter.

5.2.4 Q4: *What were the participant evaluations of the inquiry?*

Firstly, there was a positive response to the emotional knowledge framework from the participants. Secondly, the mentors connected emotional knowledge to their own teaching with two of the five interviewed also associating it with the classroom environment and the whole-school environment. Thirdly, the interviewees (mentors and former student teachers) believed the framework to be relevant at any stage in teacher development but should be introduced during initial teacher education. This was interesting because it implied that they thought of emotional knowledge as malleable rather than fixed, that it was something to develop as early as possible because, as some said, it does take time.

As an inquiry, the inquiry was fruitful in several ways:

- Student teachers used the categories of emotional knowledge within the day-to-day context of their school placements, making contributions to their success in reaching the required Teaching Standards

- Use of emotional knowledge contributed significantly to behaviour management and mutually-respectful and trusting relationships, both of which are explicit expectations of teachers within the Teaching Standards.

- Emotional knowledge contributed to positive emotional ecologies, and to the feel of a classroom and school environment.

- Participation encouraged student teachers to share a vision of their classroom being enhanced by their use of emotional knowledge. There was some variance in which clusters of emotional knowledge management was deemed most important to achieve this – some emphasised control and self-management while others highlighted facilitation and relationship management. This visualisation was more all-encompassing than the Teaching Standards framework which centred solely on the student teacher.

Earlier I affirmed my belief that teacher education providers develop student teacher capacity for managing their own professional development through self-assessment of aspects of teaching that they value. Emotional knowledge might be one such aspect that student teachers can develop through becoming reflexive and self-managing teaching professionals. The way that former student teachers had bought into this approach and applied it to development of their own emotional knowledge was highly visible when interviewed during their first few months as NQTs. They saw emotional knowledge as another type of teacher knowledge to be developed as part of their maturing pedagogy and they saw development of their emotional knowledge as an outcome of reflection.

This suggests that the ecological validity of the data collection methods – the way they fitted in easily with the real-world expectations of assessed school placements – was a successful feature of the inquiry. This goes some way to explaining the positive response from the student teachers and mentors.

Interpreting the participants' view of the thesis as an inquiry that was designed to impact positively was part of the thesis. So too was the exploration of the new framework of emotional knowledge itself. An important emerging feature of the framework is the way in which the student teachers naturally integrated the framework into their reflexive practitioner view of becoming or being a teacher. On the other hand, some mentors talked of using emotional knowledge without thinking or being aware of it. This creates a tension between these contrasting views. Are teachers consciously aware of emotional knowledge as flexible assets that they can develop? Or are they unaware of it, possessing it through tacit understanding that comes with doing something naturally?

So the findings show that emotional knowledge was interpreted as either tacit or explicit knowledge. However, as an inquiry seeking improvement, there is greater value in the student teacher interpretation of emotional knowledge as explicit knowledge. To them, the

framework was a malleable developmental model when it was subject to their practitioner reflection. Using literature and previous research on teacher knowledge and reflection, the framework will be reviewed in section 3.

Key finding

One of the interviewed mentors held that a teacher's emotional knowledge was usually tacit and instinctive. This was contrasted by the narratives from all of the student teachers and the other three interviewed mentors; they used the emotional knowledge framework within a reflexive practitioner approach. The latter was a developmental view of emotional knowledge as part of learning to teach and a phenomenon that is malleable rather than fixed. This shows that we should not assume that all beginning or experienced teachers reflect upon their teaching, particularly on an aspects such as emotional knowledge which has not been brought to their attention before.

5.3 Reappraising theories

Teacher emotions have been investigated mainly by teacher self-reports through qualitative interviews (for example, Hargreaves, 2000 and Sutton, 2004, 2007), some revisiting the participants several occasions over time (such as Darby, 2008 and van Veen, Sleegers and van de Ven, 2005) while Zembylas (2002, 2004) uses an ethnographic approach comprising interviews, observations and document collection. Quantitively, questionnaires have been used both for single-shot (Frenzel, Becker-Kurz , Pekrun, and Goetz, 2015) and repeatedly in longitudinal studies (Beilock et. al., 2010).

While the emotional knowledge of teaching is a new concept, there is a growing body of research on the emotional intelligence of teachers, as the literature review chapter shows. To recap, the authors of these different versions of emotional intelligence have designed tests to accompany their models, measuring how much emotional intelligence the subject has. Ability-based models have been measured by maximum-performance tests, such as the

MSCEIT (Mayer, Salovey and Caruso, 2004) while trait-based models are measured via self-reports by the subjects, such as the EQi (Bar-On, 1997). A limitation to research using these models is that they are rarely applied to educational research.

The construction of the Emotional Knowledge framework has been informed by the Emotional Competence Inventory or ECI (Boyatzis and Goleman, 2007). The ECI is widely classified as a mixed-model combination of ability and trait emotional intelligence (Conte, 2005). The data collection to test the phenomenon of emotional knowledge has included, as well as clearly qualitative inquiry methods, a mix of self-reporting (through the survey) and feedback from others (through mentor reports and interviews). While these are similar methods to the ECI tests, this thesis seeks to find out more about emotional knowledge itself, rather than measure how much of the emotional asset student teachers have, as would be the case if they were completing the ECI test. Of course, the ECI measures the application of emotional intelligence while the emotional knowledge frame represents knowledge, knowledge in the specific context of teaching. Nonetheless, both present particular emotional aspects of teaching within four similar clusters with a hierarchy of levels (represented in this thesis as emotional knowledge clusters EK1, EK2, EK3 and EK4).

Reference to previous research is at this stage helpful to support or stimulate discussion of the following key findings:

- Student teachers and mentors realising the importance of emotional knowledge for either self-management or relationship management
- The emotional knowledge framework becoming part of a reflexive practitioner approach by the student teachers.
- These-perceptions of emotional knowledge by student teachers and mentors being part of their visions for a learning environment

5.3.1 Emotional knowledge and reflection

In answer to the question '*What did the participants think of the emotional knowledge inquiry?*', they thought of it as an opportunity to think about use of emotional knowledge and to develop it. This implies a process of reflection had occurred.

Day points out that a plethora of school reforms by governments world-wide have been motivated "partly to re-align teacher pre-service education from what has been perceived to be an over-reliance on theory to a greater reliance upon learning through experience of school-based practice" (Day, 2016: 19).

Teacher educator views unsurprisingly contrast with this governmental view. While professional standards (discussed in section 1.6) are determining the parameters of effective teaching and learning, Ditchburn argues that "it is important that we revisit ways to ensure reflection and collegial engagement are embedded in pre-service teachers' professional experience". (Ditchburn, 2015: 94). While this comes from within an Australian education policy environment, here are similar tensions on school placements in England regarding the development of theory and practice of reflection in school-based contexts .

The model of learning to teach widely held by teacher educators includes development through reflective practice (Hegender, 2010). However Ahlström and Jonsson (1990) found, in a study of Swedish school placements, that mentors are equally likely to see student teacher knowledge from taken-for-granted or reflective perspectives. This was the case with the participant mentors in this inquiry when they discussed the emotional aspects of learning to teach. This is a timely point to reiterate my epistemic premise that emotional knowledge, like all knowledge, is socially-constructed and not transmitted. It counters the assumption made by one participant mentor, that emotional aspects of teaching are tacit and unconscious, modelled to be copied by student teachers, rather than discussed with them.

The Carter report was an independent review of initial teacher training in England, calling on all teacher educators to "make explicit the reasoning and underlying assumptions of experienced teachers; trainees are encouraged to develop and extend their own decision-making capacities or professional judgments" (2015: 21-22). This pedagogy is more consistent with the practice of student teachers using reflection to develop knowledge, moving beyond notions of transmission and reception in which the student teacher is expected to pick it up through copying the teaching of their mentors and other experienced teachers. So, to be fit for purpose as an inquiry, the emotional knowledge framework must be used within a pedagogy of reflective practice.

Reflection on the personal dimension of emotional knowledge was illustrated by a student teacher who knew that he gets nervous in front of the class and thereby forgot important teaching points.. In a situation requiring emotional self-awareness and self-management, he recognised this trigger point coming on (EK1a – level3), paused to take a drink from a bottled water and compose himself, then responded calmly (EK2a –level 2) and remembered what comes next in the lesson plan; this was a demonstration of emotional knowledge as practical, as procedural.

In an interpersonal context, an example was a student teacher who held the [propositional] knowledge that a pupil was tired and irritable in lessons because the separated parents of that pupil were having loud nocturnal arguments at the family home. The student teacher response was to take personal responsibility by recognising the child's needs in that situation (EK3c – level 2), empathising with the pupil (EK3a) and giving some behind-the-scenes support (EK4d – level 1), also addressing a classroom conflict that the pupil got into (EK4e).

The personal dimension of emotion knowledge would appear to impact positively on student teacher wellbeing. The emotional challenge holds a powerful position on Maslow's Hierarchy of Needs as emotional safety (Maslow, 1943) because student teachers cannot adequately

address other concerns until they have addressed their own emotional safety needs. Perhaps this is why they regarded the framework as 'an aspect of themselves worth reflecting on' (Ghaye, 2011: 11), seeing it as a tool worth using to develop their teaching.

The emotional knowledge framework also became part of a reflective practitioner approach by the student teachers and mentors, the exceptions being two of the interviewed mentors who viewed a teacher's emotional knowledge as being tacit and instinctive, used in an unconscious way.

Schön's renowned model of knowledge construction is based on three levels of reflective activity (1987). Applied to emotional knowledge, the first of these levels has two parts; emotional 'knowing-in-action' as an unconscious teaching state in which the teacher doesn't necessarily know or can talk about what happened (the 'knowing' is *in* the action), leading onto emotional 'knowledge-in-action' where the teacher can describe the emotional 'knowing'. The second level, 'reflection-in-action', enables the teacher to think about what they are doing while they are doing it. The third level is a meta-reflection, termed 'refection-on-action' by Schön who explained the step up, pointing out that "clearly, it is one thing to be able to reflect-in-action and quite another to be able to reflect *on* our reflection-in-action so as to produce a good verbal description of it (Schön, 1987: 31).

The view of the student teachers and most of the mentors was that emotional knowledge was part of a reflective practitioner approach. Only one mentor spoke of learning subconsciously how to teach. The participants talked in the interviews of developing emotional knowledge, of growing and changing it. By thinking about their use of the emotional knowledge framework after lessons (rather than during them), they were seeking to improve their use of emotional knowledge in the next lesson. In acknowledging the contribution that the framework made to their teaching practice, the participants saw emotional knowledge as a type of self-knowledge, helping them to 'see through' teaching

and learning situations to understand the meaning of what was happening in their school placement contexts (Ghaye, 2011). This of course was at the core of the research as an inquiry. In essence because the student teachers thought about their emotional knowledge after teaching lesson A and then applied it in lesson B, their emotional knowledge grew and changed.

However, the findings of a study by Edwards questioned the level of reflection that teacher education programmes should be expecting of postgraduate student teachers:

> "For most student teachers on a primary PGCE course, Schön's 'reflection-in-action' is an aim, rather than a reality. In terms of their classroom practice, they are still developing towards Schön's stage of 'knowing-in-action'…[with] discussion about 'knowledge-in-action' between student teacher and mentor" (Edwards, 2007:31)

My earliest teacher educator experiences would have led me to concur with Edwards' argument. For most student teachers, reflecting whilst actually teaching did appear to be still an aspiration, while their mentors were more likely to developed to the level of 'reflection-in-action'. I would have considered thinking about categories of emotional knowledge while teaching a lesson to be beyond the abilities of most student teachers. The unconscious use of emotional knowledge would be a form of what Schön, in The Reflective Practitioner (1983), referred to as 'knowing-in-action' - emotional knowing-in-action, as it were. This would be very difficult indeed for inexperienced teachers.

However, I have changed my view from a 'glass half-empty or glass half-full' perspective in recent years. On the evidence of observed lessons, seminar discourses and the pedagogical aspects of written assignment from my PGCE students.

They were however showing a form of knowledge-in-action. Firstly, knowledge is generated from classroom practice, created by reflecting after the event to improve their teaching. This

conscious after-the-event reflection - or reflection-on-action as Schön called it (1983) - was the means by which the participants provided much of the survey and narrative data and was the subject of discussions between the student teachers and their mentors.

Secondly, that knowledge was then applied in the classroom, often unconsciously. This was insufficiently recognised within the tested framework. which is embedded in pre-service teachers' professional experience (Ditchburn, 2015) and aligned with professional standards, such as the Teaching Standards in England. The evidence that student teachers were including emotional aspects of teaching within their reflective practice re-presents emotional knowledge as a form of knowledge-in-action. Although they rarely showed a conscious recognition of emotional *knowledge* as distinct from any other emotion-related phenomena (for example, emotional intelligence), throughout the inquiry the participants used and valued the categories within the framework as a working tool for improvement.

So the tested phenomenon of emotional knowledge is a set of categories with an immensely important characteristic - it can be developed through the use of reflectivity.

5.3.2 The transformation of emotional knowledge

The tested hypothesis was that the emotional competences categorised as such by Boyatzis and Goleman (2007) could be found in use as emotional knowledge within the school placement experiences of student teachers. However, most of the interpretations of the participants' placement experiences showed their use of both 'awareness' and 'management' categories of emotional knowledge.

When testing emotional knowledge as individual categories (section 4.2) I was not surprised that the analysis did not show many categories to be used in isolation. However, in searching for the key features of emotional knowledge, I was not satisfied with the naïve assumption that emotional knowledge should be interpreting as categories of both awareness and

management, or put another way, of thinking and action (See teacher knowledge section, p55).

To better understand the construct of these apparently-different types of emotional knowledge, I turned at this point to knowledge dynamics. This is the term for transformations of one form of knowledge into another. Révai and Guerriero, writing of the knowledge dynamics in the teaching profession, describe those dynamics as "the characteristics of knowledge that transforms, changes and evolves as a result of various processes and influences" (2017: 38).

In doing so, they argue that several pairs of 'yin and yang' relationships exist, opposites that are actually interdependent and complementary (Révai and Guerriero, 2017: 45). These pairs include individual/collective knowledge (discussed in section 3.1) and declarative/procedural knowledge and tacit/explicit knowledge which will be deliberated now.

In the domain of cognitive sciences in general, a simple distinction between "declarative knowledge" and "procedural knowledge" is that they respectively represent "knowing that" (facts of teaching) and "knowing how" (to teach). Declarative knowledge can be articulated, or "declared" (e.g. knowing which pupils in the class are on the school's special educational needs register) and is often referred to as "explicit" knowledge. Procedural knowledge involves memorising a skill (e.g. how to challenge pupils through questioning) and is difficult to articulate, therefore sometimes referred to as "implicit" memory. Anderson and colleagues (1995) in a study of learning student, defined declarative knowledge as factual knowledge and procedural knowledge as *goal-oriented* knowledge that mediates problem-solving behaviour. At this point I hypothesise that emotional knowledge exists as a set of 'awareness' categories, becoming this goal-orientated procedural knowledge when the student teacher engages with the hitherto 'management' categories. These former management categories are now seen as problem-solving situations, the emotionally-

intrinsic circumstances which make teaching an emotional practice (Hargreaves, 1998). This change in understanding is represented through the 'emotional situations' on the right hand side of Figure 10 below.

Explicit knowledge is carefully codified, stored in databases and accessed quickly and reliability. It is conceptualised as knowledge that can be expressed in words or other symbols (such as text) in a way that can be comprehended by another person (Bennet and Bennet, 2008).

In contrast, tacit knowledge is relatively hard to code and extract (Bratianu and Orzea, 2009) Kimble specifies tacit knowledge as two types: "(1) knowledge that is not articulable, that is, knowledge that is impossible to describe in propositional terms and (2) knowledge that is implicit or articulable but with some difficulty (Kimble, 2013: 6).

In his later work, Nonaka (2009: 637).asserted that knowledge ranged along an explicit-tacit continuum while Révai and Guerriero (2017) suggest that implicit knowledge is potentially codifiable. So explicit and tacit knowledge are not fixed labels.

Nonaka had long considered tacit knowledge to be the hidden part of the iceberg and also that emotional knowledge is an important part of it (Nonaka & Takeuchi, 1995). Dealing with emotional matters as a teacher has long been considered to require tacit knowledge and not easy to measure or codify. So that it no surprise. Neither is the scale of this suggested by the iceberg metaphor. However it offers a vision of student teachers' emotional knowledge being malleable rather than fixed and becoming explicit and open a visible asset rather than tacit and hidden. What a prospect!

Returning to the research of Constantin Brătianu and his colleagues (see section 2. 2.3), they also found a continuous dynamic between cognitive knowledge and emotional knowledge:

> Our hypothesis is that one form of knowledge can be transformed into another form … Our research focused on iterative transformations of cognitive knowledge into

emotional knowledge and of emotional knowledge into cognitive knowledge during

negotiation processes. (Brătianu and Iordache, 2013: 18)

Applied to the context of this 'learning to teach' inquiry, teacher knowledge is cognitive

knowledge that is transformed into emotional knowledge. What causes that transformation

though?

This reconceptualising of emotional knowledge also has roots in other existing theories.

McCaughtry theorised, tested and evidenced 'emotional and social knowledge' as part of

teacher knowledge in his studies of physical education teachers relationships with their

pupils (McCaughtry, 2004; 2011). The positioning of 'emotional situations' as critical to this

model (Figure 10) is also influenced by the argument of psychologists Neumann, Seibt and

Strack (2001) that emotions comprise knowledge and an experiential component; note that

knowledge does not include the experiential component, although both are strongly

associated with emotions. Further strength to this hypothesis is added by Zembylas' claim

that emotional knowledge is "a teacher's knowledge about/from his or her emotional

experiences" (2007: 356). Herein lies an implication that when that teacher knowledge is

called upon to deal with emotional experiences, it becomes emotional knowledge.

I therefore contend that when the student teacher use of teacher knowledge is aligned to

intrinsically-emotional and positive experiences, emotional knowledge is created. This

capacity to transform from and back into 'teacher knowledge' redefines emotional

knowledge. It is no longer perceived as categories of personal and relational management.

This transformed into emotional knowledge self-and social awareness categories is

represented by the left-hand side of figure 10.

Rather than viewing this management or action as categories of emotional knowledge itself

the thesis is now that these former categories are more usefully seen as a set of purposes to,

be achieved through emotional awareness. Figure 10 shows emotional knowledge to require

Figure 10: Emotional knowledge (3): transformed teacher knowledge
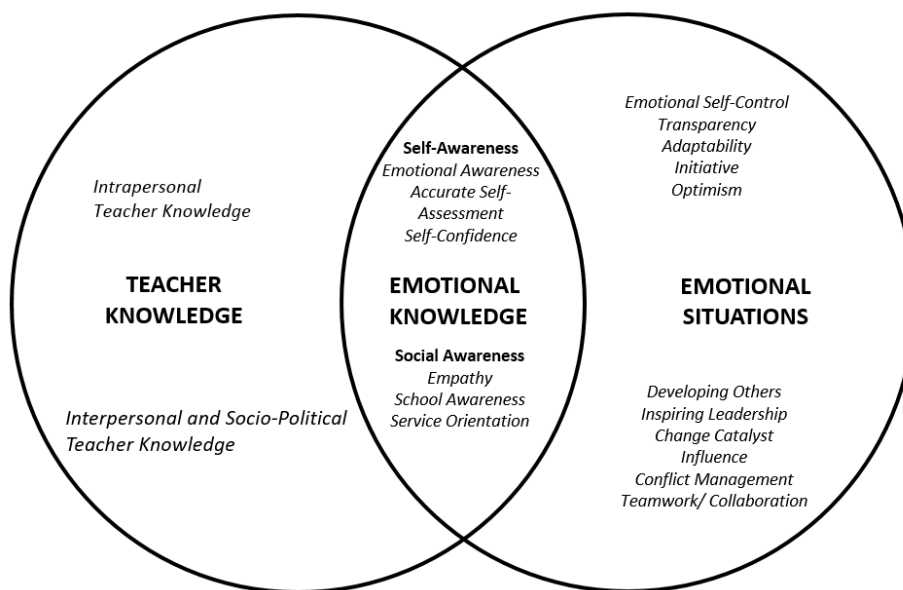
both teacher knowledge and emotional situations. These experiences also have specific positive outcomes in mind, which we will return to in the next section (5.3.3).

In this way, I have redefined emotional knowledge as 'awareness', viewing these categories as assets that are the part of teacher knowledge that deal with emotions. This emotional knowledge is created when acting in those specific emotionally-intrinsic situations (that were hitherto known as emotional 'management').

Emotional knowledge of student teachers is not only part of their teacher knowledge, but also used within their emotional experiences. Although the tested framework presented 'awareness' and 'management' categories of emotional knowledge, the analysis of that framework redefines these 'management' categories. They make more sense as intrinsically-emotional situations that call for appropriate action to achieve specific outcomes. These outcome-orientated situations give emotional knowledge a set of purposes while, conversely, emotional knowledge provides those situations with successful outcomes. If emotion itself is provoked by circumstance and then experienced as a transformation of

dispositions to act (Barbalet, 2002, cited by Day and Gu (2009) then the same has to be said of the emotional knowledge with which we are aware of emotions. Emotional knowledge must too be interactive with situated actions (labelled 'emotional situations' in Figure 10). Our hope is that these are situated actions seek positive outcomes such as showing 'adaptability' or facilitating 'teamwork or collaboration' between pupils.

This reframing is a response to the data; the value in demonstrating both the emotional awareness and emotional management categories was clear through their links to the quality of teaching whether it be behaviour management, building trusting and respectful relationships or in meeting the Teaching Standards. It recognises that effective management of emotions emerges through a teacher's awareness of his or her own emotions and those of others, including the pupils in their class. However this reframing also recognises that effective management requires the teacher to deal with emotional experiences by taking action to achieve particular outcomes, outcomes shown in this thesis to be valuable, especially at the highest target levels. Presenting emotional knowledge as a bridge between cognition and emotion (Beatty, 2007) now seemed highly appropriate (section 2.3.2) especially when emotions themselves are bound up with, events, objects or situations (section 2.1.2)

To recap on section 2.1.2, "emotions are about 'something'; they have a focus, an intentional object (Smith, 2009: 82). The actual emotions are implicitly present in this reframing, within both the emotional awareness and the action taken. Put another way, dealing with emotions is part of 'thinking' and 'doing', part of emotional knowledge and the action taken.

So, the emotional knowledge of learning to teach is both part of the broader body of teacher knowledge and part of the emotional experience of achieving specific personal and social outcomes.

5.3.3 Emotional knowledge and emotional ecologies

This section discusses the realisation by the participants that there is a wider emotional context to their school experiences. It concludes with a way to recognise this through a revision of the emotional knowledge framework and the use of a metaphor for such a difficult concept.

The professional Teaching Standards for England do not acknowledge the emotional aspects of teaching or learning (see section 1.6). Yet the emotional knowledge categories were linked to statements concerning participant aspirations for a positive placement environment. This was another problem emerging from the data because if emotional knowledge was indeed an asset, then what was its purpose? The best interpretation I could make of these aspirations was that the participants were seeking positive emotional ecologies, the concept used by Zembylas; See Figure 11.

The student teachers all showed personal visions for the classroom learning environment, although they had different perceptions of their role in creating that environment – some wanted to nurture or facilitate, others to manage or preside over. All however had ambitions of a positive environment to teach and learn in. They also reflected on this not just at the class or school level, but at the university programme level too over matters such as placement briefings, academic assignments and the role of the university tutor who visited the school to quality-assure their placement.

Recounting successful or unsuccessful experiences, they referred to how they 'felt inside' and how the whole-school environment impacted, for better or worse, on what they were trying to achieve. They were highly aware of these individual, relational and socio-political dimensions of the placement, without usually using those actual terms. They also linked their emotional knowledge with these three dimensions, sometimes sharing how their emotional

knowledge improved the positivity of the learning environment, sometimes telling how a negative learning environment seemed to erode their use of emotional knowledge.

The emotionality of the experiences they were recalling in the data suggests that they were describing the two-way link between emotional knowledge and the three planes of emotional ecologies (see literature review, section 2.2.5). To recap, Zembylas theorises 'emotional knowledge' as an asset with a powerful impact for good upon the emotional ecologies of teacher education and school communities (or impact for the worse if it is not used) (Zembylas, 2007). He also proposes a two-way relationship in which those emotional ecologies also influencing the growth or reduction of emotional knowledge itself. This aspect of the findings therefore became part of the theoretical framework of emotional knowledge itself.

There was a variance in the way student teachers sought to achieve this positive environment by using emotional knowledge; some emphasised control and self-management rather more while others highlighted a facilitating approach and relationship management. Student teachers and mentors subscribers to each of these positions would see this as part of their vision of a positive environment. So there is more than one model of a positive environment. It was also clear that in school placements where there was little trust or respect for pupils or teacher and where pupil behaviour was difficult to manage, the classroom environment was not positive and it was harder to use emotional knowledge effectively.

The mentor and student teacher participants broadly subscribed to the view that the emotional climate of a typical classroom should be warm, safe, respectful and highly supportive. Sometimes this will have been achieved in reality; sometimes it was aspirational. Every student teacher had a vision of what that healthy positive environment will be like in their classroom and their school, a vision which is connected to their own use of emotional

knowledge. This finding presents a problem; how should that emotional environment in which emotional knowledge exists be theorised?

In the literature review, Zembylas furthers the idea of an ecology as an interaction between people as organisms and their environment (Frost et. al., 2000). Here the botanical analogy on page 68 is used to describe emotional ecologies. Alexander's 'garden or jungle' analogy (1995) does not classify a controlled and managed garden with a positive environment and the law of the jungle in which only the strong survive with a negative environment (see section 2.2.4). He sees benefits to both. Similarly, emotional ecologies within this framework are more nuanced than the basis of how much teacher control is exerted in those environments. This was illustrated, in section 4.3.1, by different participant visions of relationships and behaviour management.

When Zembylas developed the little-used concept of teachers' 'emotional ecologies' (2007: 357), he considered these interactions to be created by both teachers and the school environments in which they work. This thesis has shown such interactions created are by student teachers and the school placement environments. Zembylas' research would suggest that student teacher emotional knowledge can affect the emotional ecologies of the classroom, the staff room, the whole school and even beyond – the whole school placement, in fact. He also warns that the impact is two-way, that the emotional ecologies can affect the use of emotional knowledge. While emotional knowledge itself is a positive concept, Zembylas argues that it can be more difficult for a teacher to use within negative emotional ecologies.

From my long experience in and with primary schools, I can interpret the meaning that the participants attached to emotional knowledge. I know that each classroom has an emotional environment that is healthy and positive, toxic and negative or, most likely, somewhere in-between. The student teachers' and mentors connected emotional aspects of teaching to

the school or classroom environment, landscape, climate or ethos. They did not explicitly link emotional knowledge to the term 'emotional ecologies', not surprisingly. Nor, just as predictably, did they refer to positive or negative 'valance', the attractiveness of a situation that influences their emotions and those of their pupils, addressed in the literature review (section 2.2.1). b The data did however show awareness of the possibilities for positive inquiries using emotional knowledge and leading to emotion-related outcomes. The student teachers and mentors were aware of an emotional dimension to the environment, one that they variously perceived as a feel, a climate or an ethos. The best way I can interpret their collective meaning here (see 3.2.1) is to present this relationship as that of emotional knowledge and emotional ecologies.

This post-analysis reframing therefore posits the emotional knowledge of a student teacher as being within the emotional ecologies of a school placement, ecologies that include personal, relational and programme contexts – in the classroom, the staffroom, the dining hall or even back on university campus (see Figure 11).

Emotional ecologies exist as a concept that interacts dynamically with emotional knowledge. This goes some way towards understanding the context for the emotional knowledge framework for student teachers. It shows the utility of emotional knowledge, outcomes which are part of student teachers' aspirations for positive emotional ecologies within the ethos of their classrooms. In turn, those emotional ecologies help the growth of student teacher emotional knowledge. It is also useful in keeping research attention on the multidimensionality of the emotional context. Conversely student teachers will need to be aware that a negative ethos can threaten the development of their emotional knowledge.

Zembylas theorised three overlapping planes of emotional ecologies – personal, relational and socio-political and cultural (see Literature Review section 2.2.4.). The first two are:

- Personal emotional ecologies that are influenced by, and influence, the student teacher's self-awareness

- Relational emotional ecologies that are influenced by, and influence, the student teacher's social awareness concerning the children and adults in the classroom and perhaps the school

Emotional ecologies are relevant to student teachers because they can be seen in terms of their personal vision for their class and their beliefs about teaching and learning. The term emotional ecology has to connect with the professional aspirations of individual student teachers to be of value in this inquiry. The idea of a 'socio-political and cultural' emotional ecology would have more meaning to experienced teachers than to student teachers who typically have only an embryonic understanding of school politics and pressures. 'Socio-political and cultural' emotional ecologies are less familiar to emergent teachers who have not yet had to meet the full expectations of a class teacher for a full calendar cycle; it needs to be more explicit. This third plane of Zembylas' model refers to 'socio-political' emotional ecology, denoting the idea of school placement emotional ecologies that encompass the whole teacher training programme. This plane is a partnership of placement schools and university programme provider, but also includes government, university and school policies and processes that may (and should) be driven by the needs of the pupils. Because in England student teacher school placements are subject to top-down accountability and pressures, this socio-political plane can exert pressure on student teachers and inhibit their use of emotional knowledge. However, like the other two planes of emotional ecology, it can also be changed by the use of emotional knowledge.

It is part of my practitioner researcher positioning. I believe that the next generation of primary teachers will serve the nation's children best if they are aiming for goals which are less politically-motivated, arising from consultation rather than imposition and less subject to frequent change. I suggest that one such aspiration should be an education service in

which "teachers and pupils create an environment that shapes show they are emotionally connected and engaged in learning together" (Zembylas, 2005: 357). These are the aspirations that emerge in the data from the student teachers and their mentors.

Zembylas defines such environments as emotional ecologies. The final revision to the framework is therefore to position emotional knowledge within an interactive context in which, as Zembylas' research concludes, it interacts with emotional ecologies on three planes (See Figure 11). While these emotional ecologies can be positive and negative, the model offers some empowerment to student teachers who wish to address the emotional aspects of learning to teach. For example, a student teacher can use empathy to facilitate win-win situations for their pupils in situations where conflict exists. This emotional knowledge contributes to a positive emotional ecology at a relational plane. I am interpreting from student teacher and mentor understandings that were usually implicit and unconscious, participants did conduct litmus tests of the positivity-negativity of these emotional ecologies on personal, relational and programme-wide planes, as these examples illustrate:

a) *Great; I was confident enough to take the music lesson today when the peripatetic teacher didn't turn up*. [a contribution to the positivity of the student teacher's personal emotional ecology]

b) *Children well-behaved this afternoon, but the class was dull and slow. It was as if they all had flat batteries.* [positive and negative contributions to the student teacher's relational emotional ecology]

c) *Yet more last-minute paperwork! I just want the inspection finished so we can get back to normal.* [negative (paperwork) and positive (aspiration) contribution to the programme-wide emotional ecology]

This model revision represents a tool better designed for student teachers to develop their

emotional knowledge on and thereby nurture the emotional ecologies that are essential

parts of the vision that student teachers referred to within their narratives, aspirations that

Figure 11: Emotional knowledge (4): located in the ecologies of teaching

EMOTIONAL ECOLOGIES (personal)

Intrapersonal Teacher Knowledge

TEACHER KNOWLEDGE

Interpersonal and Socio-Political Teacher Knowledge

Self-Awareness
Emotional Awareness
Accurate Self-Assessment
Self-Confidence

EMOTIONAL KNOWLEDGE

Social Awareness
Empathy
School Awareness
Service Orientation

*Emotional Self-Control
Transparency
Adaptability
Initiative
Optimism*

EMOTIONAL SITUATIONS

*Developing Others
Inspiring Leadership
Change Catalyst
Influence
Conflict Management
Teamwork/Collaboration*

EMOTIONAL ECOLOGIES (relational and social-political)

students take with them beyond their school placements into their first years of teaching.

The findings have shown that there is a relationship between emotional knowledge, teacher

knowledge and positive emotional experiences but also a symbiotic relationship between

use of emotion knowledge of student teachers and the positive emotional ecologies that

they want within themselves, in relationships and across the context of a teacher education

programme - classroom, school, university campus, online. These ecologies do affect, and

are affected by, the student teacher's use of emotional knowledge as Zembylas

hypothesised. In my experience, student teachers are also capable of evaluating the positive

or negative features of such emotional ecologies, for which the garden or jungle analogy is a

useful aid (Alexander, 1995).

This concludes a discussion of findings, drawing upon the data and research literature to

arrive at the constructivist knowledge that:

- the tested categories of emotional knowledge are in use on student teacher school placements,

- emotional knowledge impacts positively on student teachers' behaviour management, trusting and respectful relationships and it can be developed through reflection

- A reframed emotional knowledge model proposes that emotional knowledge is a transformation of teacher knowledge in specific situations and also interacts with the emotional ecologies of school placements

The next chapter reflects on the study, appraising how the research has been conducted.

Chapter 6: Evaluating the study

Self-reporting the strengths and limitations of this research requires fit-for-purpose criteria. The first of these - trustworthiness, validity and generalisability – are chosen on the recommendation of Braun and Clarke (2013: 279). To them I add three criteria developed by Yardley (2008) as open, flexible and theoretically neutral. These are sensitivity to context, commitment and rigour, and transparency and coherence of analysis. They are all chosen as a match for the interpretative approach to this research.

6.1 Trustworthiness.

Reliability must be addressed in all studies because accuracy, dependability and credibility of information depends on it. However, in quantitative research, reliability refers to the ability to replicate the results of a study while qualitative research has no such expectation. It is common to see the term trustworthiness used instead of reliability in qualitative studies. (Davies & Dodd, 2002; Lincoln & Guba, 1985). This thesis, predominantly qualitative in approach, elicits responses from individual participants in specific times, places and interpersonal contexts. Instead, I was concerned with trustworthiness, defined here as the dependability in, or authenticity of, the research (Finlay, 2006), leading to trust in the inquiry processes and findings. As such, 'trustworthiness' is a better fit to this research than 'reliability' which carries positivist expectations of repeatable methods (Braun and Clarke, 2013).

Self-report was the most direct way in to students emotional state; after all, only they really knew what they felt. Reports by other people of students' emotional state was less direct in that observers would need to interpret students' behaviour or written accounts.

Nevertheless, self-report is not easy to verify through reporting by others: the lack of self-awareness and self-censoring may have influenced reports and it is not clear to what extent these self-reports were authentic. As with any emotional self-reporting by teachers, self-

reports have more credibility when supported by external judgement (Sutton and Wheatley, 2003). Multiple measure research methods are recommended (Fried, Mansfield and Dobozy, 2015). This was particularly so in this inquiry because the students had just been introduced to 'emotional knowledge' and asked to retrospectively grade themselves based on their completed beginning placement. Triangulation of findings from these different methods gives this inquiry a high level of dependability.

A measure to add trustworthiness to the student teacher self-reports was asking the students themselves how much confidence they had in their own self-reports. This was a useful step given the notoriously unreliability of self-reported emotional aspects such as emotional intelligence (Uitto et al., 2015)   These results show a reasonably high level of confidence, captured in the two tables of survey results (Tables 6 and 7) and gave an added indicator of how dependable their self-reports were. Nonetheless the trustworthiness of the self-reports were subject to challenge, the survey was therefore not essential and the study could have been entirely qualitative in approach.

The mix of data methods also struck a balance between researcher-provoked and naturally-occurring data. Researcher-provoked data was needed to introduce the participants to emotional knowledge and ensure they shared emotional experiences within which emotional knowledge might be identified. Naturally-occurring data shared as reports and reflections was less explicit about emotional knowledge, but was more ecologically-valid, grounded in real-life school placement structured within the English national Teaching Standards (DfE, 2012). However the inquiry to raise student teacher awareness of emotional knowledge had taken place at the beginning. Similarly by the time the mentors wrote the end-of-placement reports and were later interviewed, they had been individually shown the framework to raise their awareness of emotional knowledge categories. This balance adds to the trustworthiness of the findings because use of naturally-occurring data prevented the

problem of researcher leading the participants from occurring while the researcher-led data ensured that the experiences are relevant to use of emotional knowledge.

In terms of the collection of the narrative data, the researcher-provoked questions were asked in the student teacher 1st week reflections, the focus group and the interviews (see Chapter 3, section 3.2). These could, through their wording, have shaped the answers given but the chances of this were reduced by avoiding leading questions. In interpreting naturally-occurring data such as end-of-placement reports by mentors, the problem of leading the mentors did not occur. The use of naturally occurring data from student teacher weekly reviews and mentor reports eliminated the possibility of those data sets being untrustworthy.

Selecting pieces of data was part of the bracketing and reduction processes used to analyse the narrative data (Chapter 3). Through further reduction, some of this selected data was quoted directly, a verbatim approach that gave the report a transparency which enables the reader to see and make judgements about my researcher interpretations. (Chapter 4). The unselected data was not relevant to the 'essence' of using emotional knowledge. Stepping back to the selection and coding and from the raw data, the volume of data would have made the same technique unmanageable. Instead some transparency is ensured for the reader by an overview of the coding processes and how they contributing to answer the research questions and identify emergent themes through the constant comparative technique (See section 4.3, including Figure 12: Coding of narrative data)

6.2 Validity

'Validity is the extent to which an account represents the social phenomena to which it refers (Hammersley, 1990:57). It is also another word for 'truth' (Braun and Clarke, 2013:275) and to me it exists as a truthful showing of what the research claims it shows .

The inquiry has met the challenge of dealing with the pitfall of 'anecdotalism' (Silverman, 2001: 222-3) by ensuring that the findings were genuinely based on critical investigation of all of the data, rather than a few well-chosen examples. The results (in Chapter 4) include a substantial amount of directly-quoted examples. However 'anecdotalism' was countered by using Silverman's constant comparative approach (Silverman, 2010).

The prime purpose of the survey was to serve as an introduction to the emotional knowledge framework. It was effective in doing this and, as such, had face validity for the participants. The other data collection and analysis methods, however, needed construct validity to earn confidence in the findings.

Though a constant comparison technique , I worked back through all of the data sets as new coding emerged. This checking created more explanatory 'conceptual codes' (Ritchie and Lewin, 2003), leading to sub-themes and themes, with the discarding of those that did not turn out to be significant (see p115-116). In this way, for example, 'behaviour metaphors were subsumed into 'behaviour management' and 'trust' was added to 'respect'(see Figure 12) . This re-trawling through the data and merging categories created suitably organised and usable data. Each coding was aligned to the data collection questions and the emotional knowledge framework. These are strong indicators that the findings are valid in their representation of emotional knowledge as demonstrated through the data.

Ecological validity centres on how far the data collection context represents the real world. As I have pointed out earlier, planning for ecological validity was built into the data collection in this research by using standard school placement paperwork for recording student teacher reflections and end-of-placement mentor reports on student teacher progress.

6.3 Generalisability

The survey provided a picture of 84 student teachers drawn from the population of 119 – a complete cohort of postgraduate trainees on one course. This was both a reasonable

number to make generalisations - over 30 as suggested by Denscombe (2003) - and a more than reasonable return of 70%. 62 were females and 22 were males, a participant balance that was broadly representative of the gender mix of the complete cohort.

Nonresponse bias is the variation between the true mean values of the original sample list (people who are sent survey invites) and the true mean values of the net sample (actual respondents). Direct assessment of non-response bias in survey estimates is also rarely possible (Lynn, 2002). The higher response rate from this survey carries a lower risk of non-response bias. Beyond this we have no information.

Where studies have been conducted into 'responders' and 'non-responders' there is commonly a difference – the non-responders are not random but show systematic difference from the responders. Here the subject matter of emotional knowledge is highly charged and one might expect that, besides any unbiased drop out, student teachers may have found the content of the questionnaire worrying enough to avoid answering. Both the design of the questionnaire and its presentation were planned to minimise this but it cannot be discounted entirely.

A thematic approach requires 'rich data' with detailed and complex accounts expected from each participant (Clarke and Braun, 2013). Consequently, the sample size for the collection of narrative data was necessarily small and manageable. The self-selected participants met this requirement when they engaged in the research beyond the survey. There was also some limited generalisability of the findings to other postgraduate teacher education pathways, these student teachers were subject to the same Teaching Standards, the same National curriculum and total school placement days as most other postgraduate student teachers working towards qualified teacher status in England.

6.4 Sensitivity to context:

The context, referred to above by Yardley (2015), includes the available body of research and literature, the participant perspectives and the data itself.

Contextualising it in relation to relevant theoretical and empirical literature. The search for existing knowledge about emotional aspects of teaching has been thorough with the literature review addressing a broad but relevant range of themes associated with teachers and emotions. This relevance is demonstrated by a synthesis of this knowledge and the whole empirical inquiry, ultimately informing the reframed model of emotional knowledge. While this thesis report has a chronological order necessary for the reader, the research journey has been more iterative than linear. The reality to me was jumping from literature to inquiry and back, refining and adding to both.

Placing the inquiry in the context of existing empirical research literature was straight-forward because such literature was sparse. The origin of emotional knowledge of teachers is clearly grounded by Zembylas (2007), the literature showing no evidence that the concept has developed beyond that emergent stage. I have not found any other research into the emotional knowledge of student teachers or even the emotional knowledge of any worker.

To learn from previous research approaches and methods I have looked primarily to empirical studies of teacher use of emotional intelligence and emotional competences, filtering to keep those that have methods consistent with my own ontological and epistemological position. I had some success in looking for models in this way but was not entirely successful in the design data-collection methods.

Being sensitive to participant perspectives

Emotional aspects of learning to teach are hot potatoes insofar as they require very careful handing. Indeed, even behaviour management, which the findings closely associate with use of emotional knowledge, might be expected to cause some guarding of 'real' participant

views. Talking and writing about emotional awareness and responses are likely to add to this participant reticence to share their genuine views. If their reports were not authentic, then I'd expect it to be towards under-, rather than over-representation of their actual feelings. This means that the results reported earlier are not likely to over represent the emotions actually felt by participants.

The study was originally designed to collect data through not just a survey, placement documents, a focus group and interviews but also classroom observations of the emotional knowledge of the student teachers. The focus group proved particularly valuable because it alerted me to student teacher concerns about the feedback received after having their emotional knowledge observed. The issue of trust in the judgements of an observer was an important concern; some tutors did not know the student teacher well and emotional matters are always sensitive. Consequently, the tutor feedback collected from those observations was withdrawn and the decision made that feedback from similar observations by mentors during extending placement would not be collected in and analysed. In short, the observation data set was not included in the reported analysis.

As such, the focus group, and the changes that followed it, enabled me to maintain researcher openness to whatever emerges, avoiding any manipulative or controlling behaviours. Response to student teacher views in this way showed attention to relationships and attention to the situational dynamics of school placements. By adapting the inquiry to my deepening understanding, I evaded a rigidity that could have led to greater tension and discord.

In being **sensitive to the data,** I avoided simply imposing my meaning on it. Instead, I was open to alternative interpretations of the data and the complexities and inconsistencies within it.

Student teachers were asked to reflect on their experiences. The complexity is that, although this is usual on school placements, the student teachers knew that their mentors would read some of their writing (the weekly reviews) and be assessing their placement through comments, grades and a pass/fail judgement. Awareness of this audience cannot but impinge on the myriad choices that happen between having a thought and writing something down, not least because many of these selective processes may not be under conscious control. This limited the validity of the weekly reviews that student teacher participants shared with their mentors, visiting tutors and myself as researcher. This limitation was dealt with by the choice of other data collection instruments that were assessible only to myself, namely the student teachers' 1st week's reflection (Appendix 2, p275) and their reflection on the lesson observed for emotional knowledge (Appendix 4, p277).

In analysing the data, I have focused on the complexities of emotional knowledge. It is an intricate phenomenon, being part of teaching, part of the wider picture of school placements and, I propose, it has interdependencies with emotional situations and emotional ecologies. I have not tried to reduce the thesis findings to any linear, cause and effect relationships. Instead I framed emotional knowledge and then sought to understand it better in practical situations, discussing complex issues emerging from the findings and leading to the reframing of the tested model of emotional knowledge.

The mentors observing teaching by the student teachers used the framework to giving feedback on the emotional knowledge evident within their teaching. There was an inconsistency in the student teacher responses to having their lessons observed by tutors; some trusted the judgements tutors made, others did not. This prompted ethical consideration and my decision to withdraw the observation data. In this way, the inclusion of the workshop was an effective safeguard against the use of observation data collected by university-based tutors who were not sufficiently trusted to do so by the student teachers

and indeed against any further collection of similar sensitive data by school-based mentors. It empowered the participants to shape the inquiry as it progressed. As such, that researcher recognition of different interpretations of the emotional knowledge observation process was a strength of the research design.

6.5 Commitment and rigour

This section evaluates the thorough manner of the data collection, the depth of data analysis and my methodological competence and skills.

Thorough data collection. The rational for my choice of methods, and any change to the methods used, was clear. The chosen instruments were used effectively in a manner consistent with the research literature. Most of the data collection tools were simple to use but training was needed before I could manage data coding with ATLAS.ti, the computer-aided software for qualitative data analysis. Some variety within the data collection methods gave a balance of naturally-occurring and researcher-provoked data collection, choices which were fit for purpose in a predominantly qualitative approach such as this (Silverman, 2010: 202). A particular data collection strength was the fit-for-purpose questioning applied within and across data collection methods. While the open question approach allowed for issues to emerge from the respondents, the closed questions within the survey lent themselves to statistical analysis as they were easily coded. The open questioning was limited to the narrative methods because open questions are more demanding of a respondent's time. The high response rate would seem to justify that decision.

Depth of analysis. There was a good balance between data extracts (in Chapter 4) and the analytic narrative (in Chapter 5) and triangulation across data sets was used to verify my interpretations. The research themes were coherent and consistent; they have been theoretically and inductively analysed, not just described.

Meta-analysis within an interpretivist approach arose from the search for participant experiences of emotional knowledge in a situated workplace context. At a single

hermeneutic level, my researcher analysis interpreted the meaning of individual participants. (Larkin, Watts and Clifton, 2006). At a double hermeneutic level, I was a researcher making sense of the participant's attempts to interpret and make sense of their own experiences. This meta-analysis had the serendipitous consequence of drawing my attention to the relationship between emotional knowledge and the situated experiences within which its use is located. This insight led to the reframing of emotional knowledge as procedural, a part of teacher knowledge which only exists within the experience of the emotional situations within the model (see Figure 12; section 5.3).

The inclusion of a quantitative method (the survey) alongside the other more qualitative methods enhanced the analysis to the extent that it enabled some triangulation of findings from the collective picture of emotional knowledge from a larger group and the individual perspectives of student teachers and mentors working with it. The process was one in which the narratives give a 'face' to the numbers by providing people's experiences to accompany the baseline survey data (Wansborough, Jones and Kappaz, 2000: 77). On the other hand, the amount of relevant corroborations between survey data and narrative data was not significant, as the findings showed (see Chapter 4). With hindsight, the numerical data generated by the survey would not have been greatly missed and the data collection could have been more streamlined and solely narrative.

Methodological competence and skill. Using a hitherto untested framework to interpret experiences of using emotional knowledge brought into question the trustworthiness of any findings. In wanting some evidence that was captured live, I planned for tutors and mentors to observe student teacher lessons and record emotional knowledge being used within their teaching. The rest of the narratives were participant recollections of emotional awareness and management shown earlier and captured as a piece of writing or spoken words. The other methods did not collect any manifestation of emotional knowledge at the point the

evidence was being generated. I had sound reasons for withdrawing the data arising from

the lesson observations and a process for receiving an alert from the student teachers.

6.6 **Transparency and coherence through thematic analysis**

The issues here are the fit between the research questions, the theoretical framework for

use of emotional knowledge, a lucid description of the data collection and analysis and a

reflexive consideration of how I shaped the research.

I expected some self-censoring by the student teachers (and perhaps mentors). Because

sharing emotional experiences are often difficult, deliberate or unconscious withholding of

feelings may have taken place. However, if a participant records an opinion or view, the

starting point must be that that *is* their view and so the findings were valuable. The challenge

I faced was to go beyond recording the literal meaning of their words to interpreting those

words and numbers for underlying thoughts and feelings that they held about emotional

knowledge. Where there were commonalities. I then created collective interpretations.

Mindful of those processes, I have consistently applied this method so that the findings and

the conclusions I have drawn are clear and do bear examination.

 A fit between research question, theoretical framework and methods of collecting and

analysing data.. The student teacher weekly placement reviews and the mentor reports on

the student teacher progress and attainment were comments on the real-world situations of

school placements as they unfold naturally. This was key to an interpretative approach and

thematic analysis. Because these naturalistic narratives were cross-referenced to the

Teaching Standards (and not emotional knowledge), they countered the possibility of

socially-desirable responses from helpful participants telling me what they think I want to

hear about emotional knowledge. The data that I initiated as researcher however also played

a part in effectively answering the research questions. Asking people what they feel and

think about aspects of emotional knowledge during an interview, focus group or feedback on

an emotional knowledge lesson observation had an immediacy that was absent in the

naturally-occurring data of weekly placement reviews and mentor reports on student teacher progress. In terms of yielding important understandings about student teacher use of emotional knowledge, the findings from qualitative analysis of the narrative data were more fruitful than the quantitative analysis of the survey. While these statistical findings were useful for triangulating findings, the richest findings came from the qualitative rather than mixed methods.

A transparent account of how the data was collected and analysed. This has been achieved largely through description and reasoning for the collection and analysis methods (in Chapter 3) with the subsequent outcomes described (in Chapter 4). The specific approaches to thematic analysis were clearly explained. For example, the use of many direct quotations to inform the coding and themes allow the reader to judge the adequacy of my interpretation of participants' data. To ensure that the results were well-founded, the process of coding the narrative data – the written reflections and the interviews – was rigorous and suitable for thematic analysis. The codes were ordered by number of relevant quotations recorded. Six of the seven most frequently used codes were the themes identified in advance of analysis.

Reflexivity by considering how myself as researcher, or the use of methods, shaped the research. A strength in this regard is the planning for participant feedback and my willingness to adapt, considering the feedback and acting upon it. This reflexive response arose from a type of member checking through a focus group opportunity between phases of the research. My level of researcher reflexivity, and through it the effectiveness of the research, could have been enhanced by a research design that includes multiple investigators**.** Fostering more dialogue with a colleague who shared my inside perspective of the research could have revealed, and contested, my beliefs, values, perspectives and assumptions.

To sum up, the study has many strengths in terms of validity, generalisability, sensitivity to context, commitment and rigour, and transparent, coherence analysis. Nonetheless, the

contribution of the student teachers' survey self-reports of their emotional knowledge is questionable. Consequently, a completely qualitative and interpretivist approach (excluding the survey) may have enhanced the study. Overall though, the study makes a substantial contribution to knowledge about teaching and emotions. This will now be discussed in the closing chapter.

Chapter 7: Conclusions and Implications

7.1 A summary of the inquiry

The first major finding was that nearly all of the categories of emotional knowledge were used by student teachers, experiences often associated with their behaviour management (Findings; section 4.3.1) and the building of trusting relationships (Findings; section 4.3.2).

The second such finding was my reframed model of emotional knowledge emerging from the analysis. Set in the context of school placement emotional ecologies, it represents a transformation of teacher knowledge, caused by dealing with emotions in particular situations. One way for student teachers to deal effectively with emotional aspects of learning to teach is to identify, use and develop the assets they have for this purpose. This research has shown that emotional knowledge exists and where it has been used, it has been an asset for the student teachers.

Figure 12: The emotional knowledge of learning to teach: tested and reframed
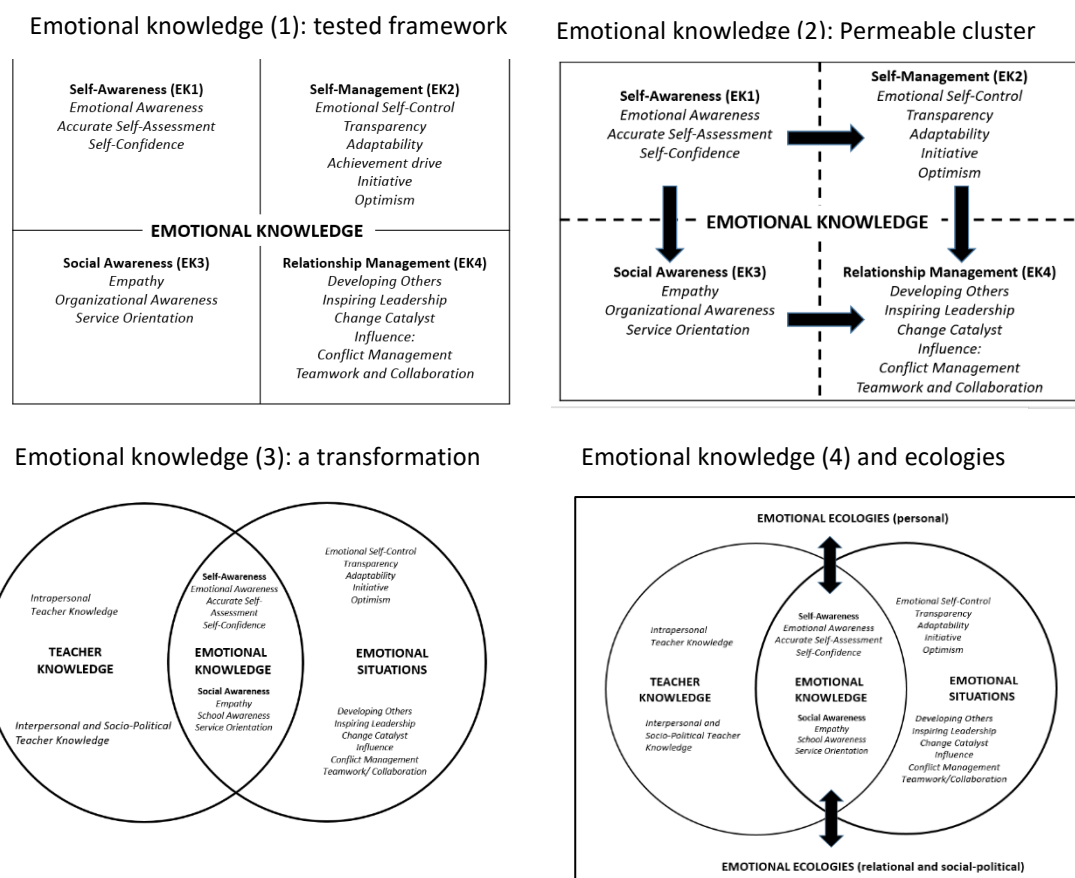
The development of this re-theorising of emotional knowledge is presented in steps in Figure 12. The findings were firstly that nearly all of the tested emotional knowledge categories were found within the student teacher placement experiences and, secondly, that this emotional knowledge frequently had positive associations with behaviour management and building trusting relationships.

Thirdly, a re-theorisation emerged, proposing that emotional knowledge comprises six categories of self- and social awareness, created from teacher knowledge and the application of eleven specific emotional situations.

'What meaning does 'using emotional knowledge when learning to teach' have for student teachers and their school placement mentors?'

Returning to this main question asked earlier (see Literature Review, section 2.4) the following list arose from the inquiry as what 'emotional knowledge of learning to teach' meant to the participants:

- Emotional knowledge exists in the placement practice of student teachers.

- The major benefits of using emotional knowledge were perceived by the student teachers and their mentors to be behaviour management and relationship-building.

- I recognised emotional knowledge as having positive associations with the student teacher performance criteria (within The Teaching Standards).

- The belief that the emotional knowledge of student teachers can be developed over time (Zembylas, 2007) was held by most of the participants in this inquiry.

- Emotional knowledge is developmental and therefore part of learning to teach; it is therefore malleable rather than fixed.

- Student teachers believed that this emotional knowledge development was achieved through reflective practice. This contrasted with a minority of mentors who held that a teacher's emotional knowledge was usually tacit and instinctive.

- The narratives from the student teachers and most of the mentors showed them using the emotional knowledge framework to develop within a reflective practitioner approach.

- Emotional knowledge was related to student teachers and mentor aspirations for the emotional aspects of the school placement (aspects of the placement environment which have been subsequently identified as emotional ecologies)

These are the essences, the essential characteristics of emotional knowledge when used by student teachers on school placements.

7.2 Significance of the findings

Fundamentally this section addresses the value added by this research **"**as assessed in relationship to the objectives, intended application and community for whom the results are deemed relevant" (Yardley, 2000: 223). The research aim was to improve the way that emotional aspects of learning to teach are addressed by teacher educators and student teachers. After reading relevant literature, this aim was honed to finding out what 'using emotional knowledge when learning to teach' meant to student teachers and their school placement mentors. The objectives at data-collection level then centred on the emotional knowledge framework: student teacher understanding of it, their use of it on school placements, its features and what they and their mentors thought of it.

In terms of the significance of this inquiry, I turn to Silverman's view (2010: 70-74) that a doctoral thesis should demonstrate both an original contribution to knowledge and independent critical thought. He cites the following description:

> Making a synthesis that hasn't been made before; using already know material but with a new interpretation, bringing new evidence to bear on an old issue...[and] adding to knowledge in a way that hasn't been done before (Phillips and Pugh, 1994: 61-2)

This thesis has provided a synthesis, fusing the emotional competence inventory (Hay McBer, 2005) and the idea of emotional knowledge of teachers (Zembylas, 2007). Use of emotional knowledge has not been theorised in this way before. Nor had interpretive analysis looked for the presence of emotional knowledge within the practice of student teachers.

The importance of this research is that this emotional aspect of teaching (emotional knowledge) is now less tacit and more explicit, impacting upon two levels of teacher/learner relationships – student teacher/pupils and teacher educator/student teacher. Student teachers can now benefit from lesson planning not just for content, methods and materials, but for use of their emotional knowledge. The impact of this will be on a community of teacher educators (school and university based), student teachers and pupils. While research into teaching has grown rapidly over the past decade (Uitto et al., 2015) this thesis answers a call for more focus on emotional aspects of pre-service teacher education (Corcoran and Tormey, 2013). It firstly presents new evidence from school placement settings that recognises emotional knowledge as a set of visible categories that serve as assets for student teachers. A second outcome of the inquiry is a hypothesis for future empirical research, the theoretical model of interrelationship of emotional knowledge with teacher knowledge, emotionally-intrinsic situations and emotional ecologies. Both shaping research design and for explaining approaches taken in order to support credibility of research outcomes.

The findings have implications for those within teacher education. However, the construct of emotional knowledge also has a relevance that could extend to others within the teaching profession and indeed beyond teaching.

Teacher educators, including university-based tutors and school-based mentors, have a responsibility to support the reflective practice of student teachers and their ability to create positive emotional ecologies in their classrooms. This of course involves modelling such

practice themselves, whether on campus or in school. The bar is set by a recommendation from the Carter report: "ITT partnerships should ensure all trainees experience effective mentoring by … selecting and recruiting mentors who are excellent teachers, who are able to explain outstanding practice, as well as demonstrate it" (2015: 68). This elaboration of outstanding practice should include emotional aspects of learning to teach and could use the emotional knowledge framework.

This thesis finds that understanding and application of emotion knowledge enables teacher educators to show student teachers how to include emotional aspects of teaching within their reflective practice. By consciously using emotional knowledge, they also show student teachers how to build and sustain the right emotional climate in their own classrooms. Since beginning this thesis my own decision-making processes have changed. I now consciously (and perhaps unconsciously) reflect on my own emotional state – my self-awareness and social awareness – before considering the impact of my decisions on myself and others in those specific intrinsically emotional situations.

For example, I recall a student teacher on placement emailing me with a complaint. In hindsight, I was stressed by an assignment marking deadline and interruptions. Consequently, I lacked emotional self-awareness (EK1a) on receipt of her email and showed poor emotional self-control by responding to her email curtly when I perceived it to be an unfair complaint. When I looked again after pressing 'send', I noticed that her email had ended with 'many thanks' and was actually courteous in tone. I had understood emotional knowledge but not applied it.

A more successful illustration of applying emotional knowledge is that I am more explicit about the purpose of grouping and regrouping student teachers to complete tasks in seminars. I explain that I am modelling the creation of 'teamwork and collaboration', partly to build bonds between them as they share out workloads, to help each other when needed

and work to tight deadlines to present outcomes together. I am now more socially-aware of the emotional currents and power relationships (EK3b) with these groups of 20-25 student teachers; I am better at organising and setting realistic but challenging expectations accordingly.

Student teachers on school placements, the findings show, are generally reflective practitioners and are capable of explicitly incorporating emotional knowledge within their practice. They also have aspirations for the ethos in their classrooms, dreams that encompass positive emotional ecologies.

So, teacher educators who are reflective practitioners and aware that they possess emotional knowledge are well-placed to develop it and model it for student teachers. Recommendations follow in section 7.3.

Teacher education strategists should be designing programmes that are more responsive to the emotional aspects of teaching. The findings suggest that, more specifically, the development of emotional knowledge is positively linked to student teachers attaining the Teaching Standards required for the award of Qualified Teacher Status. The policy of all teacher training providers is to provide trainees with a holistic experience of learning to teach. To be holistic and realistic, this experience should include the trainee using emotional knowledge of self and others.

A typical university training provider view is that the best student teachers are reflective practitioners who synthesises theory and practice to achieve high quality teaching. This view influenced the beliefs of the participant student teachers.

School-based training providers host, support and assess student teacher placements, depending on the model of teacher training. They place great value in the ethos in their school and their classes, including those in which student teachers are placed. It is beneficial to everyone at school if the student teacher uses emotional knowledge to create positive

emotional ecologies (and counter negative ones). This view was upheld by the participant mentors.

Emotional knowledge should be subjected to critical evaluation and analysis in much the same way as the Teaching Standards and emotional knowledge is needed for a learning environment that we could describe as a positive emotional ecology.

In-service teachers could also benefit from the use of emotional knowledge. All teachers have to experience some emotional labour (see section 2.2.2, particularly p48) as they hide their true feelings behind displays of false emotions as they deal with pupils, parents, work colleagues or school leaders. Using emotional knowledge, specifically self-awareness, can enable a teacher to stay composed and positive rather than simply show restraint while seething inside. That inner calm is a secure grounding for showing empathy at a level that goes beyond listening to seeing another person's perspective. Minimising emotional labour by using emotional knowledge in this way can reduce teacher vulnerability, serving as a coping strategy to deal with the emotional in their work (Kelchtermans, 2005). By contributing to positive emotional ecologies at personal, relational and programme-wide levels, use of emotional knowledge could also result in increased teacher retention and reduced teacher burn-out.

Other 'caring profession' courses also prepare students for a career in which emotional resilience will be essential. Suppression of feelings will take a toll, whether heavy or light. Learning to become a nurse or social worker, for example, is preparation for a working life which is similar to teaching in some respects. Such work can be immensely rewarding but is vulnerable to burn-out, often caused by emotional labour or the compassion fatigue of caring too much.

Indeed, the research has a broader relevance, extending to preparation for **any work which has its own body of knowledge**, not just those with their own sets of professional

knowledge (Eraut, 1994). To some extent, everyone deals with people and emotions at work – their own emotions and those of others. Triggered by taking actions such as showing adaptability and managing conflicts, we can transform the knowledge we have about our jobs and those whom we serve into emotional knowledge. That emotional knowledge can enable us all to deal with emotions and create better emotional ecologies, whether they be within ourselves and the environments we work, whether it be a classroom, a hospital, a checkout counter or an office.

This thesis is essentially a proposition that 'emotional knowledge' exists when learning to teach. The exploration of this hypothesis has been structured in terms of questions which have formed the framework of this chapter. To answer those questions, the analysed results have been discussed, key findings have emerged and those findings have been related to the relevant literature and previous research. At that point, the empirically-tested 'emotional knowledge' has been presented as a construct that could be used or further investigated within teacher education and beyond.

Having shared the significance of this inquiry to professionals and academics, I now look back to summarise the inquiry. However, research into use of emotional knowledge should not end at this point and so I add a look forward, recommending how the research can be a starting point for further contributions to knowledge of emotional aspects of learning to teach. Finally, I offer short reflections on that learning journey.

7.3 Recommendations

Arising from the learning journey of this inquiry, I have two strands of recommendations to share regarding the framework of emotional knowledge. They concern practical guidance, the pedagogical underpinning of the framework and further research.

Preparation for supervised school placements

Giving attention to emotional knowledge in preparation for supervision of school placements would be a practical way forward. Teacher educators could include this in the curriculum for student teachers in the same way as planning for lesson content, teaching methods and learning materials.

Emotions themselves were not the focus of this study (see section 1.3). Nonetheless the starting point that I commend would to develop greater student teacher awareness of the emotions that they and their pupils experience. Activities could extend their vocabulary by building a list of emotions, perhaps using role play, body language or facial expressions to deepen their understanding of those emotions – for example, being composed, agitated or intrigued. This could be a solid foundation for then investigating emotional knowledge as a practical teaching asset that enables student teachers to recognise and respond to the emotions of both themselves and their learners in the classroom.

I also recommend that teacher educators further their ability to model the use of emotional knowledge through their own teaching. In a school-based context that could be with pupil learners; on a university campus that modelling would be with the student teachers themselves as learners. This modelling for student teachers should at times be explicit, with the teacher educator drawing their attention to his or her own emotional awareness and theirs.

I would also advise that teacher educators ensure that their expectations of student teachers learning to use more emotional knowledge are realistic. While the evidence suggest that emotional knowledge can be developed, it may take longer for some student teachers than others. This is the nature of people and emotions. A student teacher may not have a positive emotional state that is conducive to reflecting on their use of emotion knowledge. Teacher educators will need to be alert to such significant barriers to learning, be they personal or professional. This of course would draw upon their own emotional knowledge to support

their student teachers – empathising with them, serving them as educationalists and being aware of how the teacher education programme can work for them.

The framework is best used as a self-report tool to help student teachers. I recommend that it is only used as an observation tool in situations where the observed student teacher collaborates fully. This is because the revised framework includes firstly, emotional knowledge as self-awareness and social awareness and secondly, actions that arise through such awareness. While awareness is more easily recognised by the subject (the student teacher), responses can be identified by both subject and observer.

The level descriptors attached to each emotional knowledge category makes them measurable (see Appendix 7, p280-281) but as the response to the lesson observations by tutors visiting the school placements showed, such measurement would be of limited validity and therefore of little value. Although student teachers may use the emotional knowledge framework to seek feedback from teacher educators or others within whom they trust, it should be primarily used for self-assessment and reflection, whether before, during and after teaching practice.

A simple step is to alert beginning teachers and their mentors to the need to consider and reflect upon the emotional aspects of the work. Suitable communication channels for this would be the student teacher seminars or lectures and university tutor school visits to support the school placements and mentor training opportunities.

Training for experienced and potential mentors could be provided to help their understanding of the emotional knowledge framework. Activities to enhance the mentor's work in these emotional areas could, in England, focus on recognising the place of the emotional knowledge framework and the recent national initial teacher education mentor Standards (DfE, 2016).

Further research

To educational researchers I advocate exploring any of three following aspects of use of emotional knowledge by student teachers.

Firstly, explore emotional aspects of teaching within the context of teacher knowledge. In reframing emotional knowledge, I have positioned it within a broad typology of teacher knowledge, adding it to the teacher knowledge types suggested by Shulman (1986: 8). That positioning of emotional knowledge as part of teacher knowledge arises from the premise that emotional knowledge is situated in experiences, bound up in actions and therefore procedural in nature. Testing this theory could provide insights into growth of scholarly understanding of both teacher knowledge and emotional aspects of learning to teaching.

Secondly, emotional knowledge does present a paradox, a contradiction that should be investigated. It seems on one hand that a recognition of all knowledge as cognitive knowledge leaves emotional knowledge ignored, while on the other hand this inquiry shows that emotional knowledge is used in the continuous decision-making of student teachers on school placements. Whereas research into knowledge needed for teaching is a 'complex tapestry' (Adoniou, 2014) and presented as many alternative models, the place of emotions within those models is conspicuously absent. This contradicts with the experiences analysed in this research which shows the use of emotional knowledge, most notably the positive associations it has with behaviour management, trusting relationships and achievement in terms of teaching standards. The findings are convergent with those of Brătianu and Orsea (2014); see section 2.2.3. There is still much to be learnt through educational research to address this mismatch between cognitive theorising and emotional practices.

Thirdly, the inclusion of three planes of emotional ecologies within the model (see Figure 11, p245 and figure 12, p260) offers a starting point for educational researchers who want to move their frame of reference beyond the individual or relational to the social-political contexts of teaching. This presents opportunities to evaluate what Zembylas calls

"positive/supportive or negative/alienating interrelationships" (2007: 365) that occur on the teacher education journey.

These three strands have a commonality insofar as they all seek to make the implicit explicit. Emotional knowledge is the hidden part of the iceberg. It is a tacit, unconscious and yet crucial part of learning to teach. Only through the thematic analysis were these hidden meanings found.

This thesis evidences the existence of student teacher emotional knowledge and a place for it in learning to teach. It also re-presents emotional knowledge within a pedagogical structure, as an emergent model to be tested. Emotional knowledge may, as proposed, be part of a wider body of teacher knowledge, located in specific activities and interacting with emotional ecologies. The importance of further research to investigate this lies in the possibility of a concept seen, not just as valuable, but as an integral part of teaching pedagogy and practice.

Using emotional knowledge is a way for student teachers to deal with emotions. I contend that it needs to be recognised and included within initial teacher education and that research into emotional aspects of learning to teach tests the revised framework in a primary teaching context.

7.4 A closing reflection

Writing this report was a largely reflexive and iterative process as I responded with more reading and more data analysis. Although these are sometimes represented by illustrations and diagrams, they are in practice messy and jerky rather than continuous and smooth. This contrasts with the actual presentation of this report which has some sense of chronology to help a reader to navigate the inquiry.

Conducting the inquiry itself has similarly been a repetitive and cyclical process of moving between literature and findings to address convergent and divergent data, identifying problems and tensions, finding solutions and indeed redefining the research questions.

At other times, the process was more parallel than cyclical. I learnt more about research approaches and methods as my understanding of student teachers using emotional knowledge grew, and visa versa. It was at these times that I had a more tangible sense of progress towards an important and defendable thesis. Just as importantly, I am wiser for the learning journey. I am tempted to look backwards and ask myself 'what if I knew then what I know now? Better though, I now look forward as a more knowledgeable practitioner researcher than he who began this inquiry. In service of teacher education I now face similar situations as before, but I am better equipped to do so.

> We shall not cease from exploration
>
> And the end of all our exploring
>
> Will be to arrive where we started
>
> And know the place for the first time
>
> (Eliot, T.S.,1944)

Appendix 1

Emotional Knowledge Survey

This was an online survey completed by 84 student teachers after their beginning placement.

Below is an example of the eighteen categories of emotional knowledge.- emotional awareness. For each category, the survey requires self-reporting on a scale of 4 up to 1 (left) and a drop-down menu choice indicating confidence in that self-report (right)

Appendix 2

1st week reflection from student teacher

This was a written reflection, completed by each of 11 student teachers early in their developing placement. It encouraged the sharing of feelings and was only accessible

to the researcher. Two drop-down choices (at beginning and end) are to identify a setting for their writing and which aspect or emotional knowledge they would associate their written experience with.

Emotional knowledge of teaching – 1st week reflection

Code labelling: Ff1WR

Date: 13th January, 2013

Begin by saving this file with a filename showing the digital date of entry and your initials (e.g. 21.01.12_JB)

The starting point for this journal entry is: A recent incident or event

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During the week I took the Apples group for guided reading, a higher ability group, which I found quite interesting, They all had productive contributions to give however I found it a little difficult to pose a question to a particular child without the others answering before they could. I posed the questions emphasising who it was aimed at and looking at that child, then on occasions simply remarking 'I asked …' however the problem still occurred and affected the participation levels of the activity as not all children could fully engage. Possibly next time I will try be more forceful and point out it is not acceptable to "shout out" even in a small group environment as we will all get a chance to speak.

I was very conscious that within this group was an introverted child who seemed quite self-conscious and quiet. I found it uncomfortable as I did not know what she was thinking and whether she would have liked to answer some of the questions. She made a lot of blank faces and would hesitate to answer even simple questions despite knowing the answer. I wanted to ensure she had a chance to speak (as the other children were explicitly vocal) so I posed a few questions to her, pitched at her level, however the blank face approach continued! This is not something I have come across in my experience so I will have to work with the more introverted children to work out how to progress their learning or assess it without forcing them to do something they might not want to.

This journal entry links most closely to my being service-orientated (EK2c)

Appendix 3

Weekly Reviews

Student teacher reflections on their teaching in the previous week, referenced against the eight Teaching Standards

STUDENT'S PLACEMENT WEEKLY REVIEW

This form is to be completed by the student prior to a weekly tutorial.
This review should refer to the descriptors in the 'Common Framework'
Criteria- commenting on your progress on previous weeks targets:

Placement:	Beginning **Developing** Extending	**Week: 1** 2 3 4 5 6 7 8
Student:	xxxx	
Associate Tutor:	xxxx	
School / Setting	xxxx	

Reflect on the following standards & consider your teaching experience & whether your folder contains appropriate evidence
S1. Set High expectations which inspire, motivate and challenge pupils   **S2. Promote good progress and outcomes by pupils**   This week I tried to consistently demonstrate the positive attitudes, values and behavior expected from the students. I also found out information about the students that I would be teaching in the class such as their capabilities and prior learning to inform my planning
S3. Demonstrate good subject & curriculum knowledge   **S4. Plan & teach well-structured lessons**   I tried to develop a better understanding of how mathematics is delivered in a KS1 classroom, which I have used to inform my planning for next week's classes.
S5. Adapt teaching to respond to the strengths and needs of all pupils   **S6. Make accurate and productive use of assessment**   I have tried to respect and accommodate individual differences within the classroom by trying to adapt my teaching methods to meet these individual learning differences
S7. Manage behavior effectively to ensure a good and safe learning environment   **S8. Fulfill wider professional responsibilities**   I have tried to demonstrate clear rules and routines for behavior in a consistent manor. I have also tried to focus on positive behaviour in the class rather than negative behaviour. I have also tried to be as proactive as possible in class.

Proposed Targets (confirmed/agreed in weekly tutorial)
    1. Develop and demonstrate broad subject knowledge
    2. Continue to work on using various differentiation methods within the class
    3. Continue to improve my behaviour management		

Student Signature:	xxxx	**Date:**
AT Signature:	xxxx	

Appendix 4

Reflection on lesson observed for emotional knowledge

Reflection after formal observation:

My voice was calm, but I need to develop my 'I am in charge/command' voice. I do find this a struggle as I am not ordinarily a 'shouty' person, and prefer a calm classroom. I have to get everyone sat down, ready to start. This is always a struggle in year one, but I do need to improve my peripheral vision. I have been told to think of my starter as a short period to enthuse the group and motivate them, perhaps make a game out of what the pupils are about to learn. This ties into pitching my lessons at an appropriate level.

My lesson was delivered in too placid a manner to engage all the pupils. Interestingly, it was commented that the lesson was pitched too high, not the LO. I need to find a good balance to amend this. Behaviour issues arose from inactivity within the children. I need to keep children at this age busy, and be more enthusiastic combined with controlling. I model my tasks, but I take too long. I do find it a bit of a vicious loop - I want all the pupils to fully understand, but this of course takes time, and the longer they stay listening the more they fidget and the less they understand.

Quite a lot of children were off task - this links to my not pitching my lesson to the age group in question. I have been told that I have a lot of potential with older children, but for now I need to slow down my teaching, yet keep things snappy, use my voice more effectively, and come up with ways of managing the group as a whole whilst still looking out for individual children. It is all about control, and at this stage I feel as if I am not in control. This is something I will concentrate on to amend.

Links most closely to EK criteria: being self-confident

Appendix 5

End-of-placement report on student teacher by mentor

Report referenced against the Teaching Standards, with a comments and grades for each.

END OF PLACEMENT REPORT

For all EYFS / KS1&2 Placements- Length:4 Weeks or More

THIS FORM CAN BE SAVED ON YOUR OWN COMPUTER BEFORE BEING COMPLETED BY THE ASSOCIATE TUTOR AND THEN MUST BE RETURNED VIA EMAIL TO THE UNIVERSITY (SEE THE END OF THIS DOCUMENT), BY THE DATE SPECIFIED IN THE PLACEMENT BOOKLET. IT IS ESSENTIAL THAT IT IS RETURNED ELECTRONICALLY WHEN A STUDENT IS ON AN EXTENDING PLACEMENT

Student Name:	Xxxx	University Programme:	PGCE
University Year Group:	PGCE	Age Range Taught:	6/7
Setting/School:	xxxxx	No. of Children Taught:	30
Associate Tutor:	xxxxx	Partnership Tutor:	xxxxxxx
Dates of Placement:	XXXX		
Placement outcome: (2 marks required)	Professional Practice Pass: X	Placement File/ Reflection Pass: X	

Context Specific Information [Please give some relevant background about the context in which this Block Placement occurred (eg the age range of the class / setting, locality and type of school / setting: any particular difficulties or constraints the student encountered).]	Xxxx taught 30 children in a year 2 class in xxxxx school. The class is mixed ability with one child with a 15 hour statement for behavioural and social difficulties. Xxxx had the benefit of 1 full time HTLA and 1 part time NVQ level 3 student.

OVERALL SUMMARY STATEMENT [THIS MAY BE USED TO INFORM INTERIM OR FINAL REFERENCE WRITING]

Please note: This statement should be informed by the student's attainment against **grade assessment criteria** and the Teacher Standards. You may wish to comment directly on the students impact on children's learning. Please type your statement here:

Throughout the placement Xxxx has remained professional, friendly and approachable and has been an asset to the class. Xxxx is an outstanding teacher and has been a pleasure to work with. He clearly understands the teacher's role as a learner and plans consistently outstanding and good lessons. Xxxx worked effectively with the other adults in the class and in the school by using them as a resource (seeking help and advice when necessary), writing them into his plans, using them as an extra teacher and is working on using them to help with assessment of the children.

Xxxx's behaviour management is outstanding and he sustains high expectations of behaviour. He is firm yet fair and the children respect Xxxx for this. He knows that this can be a barrier to learning and has clearly demonstrated how he can help children overcome this barrier. He has a positive attitude and provides a safe learning environment.

His teaching is fun and engaging and he uses innovative and creative approaches to stimulate the children as well as allowing them to progress in their learning. He is beginning to take 'risks' in his teaching and is able to evaluate the effects of his teaching on the children's learning.

Key Agendas:

Please use this box to comment directly on the students confidence and competence in the understanding and teaching of a) Systematic synthetic phonics and Reading; b) Writing c) Mathematics

Phonics- Xxxx's phonics teaching is fast paced, engaging with clearly defined learning objectives. The children clearly progressed in their learning and could say what they had learnt. During the placement Xxxx taught phase 3 phonics to a group of underachieving children and is was nice to see the progression that the children had made. He uses some good strategies including the phoneme frame and his subject knowledge is very good.

Literacy-In Literacy he taught the children how to write a non-chronological report with good success. He modelled well to the children and differentiated the activities by adult support and outcome. He also challenged some of the higher achieving children by introducing the use of bullet points.

Reading- Xxxx read with various groups of children and also took part in guided reading. He used good strategies with the children and was able to differentiate for the various abilities.

Numeracy- Xxxx taught the children weight, measures and capacity and was able to learn from his successes and reflect on what he needed to improve. The children enjoyed a range of activities and investigations as well as independent written activities.

The student has had 'Impact on Childrens' learning' in SSP & Guided Reading; Please indicate:

1 Little Impact	**2** Some Impact	**3** Good Impact	**4** Very Good Impact	**5** Outstanding Impact
			X	

Placement File:

Please comment on the trainee's reflection and organisation of their file

Xxxx is a very reflective teacher and can be slightly hard on himself even though he is an outstanding teacher. He is able to reflect on his teaching and say what went well and what he could improve. He sets himself clear targets each week and strives to achieve them.

IDENTIFICATION OF STRENGTHS AND PRIORITIES FOR FURTHER DEVELOPMENT

(for possible inclusion in the Career Entry & Development Profile or Target Setting for future placements, as appropriate).[Please identify up to 4 strengths and 4 priorities for development in relation to student's teaching.]

Strengths:	Priorities for Development:
-Behaviour management	-Assessment (formative)
-Subject knowledge	-Improving quality of plenary/plenary strategies
-Differentiation	
-Phonics	

HEADTEACHER'S or AT's ADDITIONAL COMMENTS (Not Compulsory):

Number of absences from the placement:	0
Signature of Student (who must be given a copy of the report)	xxxx
Signature of Associate Tutor:	xxxx

A Signed Copy should be retained in the student's file as part of the 'Student Placement Assessment Record'. This report will form the basis of a discussion with the student's Personal Tutor and in the case of Extending Placements will support completion of the Career Development Profile

Appendix 6

Interview schedule

Guide to semi-structured interviews

Former Student Teachers (now NQTs)	Former School-Based Mentors
1. How are you doing in becoming a teacher? [*see what emerges in relation to the emotional knowledge research questions*] 2. What were the most valuable learning experiences you had on the PGCE course [*see what emerges in relation to the emotional knowledge research questions*] 3. How relevant (or irrelevant) is the idea of 'emotional knowledge' in your current classroom position? Why? 4. How useful (or not) was the 'emotional knowledge' inquiry during the course? Why? 5. Is there anything else you would like to share?	1. Tell me about the student teacher whom you mentored? [*see what emerges in relation to the emotional knowledge research questions*] 2. How did you feel about mentoring her/him? [*see what emerges in relation to the emotional knowledge research questions*] 3. What did you understand about the research? 4. How did you feel about observing her/his emotional knowledge? What about giving feedback? 5. Do you think this focus should be developed further? Why/why not? 6. Is there anything else you would like to share?

Appendix 7

Emotional knowledge level descriptors

Hierarchical performance descriptors for each category (Hay McBer, 2005)

SELF-AWARENESS	SELF-MANAGEMENT
EK1a: Emotional Self-Awareness 4. Is aware of own emotions 3. Is aware of triggers 2. Understands implications of own emotions 1. Has emotional insight	**EK2a: Emotional Self-Control** 4. Shows restraint 3. Has patience 2. Responds calmly 1. Stays composed and positive
EK1b: Accurate Self-Assessment 4. Is aware of her/his strengths and limits 3. Is open to feedback 2. Has a sense of humour about self 1. Solicits honest critiques	**EK2b: Transparency** 4. Keeps promises 3. Brings up ethical concerns 2. Publicly admits to mistakes 1. Acts on values
EK1c: Self-Confidence 4. Is confident in job capability 3. Believes in himself/herself 2. Is self-assured 1. Has presence	**EK2c: Adaptability** 4. Adapts or changes strategy 3. Handles unexpected demands 2. Adapts to situations 1. Is open to new ideas
	EK2d: Achievement Drive 4. Improves performance 3. Sets challenging goals 2. Anticipates obstacles 1. Takes calculated risks
	EK2e: Initiative 4. Addresses current opportunities 3. Seeks information 2. Makes extra efforts 1. Initiates actions for the future
	EK2f: Optimism 4. Has positive expectations. 3. Is optimistic about the future 2. Is resilient 1. Learns from setbacks
SOCIAL AWARENESS	RELATIONSHIP MANAGEMENT
EK3a: Empathy	**EK4a: Developing Others**

4. Listens 3. Reads nonverbal cues 2. Is open to diversity 1. Sees others' perspectives	4. Recognises strengths 3. Provides support 2. Gives constructive feedback 1. Acts as a mentor
EK3b: Organisational Awareness 4. Understands informal structure 3. Understands climate and culture 2. Understands organizational politics 1. Understands underlying issues	**EK4b: Inspirational Leadership** 4. Leads by example 3. Stimulates enthusiasm 2. Inspires others 1. Communicates a compelling vision
EK3c: Service Orientation 4. Makes herself/himself available 3. Monitors satisfaction 2. Takes personal responsibility 1. Matches customer needs	**EK4c: Change Catalyst** 4. Defines general need for change 3. Acts to support change 2. Personally leads change 1. Champions change
	EK4d: Influence 4. Engages audience 3. Anticipates impact of actions or words 2. Uses indirect influence 1. Develops behind the scenes support
	EK4e: Conflict Management 4. Airs disagreements 3. Maintains objectivity 2. Addresses conflict 1. Orchestrates win-win solutions
	EK4f: Teamwork and Collaboration 4. Cooperates 3. Solicits input 2. Encourages others 1. Builds bonds

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