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Navigating the Practicum: Student teacher perspectives on their learning

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Paper presented at the British Educational Research Association Annual Conference, Heriot-Watt University, Edinburgh, 3-6 September 2008

A great deal has been reported about the problematic nature of the practicum as a site for student teacher learning. Prominent in the literature has been the critical role of the mentor and the environment in which the learning occurs. Less prominent are reports on what and how student teachers learn during their time in schools. This study sought to reveal what student teachers learnt during their third practicum of a Bachelor of Education (Teaching) programme and how their learning occurred. Twelve, second year primary student teachers volunteered as participants. Semi-structured interviews prior to and following the practicum were the main data collection method. Student teacher documentation on professional practice during the practicum provided additional data. The findings indicated that learning to teach is an emotional and complex social process of negotiation. In addition, the findings revealed that student teachers learnt about behaviour management, lesson planning and curriculum delivery. They also learnt about children and about themselves. Their learning occurred through intra and interpersonal processes that involved observation and modelling, trial and error, problem solving, and making connections with prior learning. Two main starting points were identified that assisted understanding. Some student teachers preferred to observe a competent role model in the first instance, while others favoured direct 'hands on' experience.

Background

Over the years the problematic nature of student teacher learning during practicum has been widely documented. Questions have been raised about the quality of the practicum experience and the learning that has been achieved (Edwards & Protheroe, 2003, Livingston & Borko, 1989; Zeichner, 1990). Constraints are seen to arise from a range of internal and external concerns that frequently cause student teachers to conform to the status quo rather than realise either their personal expectations or those of their tertiary educators (Cameron & Wilson, 1993; Corrie, 2000; Hayes, 1998; McGee, 1995). So, although constructed as an occasion to advance student teacher learning to be a teacher, practicum can also become a site of ambiguity and tension that impedes learning (Bullough, Young & Draper, 2004).

Despite the constraints and complexities that surround the practicum, tertiary educators continue to seek solutions to the issues as they arise within the prevailing educational environment (Brownlee, Purdie & Boulton-Lewis, 2003; Hastings & Squires, 2002; Loughran & Russell, 1997; Martinez, Hamlin & Rigano, 2001; Turnbull, 2005; Zeichner, 1999). Recently there has been renewed interest in the earlier work of Fuller and Brown (1975) as researchers continue to unravel student teacher learning during practicum (Hagger, Burn & Mutton, 2006; Haigh, Pinder & McDonald, 2006; Hascher, Cocard & Moser, 2004).

In 1975, Fuller and Brown determined that the nature of student teacher learning moved from a focus on concerns about self and survival to a focus on concerns about pupil learning. Some now consider that these stages occur in a more simultaneous manner (Burn,

Hagger, Mutton & Everton, 2003; Haigh, et al., 2006). Other studies have emphasised the emotional and dispositional concerns of learning to teach that take place in a social and situational context (Cochran-Smith & Lytle, 1999; Rogoff, 1990; Smith, 2007).

Many have argued that a significant influence on student teacher learning is a result of the socio-cultural and political context of the practicum (Burgess & Butcher, 1999; Britzman, 2003; Cochran-Smith, 2005; Hayes, 1998, 2001). Broader social, cultural, emotional, and political influences inevitably impact on personal well-being and learning. Research findings have indicated that student teachers' confidence and well-being is linked to how quickly they adjust to the school's norms and conventions and interpret the significance of the micro-political culture (Hayes, 2001; Hodkinson & Hodkinson, 1999). To this effect, a welcoming environment helps to support student teacher emotional security and to establish their personal identity (Hastings, 2004; Oosterheert & Vermunt, 2003).

Another influence on student teacher learning arises from their preconceptions about teaching and their prior experiences (Britzman, 2003; Feiman-Nemser, 2001a; Hiebert, Morris, & Jansen, 2007; Hobson, 2002; Loughran & Russell, 1997; Moore, 2003). When student teachers enter their teacher education programme, they expect to be prepared for their future role as a teacher. Yet, they bring their own preconceptions on how to be a teacher constructed from many years as a pupil in the classroom (Britzman, 2003; Goodfellow & Sumsion, 2000; Kroll, 2004). Consequently, both educational theory and personal life history fashion student teachers' pedagogy and their development as teachers (Britzman, 2003).

There is also evidence to show that student teachers interpret what they see and learn in different ways (Biggs, 1999; Hanks, 2001; Hodkinson & Hodkinson, 2004; Ovens, 1996; Russell, 1988; Zanting, Verloop & Vermunt, 2003). Likewise, they hold different perceptions about what learning involves (Feiman-Nemser, 2001a). Studies have shown that student teachers are often more concerned with being seen as competent operators in the classroom than as learners (Britzman, 2003; Edwards & Protheroe, 2003). As a result, they will perform 'proper' teaching behaviours during practicum that count towards their assessment even in inappropriate circumstances (Korthagen, 1988). It has also been found that in public situations, such as the practicum, learners try to reduce cognitive demands made of them and consequent risk of failure (Edwards & Protheroe, 2003). For others, learning is about experience and practice (Borko & Mayfield, 1995) or simply 'experiencing' a classroom environment. Sotto (2007) describes experiencing as *'digesting'* what one has been exposed to (p.123).

Nevertheless, although theories of learning abound (McInerney & McInerney, 2006) there is minimal research that reveals what and how student teachers learn during the practicum (Cameron & Baker, 2004; Feiman-Nemser, 2001b; Haigh et al., 2006). While attention has been given to the associate teacher's role in supporting student teacher learning, what is known about social constructivist perspectives on learning is that the learner has a crucial role to play (Britzman, 2003; Richardson, 1997). There remains a great deal still to discover about student teacher learning during practicum. Hence, the aim of this study was to: *Explore student teacher perceptions on what they learnt during practicum and to gain insight into how student teacher learning occurs.*

Research design

A case study design (Denzin & Lincoln, 2000) was employed to acquire insight into student teacher learning during their third of five practicum placements. Given that research has indicated that learning to be a teacher involves a multiplicity of factors including cognitive, physical, emotional, and social interactions with a range of people, an interpretive paradigm enabled such complexities to be explored.

The participants were drawn from a cohort of 350 second-year primary student teachers enrolled in a three-year Auckland College of Education Bachelor of Education (Teaching) programme (during the time of amalgamation with the University of Auckland). One hundred student teachers were randomly selected to volunteer as participants. The final sample of twelve was reduced to eleven following the four-week practicum. Both genders were represented, though only three were male. The age range was evenly distributed. Over half were born in New Zealand but other ethnic groups represented included Māori-Rarotongan, Indian, South African, and Dutch/European.

In keeping with a qualitative inquiry approach, the main data collection method was semi-structured interviews that were carried out prior to and following the practicum. Interview questions were broad enough to enable flexibility when clarifying what student teachers learnt and how they learnt. The questions were piloted and subsequently refined.

The first interview was undertaken during the month preceding the practicum. The purpose of this interview was three-fold. First, I wanted to acquire an understanding of student teacher perceptions about their impending practicum. I hoped to discover what their expectations were and what they were thinking about as the practicum approached. Second, as a result of the background reading that formed my research questions, I wanted to see what issues the student teachers might raise about the problematic nature of the practicum and what they considered the purpose of practicum to be. The third purpose of the pre-practicum interview was to use the findings to guide the direction of the post-practicum interview.

The central purpose of the post-practicum interviews was to explore what and how student teachers perceived they learnt during the practicum. In this regard it seemed necessary to gain insight into their learning processes as well as identify factors that they perceived impacted on their learning. Analysis of the pre-practicum data had indicated that it was necessary to examine what student teachers considered the term 'learning' meant. Hence, clarification of this concept became the opening question for the post-practicum interviews, followed by student teachers reflecting back on their earlier expectations and how these were realised or not.

A second means of data generation was student teacher documentation of significant learning. During the practicum, the student teachers were invited to collect information regarding learning that they considered significant. The documentation was complementary to the regular practicum documentation and took a specific format. Information was sought under four headings: What was the significant learning?; What made the learning significant?; How did the learning occur?; and What does this learning now mean for you? Eight student teachers provided this documentation. The student teachers were also invited to provide copies of their critical reflections that formed part of their required practicum documentation. Data gleaned from both these sources provided rich examples of student teacher learning and the manner in which it occurred.

Open, axial, and selective coding was employed to analyse the data and to generate themes (Strauss and Corbin, 1998). Once all sets of the data had been analysed, selective coding was used to confirm the final core themes and sub-themes across all the data. For example, the first core theme was termed *Pedagogical Practices,* with sub-themes being: *Learning about Behaviour Management; Learning about Planning;* and *Learning about Curriculum* The other two core themes were *Learning Processes,* and *Communication and Relationships.*

Findings

Prior to the practicum

When interviewed prior to the practicum the student teachers described their expectations, their worries, and what they hoped to achieve. Aspirations were mixed with apprehension. Concerns featured across all three themes with relationships being uppermost their minds. Issues included unfamiliarity with the assigned age group or socio-economic area raised anxiety and precipitated some preconceptions. Would the children like and accept them? Did they have the ability to teach the new age level? Would their associate teacher want them, like them, or trust them? They wanted to get along with their associate teacher and to 'fit in' as quickly as possible. As Nola exclaimed *'It's really hard to fit into someone else's classroom routine'.*

The majority of student teachers were hopeful that there would be opportunities to *'put into practice what they had learnt from their course work'.* Many spoke about wanting to *'test the reality'* to see what worked and what didn't work. According to most of them, it was only when you worked with children that theories learnt became relevant.

> Talia: *Your theories of learning, behaviour management and thinking how is this going to help me as a teacher, how is it relevant, where can I apply it?*

An authentic setting was seen as being necessary in order to make sense of the theory.

> Nola: *You talk about behaviour management but you're not watching any children actually and you do not have to react yourself. You talk about needing to count in the head and wait for reaction time if you're getting grumpy and not losing your voice, but unless you're experiencing it, you can't really identify it.*

More than half the student teachers made reference to longer term planning - a requirement for the practicum. Few, however, spoke about specific curriculum areas. Longer term planning was a new activity that appeared to cause a certain level of apprehension. For some, it raised doubts about their capabilities and lack of preparedness.

> Petra: *Something that is really concerning me is long-term planning. There's quite a disparity between what you get taught here and what you have to do on ground level.*

> Don: *I haven't got the planning skills yet and that hopefully will come with the first couple of weeks of practicum.*

Several of the student teachers held self-affirming beliefs about their personal qualities or characteristics that they perceived would help them achieve their goals. Such characteristics included an ability to relate to others and persistence when faced with difficulties. While Nola felt she had '*a natural ability to interact with children'*, Ray and Don considered that there would be no problem relating to their associate teachers. Petra stated that even if she had difficulties she would '*still learn because I would stick at it because I don't give up'*.

Others indicated where they hoped to be more pro-active or made reference to areas that they wanted to build upon, or improve in.

> Holly: *Within myself I hope I'm a bit more proactive, because I tend to just sit back and watch for a while.*

> Faranak: *I want to be braver and more outspoken and communicate what I think.*

> Nerida: *I know the things I can improve on and I need to work out how to do that for myself.*

Some appeared to be aware of the way that they best learnt. Don, for example, indicated that he preferred to learn through direct '*hands on'* experience rather than by being told how to do something. Holly, on the other hand, appreciated that the process of reflection provided opportunities to '*rethink everything, to get others views and not just one view'*.

Following the practicum

Table 1 reveals *what* student teachers considered they learnt about during the practicum and *how* they acquired this learning. Similar to what others have found (Hagger, Burn & Mutton, 2006; Haigh, Pinder & McDonald, 2006) management and lesson delivery issues were dominant. Curriculum was referred to mostly in relation to lesson delivery and aligned with management and procedural concerns. As the student teachers learnt about managing the complex learning environment they also learnt about the children and about themselves. Their learning occurred through intra and interpersonal processes that involved observation and modelling, trial and error, problem solving, and making connections with prior experiences.

Table 1: What and How Student Teachers Learnt During Practicum

What student teachers learnt. They learnt about:	*How* student teachers learnt. They learnt through:
Behaviour management	Authentic experience
Lesson planning	Observation and modelling
Curriculum delivery	Trial and error
Effective communication	Problem solving
Professional relationships	Making connections
Children	Intrapersonal awareness
Self	Interpersonal awareness with the:
	Associate Teacher
	Children
	Staff and school environment
	Significant others

Some of the key aspects from table 1 are elaborated upon in the following sections under the three main themes: *Pedagogical Practice, Learning Processes,* and *Communication and Relationships.*

Pedagogical Practices

Learning about behaviour management

Following the practicum, almost all the student teachers made some reference to what they had learnt about regarding the management of children's behaviour. Many commented on matters such as the need to, *'follow routines'*, *'set clear boundaries', 'be consistent'* and to *'be firm.'* Nola wanted to be seen as a *'proper teacher.'*

Though not always in agreement with their associate teacher's way of managing children's behaviour, the student teachers tended to follow established practices initially. Sometimes the associate teacher's strategies did not work for them. At other times, initiating personal strategies was problematic. It was during these occasions that the student teachers seemed to experience the greatest amount of stress.

Marie and Richard learnt to manage their difficult classes through adopting routines established by their associate teachers. Associate teacher advice was also useful.

> Marie: *I think I acquired my learning by watching, doing, and imitating….I think that by sticking close to what he* [the associate teacher] *did, made my life easier because I didn't have to have that battle for four weeks.*

> Richard: *It was a challenge... I pretty much copied my associate teacher and she was good at giving advice as well... It's not hard theory, it's little tips.*

Nerida, on the other hand, discovered that copying her associate teacher's strategies didn't always work for her.

> Nerida: *I said to her, "it's really hard trying to mimic you"….I did get to implement my own behaviour management strategies but her ones didn't work for me and I struggled with that.*

Talia felt undermined by her associate teacher and found that the children resisted any changes to routines that she wished to introduce. She indicated that the children would say *"We don't do it that way", causing me to become unsure of my authority'.* Consequently this resistance impacted on her confidence and increased her stress.

When the student teachers beliefs differed from those of their associate teachers it often caused them to reflect critically as they documented their significant learning. As a result, they not only learnt about children they also learnt about themselves. Marie reflected that she had been *'feeling like a crowd controller instead of a teacher'.* Richard was surprised to discover that another teacher had considered his *'class to be out of control'.* Although

he *'didn't see it* [him]*self at all'* he indicated *'I'm learning about myself that I'm not really interested in that controlling type of environment'.*

Although most student teachers had generalised expectations about managing children's behaviour, they found the reality of coping with some emerging situations to be problematic. They discovered that they needed to understand the socio-cultural context of their practicum placement. This meant learning about the children's backgrounds and the inter-relationship between the factors that affected learning. Claire, for example, came to understand that she could not assume that children from a low socio-economic area would have home resources that would enable them to do their homework. Talia learnt that adverse home influences and frequent absences could affect children's behaviour and their learning.

In contrast to working with children from a low decile school, Faranak and Holly encountered setbacks when the children in a high decile school did not automatically respond to them. Both student teachers had to persevere to overcome the children's reluctance to acknowledge them as teachers. They had to learn about establishing boundaries between friendship and professional distance.

The children provided the student teachers with useful information about their professional practice and their capabilities. As insight was gained from dilemmas encountered, their ability to master behaviour management increased and their sense of efficacy was enhanced. Nola summed up what the majority of student teachers felt in respect to the importance of practicum experience when learning about behaviour management.

> Nola: *I think behaviour management is a huge part of being a classroom teacher.*

Learning about lesson planning

All but one student teacher referred to lesson planning following the practicum. They revealed that they had acquired insight into the planning purpose and increased their understanding of the planning process. In particular, they learnt about the relationship between long and short-term planning and found that planning involved more than just written documentation.

The majority spoke about the manageability that resulted from developing consecutive lessons. Nola considered it was *'awesome'* being able to *'follow something through'* and Nerida found that taking the *'maths group eight times'* enabled her *to 'just run it on'*. Richard, felt that he had been able to have *'a good look at how it all works in a complete picture'* and Don's confidence in his capability for planning had grown.

> Don: *Well, what's happened here big time is that I now know I can make a week's plan and go, "okay, that's what we're doing for the week"…there is a process.*

Longer-term planning enabled the student teachers to improve their knowledge about the amount of detail required in order to sustain lesson delivery. Richard discovered that *'The daily, weekly, unit planning could incorporate required detail without having to resort to a lesson plan for every lesson'.* Others found that detailed planning did not always achieve

the desired result. When Holly took a maths lesson she realised that she had *'packed too much into the lesson to let the kids actually learn something'.*

Several student teachers appreciated that not everything had to be written down and that visualisation could help lesson delivery. As Faranak said:

> *I learned how planning on paper is not enough when it comes to working with children and that I do need to think through things in my mind with regards to how lessons will flow, group dynamics, and the prompts I might make.*

The student teachers agreed that it was important to have an associate teacher who could model planning in practice.

> Richard: *My observation of the way* she [the associate teacher] *planned significantly influenced my learning.*

> Talia: *…the associate teacher's guidance was good because she had very good planning. I gained a lot of confidence in that area from her.*

Planning to meet children's learning needs was a growing concern, particularly with regard to planning for individuals and groups. For Nerida, *'Another significant learning this week was finding out how to plan for individual and group needs of children in the classroom'.*

During this third practicum, the student teachers appeared to acquire greater realisation of the principles of planning. Nola considered that planning incorporated *'being clear in instructions and being really clear about the purpose of learning activities'.* The majority of the student teachers recognised that it was necessary to be flexible with planning and to be prepared to adjust accordingly. Indeed, a willingness to adjust to circumstances was a prominent feature of the conversations both in terms of lesson planning and delivery as well as learning to be a teacher in a more general sense.

Mostly, however, attention centred on manageability and delivery concerns. Longer term planning had been important to their learning in this respect. Petra, concluded that although content knowledge was important, it was not as important as pedagogical aptitude.

> Petra: *Although content knowledge is important, the ability to teach anything, even with limited understanding, is much more important. Lesson delivery is the most important thing.*

Learning about curriculum

When the student teachers made reference to curriculum they viewed it more in terms of how it might be taught as opposed to using opportunities to acquire further curriculum content knowledge. Consequently, learning about the curriculum appeared to be more about pedagogical content knowledge (Wilson, Shulman, & Richert, 1987) than it did about specific curriculum content knowledge. At the same time, there was some awareness that curriculum content knowledge was important in order to deliver lessons effectively, though such awareness was minimal.

Some student teachers found, however, that what had been learnt previously, did not always work in another context. They learnt that curriculum delivery was context specific. Mathematics and reading were the most frequently mentioned curriculum areas. Māori language featured next, and appeared to be problematic for several student teachers. Richard felt uncomfortable teaching Māori but persevered after the feedback he received helped him make progress. The approach he employed, however, was *'at variance'* with what he had been taught at the University. Nevertheless, the modifications that he made enabled his confidence to grow when he saw the children learning.

> Richard: *During this process, I felt my confidence growing and my belief in the way I decided to teach being reinforced by the learning I saw taking place and the enthusiasm of the children.*

Nerida, on the other hand, had attempted to follow her associate teacher's practice of incorporating instructions in Māori. She found that children did not respond to her commands. Her reflection revealed both her inner conflict and her discomfort.

> Nerida: *I just feel silly, I don't know why. Something inside me said, "You sound stupid, just stop saying that right now. You sound like an egg head." But I have to use Māori, we've been told we have to use Māori and I was just like, "No, I have to stop this." I couldn't do it.*

Physical education, health, social studies, dance, and science (inquiry learning) were the only other subjects mentioned more than once.

Learning Processes

Another of the main themes, *Learning Processes*, identified the different ways that student teachers acquired their learning. Although the student teachers learnt in different ways there were similarities in the factors that influenced their learning and the learning processes that they engaged in. The student teachers learnt through authentic experiences by making connections with previous learning; from observation and modelling; and through participating in trial and error and problem-solving activity.

Theory – Learning through making connections

Nearly all the student teachers spoke about the need *'to work with children to know how those theories work'* or the need *'to observe the theory in practice'*. For the student teachers this meant it was important to observe and apply the theory before judgements could be made about what would be useful, relevant or applicable to them at this time within the context that they found themselves. Practicum was where they felt they could sense of the theory.

> Nola: *I think you need to go on practicum to be able to make more sense of the theory that you're learning here. It all starts to tie together at this stage for me. It's all starting to link and overlap.*

Petra considered that translating theory into practice was finding out how to *'marry the two together'*. It was not a conscious act, but rather something that went on in her head when she taught children. Reflection helped her to make the connections between theory and practice.

> Petra: *The connection just sort of tends to happen when you're in a situation - there's children in front of you that require to be taught something. You have all this knowledge in the back of your head that you are able to access when you're doing this. "Okay, this is the problem; I need to solve it with these kids." It's not until you reflect upon it later that you suddenly go, "Oh, is that what that means? Right, I've got it now." For me, it just seems to come quite naturally.*

Similarly Richard appreciated that it was through personal involvement that the theory could resurface.

> Richard: *I find that I learn best when I'm doing things, not reading about them and not hearing about them but actually doing them…. I find you get realisation while you're actually teaching. Suddenly the theory you remember it as you're teaching and it comes back to you.*

The student teachers frequently referred to mental images as they struggled to make sense of their learning. Russell (1988) considered that student teachers required knowledge or images of teaching before they could experiment, analyse, and evaluate and that metacognitive processes were integral to planning. The student teachers in this study were constantly engaged in cognitive processes as they struggled to engage in longer term planning, manage children's behaviour, manage their emotions and manage the complex learning environment. Making connections to previous learning was integral to this process.

Several spoke about images that were conjured up in their minds. Faranak explained how she made links in her mind when she saw teachers demonstrate the strategies that they had previously discussed with her.

> Faranak: *Just being able to make that link, I guess, between what you actually tell me versus what you actually do. For me, that's important…just trying to make that link in my mind. It actually makes a lot of sense when someone tells you something and then seeing them actually use it in some way, be it a strategy or an aspect of their teaching.*

Nerida spoke about developing a *'mental box'* for future action and Holly disclosed how she rethought everything by *'shuffling it around'* in her mind. Such mental images appeared to be important to the student teachers' learning and affirmed the contention that when learners review their thinking, they ascertain what works and what does not work (Von Glasersfeld, 2002).

> Nerida: *For me, I was thinking like, "Would this work in my classroom? Would I do this in my classroom?" You're getting to that point where you sort of like say, "I wouldn't do that or I would do that." You're sort of starting to make up this little mental box of things you're going to take out when you get your own room.*

Learning through observation and modelling

When student teachers spoke about their learning, they frequently used the word *seeing*. Seeing was used in a variety of ways. Often it was associated with observation that preceded personal application and subsequent understanding. For example, Marie, Petra, Nola, and Nerida were strongly motivated to 'see' for themselves what theory 'fitted' and what strategies, talked about in university, worked in practice. Nerida wanted to see how teachers applied social constructivist theories.

Sometimes seeing appeared to be a form of osmosis where student teachers, would *'sort of look'* and take in what they wanted and leave out what they did not want. As Holly explained, *taking what you want out of it and turning it into something relevant for you'*. At other times seeing meant observing something modelled before understanding was acquired.

> Faranak:…*seeing whether it works for me or not and then adjusting it to suit my needs and my style.*

The notion of osmosis appeared to be an important part of the learning process. The student teachers' references to this form of learning were similar to Oosterheert and Vermunt's (2003) sensory experiences which were reported to be important internal sources of 'dynamic self-regulation'. Petra, for example, described *'picking up a lot of things from her associate teacher by osmosis'*. She clarified that, for her, osmosis meant watching the associate teacher in order to evaluate and draw conclusions.

> Petra: *Osmosis is the process where it just drifts from one side to the other side, not necessarily turning round and saying, "you need to learn this; this is your learning objective; this is the reading you need to do to achieve it." This was a lot more like just watching her, watching what she did, being able to evaluate myself. "Yes I like that or no, I don't necessarily think that's a good idea." Just taking in what I wanted to take and leaving out some of the things that I didn't want to take in.*

Observation could be planned or unplanned. It provided the security to trial ideas and helped to develop confidence. Whether planned or unplanned student teacher observations were frequently used to make decisions about what they would use, modify or adjust before they would implement ideas themselves.

> Nerida: *A lot of learning actually comes from observation, and that's something I've learnt big time. You are only going to see it in action if you observe and know how it works for you if you then implement what you've observed.*

In addition to unplanned, incidental observations, over half the student teachers actively sought focused observation of their associate teacher's practice. There were occasions when they felt it necessary to observe their associate teacher prior to teaching. Petra, while having strong subject knowledge in mathematics, was unsure how to apply this knowledge to teaching mathematics with junior children. As an opportunity for such an observation was not available in her own classroom, she sought out another teacher in the school to observe in order to obtain the necessary information. She then felt ready to teach mathematics with her own class. In contrast, Marie realised that she had been

disadvantaged when teaching maths by not previously observing her associate teacher. Both these student teachers overcame the constraints that they encountered by their perseverance and, in Marie's case, through resilience in the face of difficulties.

Some of the student teachers acknowledged the importance of follow-up from the observation - through engaging in trial and error, reflection and discussion. Petra considered *'part of an observation is reflection'* and many regarded observation as a starting point to a trial and error process.

> Nerida: *So learning does come from observation, but then you need to have that opportunity to trial it, run with an error or a positive, and then reflect on it.*

From the findings in this study, it was evident that observational experiences enabled student teachers to develop a stronger sense of efficacy with regard to specific goals. Planned and unplanned observation experiences appeared equally important in this regard. Student teacher observation of their associate teacher and others provided important information against which judgements could be made about learning and about themselves. Observing the successes and struggles of others helped student teacher expectations that they might experience similar outcomes when performing the same behaviours.

Learning through trial and error, problem-solving, mistake-making

The student teachers regarded the practicum not only as an opportunity '*to see how things work'* they also saw it as an opportunity to *'try out new things', 'take risks', 'experiment'* and *'make mistakes'*. The associate teacher could be persuasive in encouraging student teacher confidence to achieve certain tasks. Such encouragement increased student teacher willingness to take risks and overcome difficulties.

Richard, for example, appreciated having an associate teacher that encouraged him to *'try out things if he wanted to'*. Being *'in an environment where he could explore what he thought about teaching'* he felt that he was developing his own pedagogy, rather than simply imitating his associate teacher's practice. He explored what worked for him when engaging children and assessing their learning for further planning.

> Richard: *For the first time on practicum I started to feel that I was developing my own pedagogy, rather than mimicking the associate teacher. I was learning about what I found worked for me as a teacher, what tactics showed results, what assessment was useful in further planning, and what practice seemed to engage children.*

In contrast, Talia lost confidence when her associate teacher persuaded her that she lacked capability in her attempts to manage the children. She subsequently withdrew her effort and was reluctant to trial her own ideas. She coped by just doing the minimum practicum requirements.

Often trial and error was associated with student teachers finding solutions to problems. Nerida, had been brought to tears by a difficult class. She realised that if she were to survive, she would need to be more assertive.

Nerida: *I learnt from my mistake. My first day of control, I left the school feeling completely drained and as if I had taught nothing. The following day I was stronger and far more assertive.*

Don, like others, found he was better able to make connections and retain what he had learnt if he had '*positive usage*'. He considered he could build upon his learning while engaged in practice and making mistakes.

Don: *I learn very quickly 'hands on', so being in a position where I'm actually teaching I can build on that knowledge while I'm doing it….Unless I made the mistake, I would never have asked the question, "What do I do now?".*

Problem-solving invariably sought answers to questions about curriculum delivery or managing children's behaviour.

Nerida: *I was just like, "How do I deal with that? What do you do?"*

Marie: *How do you introduce a new whatever it is that you're doing? Also, how do you change from maths to spelling to topic in that classroom?*

Sometimes solutions involved making judgements. At other times, solutions weren't found or strategies were discarded.

Claire: *It didn't work. Terrible!*

Nerida: *I tried it twice and I didn't do it again.*

Communications and Relationships

Learning about effective communication and establishing appropriate professional relationships were priority considerations. There were four groups of people that featured in this regard. Foremost were the children and the associate teacher. Also important were the staff of the school and 'significant others' that were mostly from outside the school setting. Significant others contributed to student teacher learning by offering support, ideas, or advice when overcoming dilemmas. For some student teachers this meant engaging in dialogue with people such as the visiting lecturer, their peers, and their mother.

Prior to the practicum the students spoke a great deal about their associate teacher. They wanted to '*belong*'. The student teachers seemed to appreciate that appropriate relationships with their associate teacher might enable them to better manage children's behaviour as well as their own learning. They were, therefore, ready to adapt or comply as became necessary.

Richard: *I'm sure I'll get on with the associate teacher just fine because whatever sort of person they are, I'll adapt to that because I've got no reason not to. To be honest with you, you become stoic and you just make the best of it that you can, so you take all*

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the opportunities you can get and just soldier on anyway. I wouldn't complain....You work really hard to do everything that they require you to do.

Talia had previously considered that relationships depended upon personality. Like Richard, she regarded herself as being adaptable and intended to '*fit in*' with whatever her associate teacher wanted.

Talia: *Whether you're going to develop relationships professionally and be successful in that depends so much on personality...I think of myself as very adaptable and very flexible and I am happy to fit in with what my associate likes her class to be.*

Talia's practicum experience, however, later caused her to change her perspective. She struggled to 'fit in' and concluded that in order to learn, a professional friendship rather than a personal friendship was what was necessary. She surmised that in future, '*I will just remember that it's like a professional friendship. I'm there to learn*'.

Although the student teachers spoke less about their associate teachers following the practicum, it was nevertheless apparent that the associate teachers influenced both their learning and their confidence to trial new ideas.

Marie: *I had a really good relationship with my associate teacher. I had the chance to implement and try new things - teach new topics I'd never taught before.*

At the same time, there were also occasions when student teachers realised that getting along with the associate teacher did not necessarily mean that their learning was enhanced. Petra, while acknowledging the support she had been given from her associate teacher, felt that she hadn't been given much to think about. Consequently she considered her learning had been restricted.

Petra: *My associate teacher allowed me to be myself, to develop my own style, and supported me while I was there. She didn't give me much, like many things to think about, except we did discuss the time management issue on several occasions. I think that's about it.*

Marie, also, felt that her learning had been limited by being left alone a great deal. She had been unable to observe different aspects of professional practice that might have extended her knowledge. Feedback from her visiting lecturer indicated areas of concern that ultimately impacted on her confidence to teach maths. Hence, she concluded, '*If I had been able to watch a little bit more, I would have felt more comfortable....I didn't get to learn any new strategies because I didn't watch him*'.

Nerida, rationalised the constraints imposed upon her by her associate teacher because '*it was a difficult class*'. Although she had felt '*under her* [associate teacher's] *thumb a bit*' she considered she '*needed it because the class needed me to follow what she wanted*'.

Sometimes differing beliefs caused tensions in relationships. However, in this study the student teachers sought ways to overcome these. Talia considered her relationship difficulties had arisen from communication problems and differing expectations.

Talia: *I was committed but we had a communication breakdown. She obviously had very different expectations to how I interpreted everything I learnt.*

In the end, Talia maintained that while a good relationship with her associate teacher would have been preferable, she had been able to learn in spite of the relationship. She now considered that *'getting along'* with the associate teacher was not vital to her achievement and her learning. This change in perspective helped her to continue learning, despite the emotions that she was feeling.

Talia: *It would make it a lot more pleasant and a lot easier and a lot smoother, but I guess I knew before it wasn't vital.*

Other people were useful when difficulties arose. Talia actively sought the help of another student teacher in the school to confirm her perceptions of the practicum requirements. The support that she received helped her sustain sufficient effort to complete the practicum successfully. Marie sought outside advice that allowed her to view her dilemma from another perspective. As a result, Marie initiated an observation of her associate teacher and persevered despite her discomfort.

For most student teachers initial worries about their associate teacher dissipated once on practicum. However, the overriding pressure to pass the practicum often influenced what and how they learnt. When beliefs did not concur with those of their associate teacher, they reported that the best approach to establishing a working relationship was to conform rather than *'rock the boat'*. Petra wanted to make sure that she *'passed'* and *'met all the practicum requirements'*.

Similarly, Richard advised that there was really no option other than to, *'play the game by the rules that you are in. You can't do much else'*. Passing the practicum was the bottom line for him.

Richard: *It all comes down to passing or failing as far as I'm concerned; that's the black and white if it.*

Discussion

The findings of this study confirm that learning to teach is a complex process (Haigh & Ward, 2004). As others have reported, becoming a teacher is a highly emotional experience for student teachers as they struggle to make sense of the realities of the classroom and come to grips with the tensions that impact on their emotions, and their efficacy (Hastings, 2004; Mayer & Austin, 1999; Oosterheert & Vermunt, 2003; Rosiek, 2003). In this study, what and how student teachers learnt during practicum was largely determined by their capacity to navigate their environment and to manage their emotions.

Consistent with the literature, the most common way for student teachers to manage conflict and tensions during the practicum was to comply with what the assessors required of them (Calderhead, 1988; Cochran-Smith & Paris, 1995; Edwards & Protheroe, 2003; Hayes, 2001; Martinez, 1998). In so doing, they reduced emotional stress but may have also lessened their potential for learning.

Nevertheless, the student teachers still experienced varying levels of stress during the practicum that tested their capacity to exercise control over their performance and their emotions. Intrapersonal and interpersonal factors were significant in determining how the student teachers perceived and interpreted their experiences. Positive relationships with the associate teacher, the children, and the staff helped to reduce negative emotions and the level of stress experienced. Strained relationships led to increased tension. Thus, similar to the findings of others, the findings in this study indicated that there are important links between emotions, personal relationships, and personal attributes (Hascher et al., 2004; Lind, 2004; Malderez, Hobson, Tracey, & Kerr, 2007).

The majority of the struggles arose from student teacher endeavour to 'control' their learning environment and their well-being. That is, their capacity to manage the children and their teaching. This meant that they had to 'fit in' as quickly as possible. It was necessary to manage children's behaviour in order to implement lessons and fulfil the practicum requirements. Pedagogical concerns took precedence. Hence, what the student teachers learnt at this time was mostly about behaviour management, planning, and curriculum delivery. Such findings concur with others (Hagger et al., 2006).

To help minimise stress, copying their associate teacher provided a means whereby the student teachers were better able to anticipate events and predict outcomes. The initial imitation provided scaffolding and security against which they could measure their own success and select what they could effectively manage without losing confidence. Observation provided a springboard from which they could develop their own practice.

The practicum site was also where the student teachers attempted to make sense of theory learnt in their course work by applying it and testing it out in the reality of the classroom. Instead of discovering a gap between theory and practice, the student teachers in this study appeared to understand the integrative nature of theory and practice. Critical reflection was often part of this interactive process. On the few occasions when follow-up discussion occurred with their associate teacher, their learning was enhanced. A process of theory-practice-reflection-discussion helped the student teachers to integrate their theoretical knowledge.
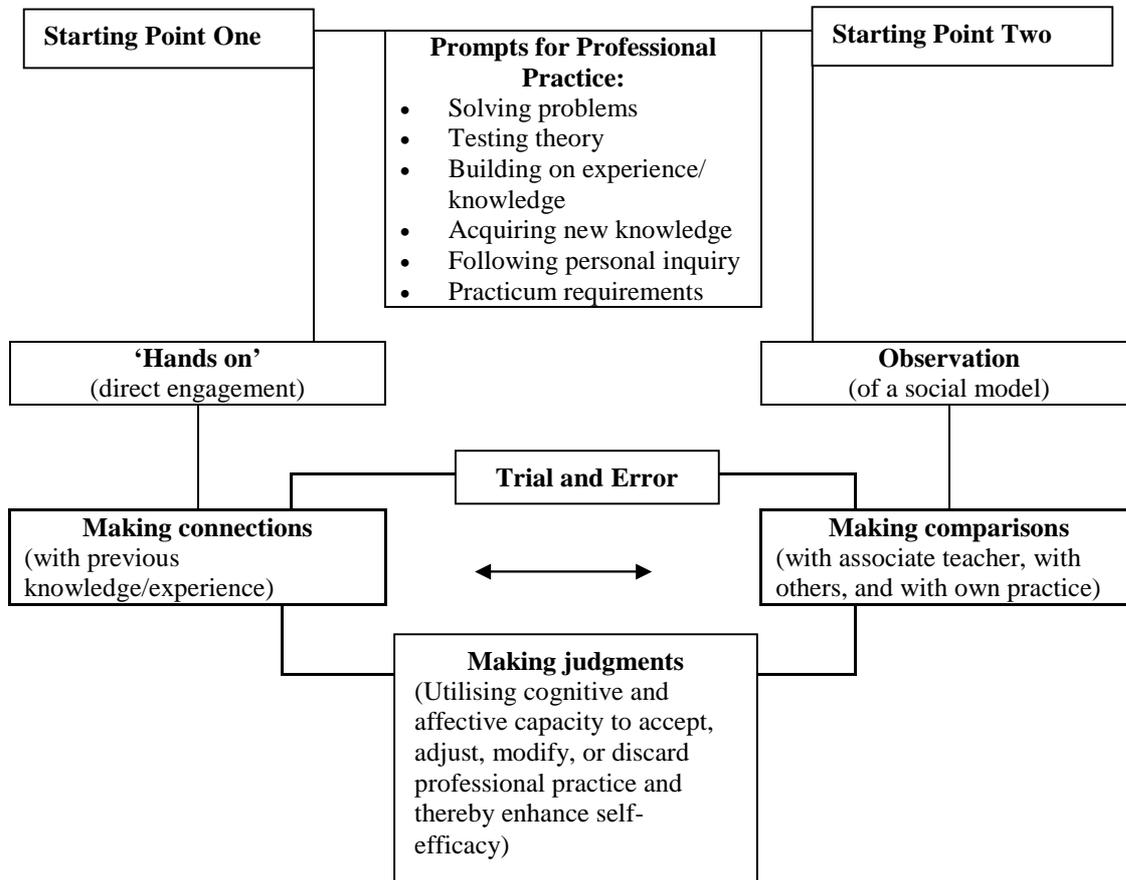
In addition, as the student teachers engaged in cognitive and social activity it became apparent that developing a sense of mastery occurred from one of two main starting points - namely through (1) hands on experience, and (2) observing a social model. Thus, while all the student teachers aimed to progress their learning to be a teacher, they went about this in two key ways. Figure 2: *Engagement in Professional Practice* illustrates the two starting points for student teacher engagement in professional practice.

In *Starting Point One* the student teachers engaged directly in 'hands on' professional practice. Through trial and error they made the connection with previous knowledge and understanding and used cognitive and affective processes to make sense of their learning. Hence, sense was made through direct participation in the teaching/learning situation.

In *Starting Point Two* the student teachers followed a similar process but first chose to observe a social model. When the student teachers were less confident about their capacity to be successful in a particular aspect of professional practice, then observation prior to engagement in the trial and error process appeared to provide support. Though the student teachers made connections with previous learning during the trial and error process, they

also made comparisons with the observed social model.

Figure 2: Engagement in Professional Practice

Starting Point One	Prompts for Professional Practice: • Solving problems • Testing theory • Building on experience/ knowledge • Acquiring new knowledge • Following personal inquiry • Practicum requirements	Starting Point Two
'Hands on' (direct engagement)		**Observation** (of a social model)
	Trial and Error	
Making connections (with previous knowledge/experience)		**Making comparisons** (with associate teacher, with others, and with own practice)
	Making judgments (Utilising cognitive and affective capacity to accept, adjust, modify, or discard professional practice and thereby enhance self-efficacy)	

Although both starting points were used interchangeably, the student teachers appeared to have learning preferences. Some preferred to engage directly in practical experience. Others preferred to first observe their associate teacher. Decisions were also made at this point whether to accept, modify, or reject the observed practice before personal involvement occurred. It should be noted that the progressions are not sequential stages for all occasions but rather the stages that were most prevalent in the findings.

Conclusion

Thus, a conclusion drawn from the study is that student teacher understanding seemed to occur from two different starting points. Either way, working with children in a sustained way was essential for making connections between what they had been told, what they believed, what they saw in practice, and what they felt they could implement themselves. For some, this meant observation before a trial and error process was engaged in that led to assimilation, modification, acceptance, or rejection of the practice. For others, it meant

engaging directly in a problem-solving process that required spontaneous interaction before similar modification, acceptance, or rejection occurred. Integral to what was achieved was student teacher confidence to take risks and learn from mistakes.

What the student teachers were able to do, however, was also dependent upon their capacity to cope with the constraints and emotional stresses that they encountered. Personal attributes, beliefs about learning, and beliefs about themselves appeared central to achievements. It was evident that there were important interactions between efficacy and emotions; emotions and relationships; and relationships and learning.

Although there is evidence from this study that confirms the influence of the associate teacher and the school environment on student teacher learning, there was also evidence to suggest that each student teacher has the potential to significantly influence her or his own learning. While the student teachers place emphasis on the role of the associate teacher in their success they need to give more attention to their role as a learner.

I consider that learning to teach is a social process of negotiation as well as self-direction. Personal relationships and efficacy beliefs, therefore, are powerful influences on learning. Student teachers need to be aware of the effect of such interactions and communicate effectively in order to take advantage of the learning opportunities that prevail. They also need to appreciate the impact of their efficacy beliefs upon their confidence and achievement as they navigate their learning. Consequently, I argue that what and how student teachers learn during the practicum depends upon the learning context and a capacity to manage both self and the complex learning environment.

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