

RETAINING EFFECTIVE EARLY CAREER TEACHERS IN NSW SCHOOLS

UTS: Centre for Research in Learning and Change and Centre for Study of Choice.

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EXECUTIVE SUMMARY

OVERVIEW OF THE STUDY

This project was commissioned by the NSW Department of Education and Training. This four and a half year research project had the aims of tracking a cohort of final year (2005) preservice teacher education students through their post-graduation experience into 2006, 2007, 2008 and 2009, in order to understand more clearly the reasons why some early career teachers (ECTs) in NSW public schools choose to leave the profession, and why others choose to remain; and in order to develop strategies to increase the retention rate of effective teachers during their early years of teaching.

The project team comprises researchers from the Centre for Research in Learning and Change, University of Technology, Sydney (UTS) and researchers from the Centre of Study of Choice, UTS. The expertise of the team members allowed a thorough investigation which comprised rich textual data about ECTs' experiences, together with extensive quantitative data about decisions ECTs make about staying in the profession. The qualitative component of the study was longitudinal and was informed by interviews with a small group of ECTs, focus groups, narratives of ECTs and member checking at a project conference. The quantitative part of the study comprised a survey to ascertain the rankings of factors that were influential in teacher decisions to remain in the profession (Best/Worst Survey) and a scenario-based survey to ascertain the most influential actions that could be implemented to keep teachers in the profession (the Discrete Choice Experiment). The findings aim to inform the NSW DET, teachers and teacher education institutions about how best to retain effective ECTs.

AIMS

The overarching research question is:

Why do some early career teachers choose to remain in the profession and why do others choose to leave?

The subsidiary research questions are:

- What are the relevant experiences of ECTs in their first four years of teaching?
- What influences ECTs to remain in the profession?
- What influences other ECTs to leave the profession?
- What strategies might assist in the retention of effective ECTs?

KEY FINDINGS

The key findings of this project are summarised below:

The Best-Worst Survey distributed to the 2006 entry cohort, indicated that the ten most important factors in influencing ECTs' decisions to stay in the profession were the following (in order of importance):

1. Student involvement or the extent to which the teacher was or felt able to engage their students.
2. Professional challenge or the extent to which the work was professionally satisfying.
3. Collegial support (or the level of support offered by other teachers)
4. Professional collaboration or the relationships with others who are involved in student welfare and learning.
5. The support received during the ECTs' first year, which included the orientation to the school and system (for example, structured supervision and mentoring).
6. Executive support or the support provided by the School Executive (Principal, Deputy, Head Teacher, Assistant Principal).
7. Staff culture or the interaction and support among staff
8. School 'climate' or the tone of the school (welcoming atmosphere).
9. Pedagogical Support, or the quality of support given for planning and delivering teaching and learning.
10. Workload or the time and effort you commit to teach effectively.

Findings from the Discrete Choice Experiment indicated that there were clear divides between the group which indicated an expectation to stay in teaching and the group expecting to leave teaching. Factors likely to influence the preferences of ECTs regarding working conditions differ for these two groups.

Those who indicated an intention to stay noted the importance of good support, from mentors and from experienced colleagues. Those who said their intention was to leave were more likely to share characteristics of being "loners", male, and disliking collaborative professional learning structures. There were a number of other factors, but it was clear that there was great variation in the factors that induced them to stay in the profession, and many of these were local and dependent on the context of the teacher.

Findings from the full set of interviews across the four years of the project and focus groups at the project conference revealed a number of themes relevant to understanding why teachers stay in, or leave, the profession. It must be noted that as this was a longitudinal study, the interviewees were drawn from a cohort that started teaching in 2006. Consequently, they were not beneficiaries of initiatives for early career teachers that were subsequently introduced by the DET. As well, although 52 respondents were initially selected for interviews, the number of respondents diminished with each set of interviews. This is not unusual in longitudinal studies and the aim of the qualitative component of this study is to provide rich data on different experiences, rather than to generalise from these data. The results of the BWS and DCE indicated how these themes were

important to the whole cohort in their decisions as to whether to remain in the profession or leave it. The themes are collected below. The ones that appeared important both in the qualitative and quantitative components of the project are noted first.

- Collegiality was important for job satisfaction, including working closely with more experienced teachers.
- Support of the ECTs was variable. Where it was good, the ECT tended to find it easier to become a productive teacher; where it was poor or non-existent, the ECT found teaching more difficult. There was a need for support in second and subsequent years of teaching.
- ECTs felt supported when colleagues exhibited understanding of their novice status and demonstrated realistic expectations and offered practical help and support
- Colleagues, executive and community who showed they valued the contributions of the ECT were important in affirming the ECTs' commitment to teaching.
- Behaviour management was a problem for most of the ECTs. External courses on behavior management were helpful and school structures that provided a consistent approach to classroom management also supported them.
- ECTs expressed a strong desire to engage their students and found a major challenge to be students who were resistant to learning.
- Schools with stable staff and executive usually led to better student behavior and better staff morale.
- Basic resources with which to carry out teaching needed to be readily available.
- Participants, in particular, second career teachers were generally critical of the physical working conditions, and suggested these conditions indicated a lack of regard for their professionalism.
- ECTs appreciated the opportunity for professional learning, both through external courses and through learning at their workplace with colleagues. They indicated that being professionally challenged and stimulated was important to them.
- A reduced teaching workload appeared important to respondents in the interviews, as well as one of the factors influencing ECTs to remain in the profession.
- Teachers sometimes experienced feelings of isolation.
- Casual and temporary teachers requested access to the same level of professional support as permanent staff.
- The NSW IT accreditation process was introduced in the first year of teaching of the participants in this study. This meant that the process was often confusing for the teachers involved, and those trying to mentor them.

The next section summarises the first aim of this project — to answer the questions why do ECTs choose to remain in the profession; and why do they leave?

WHY DO TEACHERS STAY IN THE PROFESSION?

The answer to this question is both simple and complex. The simple answer is that most teachers enter the profession with a desire to be good teachers; to help their students learn and contribute to the next generation. During their early years, as they become better teachers they also become increasingly likely to stay in the profession. The only characteristic common to every ECT who remained in teaching (and as a participant in this study) was that they reported that they were becoming better teachers and that teaching was becoming gradually more manageable for them.

The answer is complex because teaching is a difficult and challenging profession that is arguably never mastered; and because the environments in which ECTs find themselves vary enormously. ECTs, when they begin, are not yet complete, able, independent teachers. Most have some weaknesses that are exposed and the more challenging their teaching situation is the more likely it is that they will find it difficult to experience the sense of personal achievement that effective teaching can bring. For example, ECTs almost universally struggle with the management of the behaviour of their classes, particularly in their first year and particularly early in this first year. The struggle when they start varies in intensity, but many report being stressed, needing to work hard late at night and having a sense of helplessness - at least with some classes some of the time. If this state of play endured it is hard to imagine that many would remain in the profession for the long term.

Fortunately, for most, circumstances improve. The overwhelming evidence of this longitudinal study is that, for most, the experience of teaching gets better as the ECTs become better teachers. They want to teach. They want to be good teachers. As they learn to be better teachers this experience of personal professional improvement together with the resultant improvement in their classes contributes to their desire to remain in the profession.

If the above assertion holds true, then two broad factors become critical to the retention of teachers: the opportunity for professional learning; and the contribution of their work environment (including support, collegiality and possibility physical environment) to their sense of self-worth as teachers. Some, whom we could call the 'supported stayers' find themselves in supportive environments: valued and welcomed by colleagues; supported by a proactive mentor; and regularly assisted by experienced teachers. This contributes to their professional learning as well as their sense of collegiality and belonging in the school (and perhaps the profession more widely). Under these conditions ECTs are likely to become better at teaching more quickly and experience more success more often than those in unsupportive environments.

Professional learning *in situ*, involving good feedback and advice, with opportunities to learn by collaborating with colleagues, makes an important contribution to the experience of ECTs as they become immersed in the complex tasks inherent in teaching. Professional learning with others at their school is critical. Their professional learning is further enhanced by sustained discussion with peers at workshops and sessions led by experts – particularly where this focus is on perceived key predictors of success, such as effective behaviour management. Such meetings, with time away from their school to reflect and talk with peers, may also contribute to the morale of ECTs. Their desire for input from experts outside their school suggests that the solutions to all their problems cannot be found within the knowledge base of a single school. Furthermore, having the tools to teach well is

important. This includes access to shared teaching resources and materials in their school as well as to modern teaching technologies.

Some ECTs find themselves in less supportive environments than that described above, these could be called 'resilient stayers'. For reasons that are unclear, this group may be over-represented in the sample of teachers who continued participation in this study from start to finish. We speculate that it may have been a function of the sampling process in that those who have had negative experiences may have been likely to want to continue to voice their views over the four years of the study. On the other hand, our recent experiences with ECTs participating in interviews and focus groups suggest that they value the opportunity to talk about their experiences because talking about them helps them to cope with the difficulties and perhaps the isolation that they face. For those who felt less well assisted by colleagues and systems, the research process may have provided support. Such influences would contribute to an over-reporting of negative experiences in this study.

The views expressed by these ECTs underscore the needs they have which they feel are unmet and the recommendations they have to improve their lot. Most of these teachers report that when they began teaching they were highly motivated to teach with a strong focus on helping young people to achieve and succeed in life. These teachers add to our understanding of the work environments that may influence their thinking about staying or leaving. For example they express frustration at what could be broadly described as isolation, poor communication, unprofessional working conditions and excessive workloads.

Their largely negative experiences point to the need for them to gain access to the factors appreciated by the 'supported stayers'. Specifically, they seek the support and an environment that is conducive to becoming better teachers. They speak of the hard road they have walked, often with little or modest assistance, and elaborate on how difficult it has been to get to a stage where they derive satisfaction from teaching. They began with an altruistic focus on making a difference for their students but during their first year they regressed to concentrating on themselves, their survival and coping with stresses such as: a full teaching load, difficult classes, resistance to learning and, sometimes, ambivalent colleagues. For most of these teachers it is not until their second year that they begin to speak of 'things getting better' and then they still talk of how much there remains to do.

The key question here then is: why do these teachers who feel relatively unsupported remain in the frequently difficult teaching situations they describe? Some of the evidence suggests that they feel they have made a substantial investment in this career and are loath to nullify that investment by leaving. Importantly, the evidence suggests that over time they do experience success and satisfaction but it is likely that, under the conditions described, these particular teachers are also in possession of significant resilience that allows them to cope with or survive the prolonged difficult period or 'dry spell' as they learn their profession. Certainly their stories reveal often small and isolated positive experiences that appear to take on great significance and provide a sense of triumph. Consider for example the teacher whose 'highlight' was a student who offered to pay for a broken drumstick. In short, some ECTs do not appear to need much to provide the signs of progress that keep them going. Nevertheless, it remains clear that for some teachers this is insufficient and some leave the profession.

WHY DO TEACHERS LEAVE THE PROFESSION?

Unfortunately, it proved very difficult in this research to maintain contact with those who had actually left the profession. A few corresponded with the research team with stories of despair and disillusionment but none remained for the full duration of the study. We have not reported these cases because the research team cannot be confident that they are representative of those who leave or that they provide clear guidance on how to retain ECTs. The lack of data from teachers who have quit the profession makes it difficult to provide definitive advice on why ECTs leave. More evidence is available from those in the study who express an intention to leave or uncertainty about remaining, but care should be taken in extrapolating to those who actually leave. There appear to be four groups of potential leavers. The first two are most evident in interview data. The third group is most evident in the choice experiment. The last group is described in Skilbeck and Connell (2004) as teachers leaving teaching because of natural progression to other careers or to have a family. Some of these will be planning to return to teaching later.

The two groups of potential leavers evident in the interview data are of great interest. Both have come to teaching for primarily altruistic reasons. One of the groups, whom we could call 'radical idealists', was quite small in our sample but its actual size in the population is unknown. This group has creative and novel or radical views of education, how to teach and what a teacher ought to be. Often they want to use rich technologies to improve pedagogy or help students achieve goals that may be different from those promoted in more traditional curriculum and assessment regimes. They find their preferred approaches to teaching difficult to enact in what they perceive as a conservative educational environment. Unable or unwilling to compromise they intend to leave. It would be advantageous to retain these radical idealists in the profession though the changes required might be so fundamental that they would be difficult to address on the current educational trajectory.

The second group of ECTs who talk of leaving overlaps with the resilient stayers, who are described above as experiencing significant difficulty and feeling inadequately supported. These 'reluctant leavers' also speak of small successes and how things are getting better but for them things are improving neither enough nor quickly. A key factor influencing them to remain is that they usually have been strongly motivated to become teachers and have made a considerable investment in a teaching career. Some of this group have relinquished successful careers to enter teaching. The general position of this group could be described as: 'wait and see if things improve', and if they do not, then they will reluctantly leave. Fortunately, the factors most likely to influence them to stay are identical to those which improve the lot of ECTs who intend to stay. Their need however, if they are not to be lost to the profession, is more intense and urgent.

The choice experiment indicates that the decisions of one group of potential leavers are influenced by a different set of factors from the ones that encourage those who are likely to stay. This group could be described as 'loners', either by choice or circumstance, who do not seek or find person to person interaction and perhaps prefer to avoid cooperative endeavours. Where factors are highlighted as important to this group only, it is unwise to address these lest they negatively influence those who are retained in the profession. Rather, a better course of action would be to seek to create the supportive environments, working conditions and professional learning opportunities that contribute to the ECTs becoming better teachers, with the resulting perceptions of success that they might experience.

ENHANCING SUPPORT

ECTs in schools with strong support structures expressed satisfaction with their teaching experiences. Support includes mentoring and expert teacher support, school executive support and peer support. ECTs found support from all these groups essential. As a general principle, we encourage the DET to initiate a system which requires school executives to establish and audit goals and procedures for supporting ECTs, including stricter standards on provision and availability of mentoring.

In terms of attractiveness for retention, it is noteworthy that collaboration with a more experienced teacher was rated higher in survey responses than working with a mentor. This may be explained in terms of the different activities, relative status of the teachers and roles played. Working with an experienced teacher was primarily associated with collaborative activities such as co-teaching, co-programming and co-lesson planning, whereas mentoring was primarily associated with feedback, reflection and advice. This indicates that there may be a need to reshape the type of assistance provided and re-conceptualise the role of mentor. Alternatively, a flexible partnership between a mentor, experienced teacher and ECT may permit a more generative network of support that better matches the needs and desires of ECTs.

RECOMMENDATIONS

Recommendations related to research findings have been provided to NSWDEC under separate cover as requested.

CONCLUSIONS

This project has shown that the factors of collegiality and support, student engagement and behavior management, professional challenge and professional learning, and workload are all important issues when ECTs make decisions about remaining in the profession. A number of initiatives implemented by DET subsequent to the start of this project are well aligned with the recommendations and findings of this project. The recommendations provided to NSWDEC support, extend and supplement current DEC initiatives.

CHAPTER 1: INTRODUCTION AND LITERATURE REVIEW

1.1 OVERVIEW AND SCOPE OF STUDY

In 2005, the NSW Department of Education and Training (NSW DET) put out a tender for a project on retaining effective teachers in the NSW DET. This project was awarded to the UTS team after a competitive application process. This four-and-a-half-year research project had the aims of tracking a cohort of final year (2005) preservice teacher education students through their post-graduation experience over 2006, 2007, 2008 and 2009, in order to understand more clearly the reasons why some early career teachers in NSW public schools choose to remain in the profession, and why others choose to leave; and in order to develop strategies to increase the retention rate of effective teachers during their early years of teaching.

The scope of the study as described in the tender document issued by DET was to investigate why early career teachers (ECTs) chose to remain in the profession or chose to leave it. The study comprised the following aspects: a tracking survey to follow graduates over their first three years as teachers; a longitudinal study of a group of early career teachers (ECTs) and a set of narratives about their experiences; an investigation of the reasons for teachers staying in or leaving the profession; and a set of strategies and recommendations that might increase the retention rate.

The project team comprises researchers from two research strengths of the University of Technology, Sydney (UTS): the Centre for Research in Learning and Change (CRLC), and the Centre for Study of Choice (CenSoC). The expertise of the team members allowed a thorough investigation which comprised rich textual data about ECTs' experiences, together with extensive quantitative data about decisions ECTs make about staying in the profession. The findings aim to inform the NSW DET, teachers and teacher education institutions about how best to retain effective ECTs.

1.2 RATIONALE

The literature indicates that retention and recruitment issues cannot be considered separately and it is necessary to implement strategies and approaches that make the teaching profession attractive in the long term. Research in Australia and overseas also shows that a wealth of teacher experience and knowledge may be lost to the profession through high rates of resignation and retirement, and the 'revolving door' effect of teacher attrition and turnover (Ramsey, 2000; Ingersoll, 2001; Williams, 2002; McGaw, cited in Manuel, 2003; Lonsdale & Ingvarson, 2003; Skilbeck & Connell, 2003, 2004).

The alarming upward trend in ECT resignation in NSW was highlighted in Ramsay's (2000) report and confirmed by Manuel (2003), who observed that one in five NSW teachers leave the profession in the first five years of their teaching career. More recently, a national survey of 1,351 beginning teachers conducted by the Australian Primary Principals Association (2007) reported "although 93% of the survey respondents enjoy teaching, 24% indicate that they will be leaving the profession

within 5 years” (p. 8). This report also indicates that ECTs are feeling high levels of pressure during their first years of teaching.

In a similar national survey of about 1200 ECTs conducted by the Australian Education Union (2006), 45% indicated that they would not be teaching in ten years time. Teachers also identified their top four concerns in their first three years of teaching as workload (64%), behaviour management (60%), pay (56%) and class sizes (55%). McKenzie et al. (2008) reported that 17% of the approximately one thousand early career secondary teachers they surveyed indicated their intention to leave within three years. Survey respondents also believe that “more support staff, smaller class sizes, fewer student management issues, reduced workload, higher pay and a more positive public image of teaches would help to retain people in the profession” (p. 20). While these figures are at odds with recent reported figures for resignation in the NSW DET (see 1.5.1), they caused sufficient concern at the time of the genesis of this study to initiate the call for tenders to investigate retention in NSW.

Teacher shortages and high attrition rates among ECTs are reported in other nations in the English-speaking world (Lonsdale & Ingvarson, 2003; House of Commons Education and Skills Committee, 2004; Jones, 2005). The website of the National Education Association (2010) in the US reports:

Nationally, 46 percent of educators abandon teaching within their first five years, according to James Rowley, an education professor at the University of Dayton in Ohio and author of *Becoming a High-Performance Mentor: A Guide to Reflection and Action*. Coupled with a report issued earlier this year by the National Commission on Teaching and America’s Future that noted half of today’s teachers—1.72 million—could retire during the next 10 years, it’s clear retaining new educators is critical.

Despite the widespread importance given to teacher policy issues in most developed countries, there is a lack of detailed information regarding the nature and extent of teacher shortages, teacher attrition and retention, and reasons for entry and leaving. It is clear that having information about the reasons for teachers leaving or staying is of value in maximizing ECT retention. Some reasons suggested for teachers leaving the profession include young peoples’ needs to experience other career options and perhaps return to teaching later (Mayer, 2006) and, in the case of women particularly, to start a family and then return to teaching (Skilbeck & Connell, 2004; OECD 2005). Even so, as Ingersoll (2000) points out, it is often the brightest and best teachers who choose to separate from the profession.

While studies of ECTs have teased out specific aspects of their experiences, the issues of teacher attrition and retention extend beyond these to whole-of-school practices and policies. McKenzie et al. (2008) emphasise the importance of “providing information at a greater level of disaggregation such as differences between primary and secondary school teachers in terms of demographic background, qualifications and organisation of work” (p. 24). They give examples of schools using strategies that easily remain hidden, such as employing teachers in areas outside their qualifications and expertise or hiring less qualified teachers.

A number of recruitment initiatives have been put forward in recent years by Australian states and territories keen to attract not only young, energetic graduates but also more experienced professionals from other disciplines who are willing to provide their skills and expertise and make a valuable contribution to students’ lives. An example is Teach for Australia

(2010), which was founded in 2009 based on overseas models and conducted through the Melbourne Graduate School of Education. This is a recruitment initiative which aims to attract non-teaching graduates to enter the school system for a two-year commitment as Teach for Australia Associates. In early 2010, the first 45 Teaching Associates were placed into disadvantaged schools in Victoria. The Teach for Australia website (2010) reports international experience showing that 40-50% of Associates enter other professions after their two-year commitment rather than proceed to gaining full teacher accreditation. Presumably, future research will reveal how successful the Teach for Australia program is in generating and retaining beginning teachers beyond this level.

While reforms such as the above are based on increasing the number of quality teachers in schools, retaining them is a difficult task that cannot be considered in isolation. The remainder of this literature review will look at the experiences of ECTs through the lens of the research questions listed above. Where possible, literature on ECTs in NSW will be highlighted.

1.3 AIM

This section examines relevant literature on the retention of early career teachers (ECT) in a way that aligns with the research questions of this study. As set out in Chapter 2, the methodology chapter, the overarching research question is:

Why do some early career teachers choose to remain in the profession and why do others choose to leave?

The subsidiary research questions are:

- What are the relevant experiences of ECTs in their first four years of teaching?
- What influences ECTs to remain in the profession?
- What influences other ECTs to leave the profession?
- What strategies might assist in the retention of effective ECTs?

It is important to note here that the *National Partnership Agreement on Improving Teacher Quality* (Council of Australian Governments, 2009) proposes many reforms to recruit and retain teachers. These include much abbreviated teacher training for high achieving graduates, better support and reward for quality teachers who work in hard-to-staff schools, strong partnership between schools and universities including more practical experience components, differentiated rewards for teachers based on standardised measures of teacher quality as well as support for the ongoing skills and knowledge development of teachers throughout their careers. Findings from evaluations being conducted in NSW in the near future should yield further significant insights into the research questions guiding this study. Unfortunately, at the time of writing this report, the agreement is still in its roll-out phase and no data on the relative merits of its varied activities are available.

It should be noted that the NSW DET website already displays a range of literature and other resources dealing with the experiences of ECTs based on research in NSW and other locations. This literature review will not attempt to analyse the data already available from the DET website.

The review begins with the experiences of ECTs in general and in the particular context of ECTs in NSW. Using three questions as context, a variety of core themes are then identified. These questions are:

1. What are the relevant experiences of ECTs in their first four years of teaching?
2. What influences ECTs to remain in the profession and what strategies might assist in their retention?
3. What influences other ECTs to leave the profession?

The literature review concludes with a summary of best practices, as discerned both from the literature review and from the NSW DET's own briefing materials.

Note: The terms 'beginning teachers' and 'early career teachers' (ECTs) refer to school teachers who have 0-4 years of teaching experience. These terms are used interchangeably in this review with no particular preference.

1.4 EARLY CAREER TEACHERS' EXPERIENCES

1.4.1 WHAT ARE THE RELEVANT EXPERIENCES OF ECTS IN THEIR FIRST FOUR YEARS OF TEACHING?

The experiences of ECTs in NSW have been explored recently by a number of researchers, including Carter and Francis (2001), Manuel (2003), Schuck (2003a), Schuck (2003b), McCloughan (2004), Ewing and Smith (2005), Schuck et al. (2005), Brady and Schuck (2005), Buchanan (2006) and Brown (2008). Other relevant research is recorded in the NSW DET website. Manuel's (2003) research study used teacher-centred data in a bid to address the "alarming attrition rates of [beginning] teachers...in their first three to five years of their service" (p. 140). The aim was to understand more fully the ways in which beginning teachers negotiate the transition from university to school environment as well as map the terrain from 'novice' to master teacher. Teachers were found to move from "an initial buoyant state of energy and enthusiasm to a reality zone of day-to-day school life that is ... confronting" (p. 144). Goddard and Foster (2001) have reported similar teacher transitions in Canada.

Manuel's 2003 study has implications for teacher retention in terms of a range of strategies identified by the teachers in the case study which "they consider to be a first step to overcoming some of the major difficulties experienced during the first year out" (p. 148). These include relief from full teaching load, harnessing the rich resources of professional teaching associations, funding to participate in meaningful professional development over time, additional support for new teachers in hard-to-staff schools, pastoral care and substantial links between universities, education authorities and schools. Manuel (2003) points out, however, that these findings cannot be generalised and that "not all beginning teachers experience the kind of hardship that leads to a decision to leave the profession" (p. 144).

Ewing and Smith (2003) reported on the results of a longitudinal study aimed at understanding the issues raised by beginning teachers. These teachers' concerns included "adjusting to the demands of teaching full-time (with programming and classroom management as the most cause of concern), negotiating colleague and parent relationships, understanding

classroom, school and community cultures, coping with self and finding a niche and the idealism of pre-service teacher preparation” (p. 17).

Buchanan (2006) provided a case study of six NSW primary school ECTs' views on their pre-service education, in the light of their current experiences. He noted that an education degree might be the first time many people reflect seriously on the nature of teaching and learning, beyond the ubiquitous 'I know what I like'. This period forms a crucial time in the development of a philosophy of education for a pre-service teacher. As Buchanan reminds us, however, school and university contexts differ along a series of crucial continua. Even during practicum a quest for creative teaching may blind a student to issues such as behaviour management when in a relatively controlled environment with the cooperating teacher present. As a result, ECTs enter the profession with quite robust views of what (good) education 'looks like'. The institutional and cultural chasm between the two contexts may contribute to an amplified sense of powerlessness and ignorance on the part of the beginning teacher, a feeling that, after several years' training, they know nothing about this job.

Brown's (2008) article is a personal narrative of her experiences as a beginning teacher in NSW. By way of describing the "attractions of a job that is different everyday" (p 16), her story highlights the critical role of collegial and professional development support in improving her overall experiences in the first year of teaching. Brown also acknowledges the NSW Institute of Teachers accreditation process as helpful because "it made me reflect on and improve my teaching processes. It forced me to make sure I was meeting all of the quality teaching standards" (p. 17).

Carter and Francis (2001) and McCloughan (2004) examined mentoring in NSW schools in large-scale (n = 465) and small-scale (n = 7) studies respectively. Carter and Francis (2001) concluded:

Mentoring relationships that promote collaborative enquiry, cooperative practice and reflection are fundamental to workplace learning for beginning teachers that moves beyond the transmission of past and existing practice. Collaborative endeavours between schools and universities are also central to effective workplace learning for teachers. (p. 260).

McCloughan's (2004) study revealed the variety of interpretations teachers have regarding the nature and expectations of teacher mentoring and the need, therefore, for teachers and their educators to develop a "shared systematic understanding of the term 'mentoring'" (p. 7).

A number of studies have also explored ECT'S experiences in the light of their initial teacher education experiences and as they evolve from student teacher to novice educators. While for many ECTs the experience of being a beginning teacher is neither traumatic nor upsetting (Hebert & Worthy, 2001; Brown, 2008), Cherubini's (2009) literature review on ECTs' experiences over the last 35 years points out that new teachers seem consistently to resign themselves to negotiating the tension inherent within disjointed teaching experiences. A consequence of this tension is that new teachers may abandon those pedagogical practices that resonate with student emotional, creative and intellectual development. Cherubini (2009) depicts a consistent language frame of:

...an unmistakable subtle and overt sense of tension that potentially exists in the transition from pre-service student to professional teacher ... recurrent descriptions of beginning teachers' initial circumstances imply quasi-Darwinian overtones.....while being forced to make sense of the moral and ethical friction that threatens the fragile identities formulated during teacher preparation. (pp. 92-93)

The research literature has long drawn on the metaphor of journey to describe the discouraging and uncomfortable phases ECTs go through (Fuller & Brown, 1975; Lortie, 1975). The experiences of some ECTs have been characterized by feelings of isolation, lack of support and guidance, or of a mismatch between their expectations and reality (Veenman, 1984). New school teachers may experience reality shock or abruptness as they take on their full professional responsibilities (Huberman, 1991). In Sabar's (2004) study of 46 beginning teachers in Israel, the novice teachers likened their school experiences to those of immigrants in a new country who experience both despair and culture shock.

Goddard and Foster (2001) analysed teachers' experiences using a critical constructivist approach and reported how 'neophyte' teachers move through different phases with the "transitions occurring at varying rates and triggered by experiences particular to the individual practitioner" (p. 362). Further, these phases or themes were able to provide a means to better understand the relationship between effects of the experience and the broader issue of high attrition rate among the neophyte teachers. The authors also call for researchers to "seek out those neophytes who show resilience and who do more than simply survive their first years to stay in the profession" (p. 362).

Schuck, Brady and Griffin (2005) identified school culture as a major determinant of early career teachers' satisfaction. Where the school culture was supportive and encouraging, this appeared to be a critical variable for helping ECTS cope with the rigours and challenges of their new careers. ECTS in Schuck et al.'s (2005) study experienced feelings of not being accepted, or of perceiving that they were being unfairly treated by senior staff and staff who had been at the school for many years. Communication often presented a problem, in that ECTS struggled to discover both the written and unwritten rules and protocols of the school.

1.4.2 WHAT INFLUENCES ECTS TO REMAIN IN THE PROFESSION AND WHAT STRATEGIES MIGHT ASSIST IN THEIR RETENTION?

The OECD (2005) report, *Teachers Matter*, draws the conclusion that teachers are highly motivated by the intrinsic benefits of teaching – "working with children and young people, helping them to develop, and making a contribution to society" (p. 12). Inman and Marlow (2004), however, provide a slightly different perspective to understand the retention and attrition of ECTS. They questioned beginning teachers for the reasons they *remain* in the profession so as to identify the positive factors that may lead to retention. The most commonly identified positive factors for remaining in the profession were perceived job security and the supportive professional environment.

Similarly, Hebert and Worthy (2001) conducted a US case study of success in first year teaching. Their study revealed that success was impacted on by factors that included personal background, pre-service teacher preparation experiences, taking an active role in the school social context, and the teacher's perceptions and interpretations of her school, students and teaching performance (p. 897). The reasons for joining the teaching profession (for example: 'I always wanted to be teacher') as well as relationship with colleagues can also impact on the level of enjoyment and positive feeling (Cockburn, 1999). Schuck, Brady and Griffin (2005) suggest that quality relationships with principal, colleagues, peers, students and parents are major determinants of both personal and professional satisfaction. A study by Williams (cited in Castro et al.,

2010) also observed that teachers who chose to stay exhibit qualities of resilience, particularly when teaching is challenging, such as with high-needs students.

The literature (e.g. Ramsay, 2000) indicates beginning teachers may be unable to retrieve essential knowledge learnt at university and transfer it to real-life classroom situations. They often do not understand how classroom practice produces student learning. This often occurs because of the absence of the link between theory and practice, particularly at the teacher education and university level. Gore et al. (2004) suggest that successful pedagogical framework programs that have been used traditionally in university teacher education courses could be developed to suit the needs of beginning teachers in the context of keeping pedagogy as the central focus of their work. Such partnerships would build and extend on teacher knowledge, particularly across the transition from student teacher to teacher.

While there is evidence for the need for such partnerships between universities, schools and educational authorities to improve ECTs' experiences, there is not much clarity or focus as to how to develop these partnerships in a more productive and school-dependent way (Dyson et al., 2007). By recognising the differences in the school culture and the needs of beginning teachers, the partnership model should be flexible enough to contribute to the ongoing support of beginning teachers through shared knowledge and "create and sustain a cohesive and unified approach in preparing teachers for the demands of teaching in schools...in the twenty first century" (Dyson et al., p. 93).

Australian studies have articulated the need for teacher education courses to align ECTs' needs more closely with the real classroom (Kervin & McKenzie, 2007; Kiggins, 2007). The NSW DET report (MACQT website, 1997) recommended the following student management strategies be incorporated in initial teacher education courses:

- Universities should review the practicum with a view to enhancing student teachers' classroom and playground management skills.
- Universities should include subjects in the compulsory core on student behaviour management that have a practical focus on contemporary, relevant issues such as coping with bullying and playground violence.
- Universities should include subjects in the compulsory core on managing students with diverse needs and abilities, including the integration of students with disabilities into mainstream schools and classes.
- Universities should include a subject in the compulsory core to develop skills in working collaboratively and being a member of a team.

The idea of forming professional learning communities in schools to support and provide a collegial and enabling context for teachers has been explored in the literature on teacher professional development and school reform (e.g. McLaughlin, 1997; Clarke & Hollingsworth, 2002; Le Cornu & Ewing, 2008). Such learning communities bring together beginning teachers with prospective teachers, experienced teachers and teacher educators in school settings to construct pedagogy and learning. With their own experiences also recognised and acknowledged by school staff and faculty, teachers are then able to provide mutual support and challenge for each other as they learn new practices and unlearn old assumptions, practices and beliefs (McLaughlin, 1997). Sabar (2004) stresses the need to "make use of the novices' great potential in creativity, resourcefulness and the ability to initiate change" (p. 159).

Kardos and Johnson (2007) suggest an 'integrated professional culture', which promotes "frequent and reciprocal interaction among faculty members and across experience levels" (p. 2083), can assist and support new teachers to stay in teaching

and remain in their schools. They call for understanding such things as the effect of support programs on teachers' satisfaction, their sense of efficacy, their retention and their students' achievement.

A potential outcome of this collaborative process involving interdependency and team-work with more participatory decision-making processes is a shared commitment to teaching and learning goals (Le Cornu & Ewing, 2008). Pre-service teachers benefit by acting as critical friends and peer mentors to each other, while teachers actively shape their own professional learning and growth to reduce feelings of isolation so prevalent in school working lives. Participation in learning communities reconceptualises teacher learning as a "continuum that begins with pre-service teacher education but continues for the teacher's whole career" (p. 1810).

Professional development seminars have been used traditionally by beginning teachers as a means to solving some of the daily issues they face. Mitchell et al. (2009), however, take an innovative approach through a collaborative action research (CAR) framework that connects theory and research with practice in meaningful ways so as to inform and improve practice and engage in ongoing expertise development. Their school-university CAR model extends the notion of partnership whereby beginning teachers together with university researchers (who act as critical friends or mentors) create a kind of relationship to connect theory and research. Beginning teachers may then see how theory and research affect everyday issues in classroom teaching and management and draw upon and apply the knowledge to solve the problem at hand with the support of the university partner. The supportive nature of CAR facilitates the development of meaningful solutions at a faster pace than having to struggle in social and intellectual isolation.

By participating as active learners, teachers shape their identity and professional growth through reflective participation in programs and practices where they may also learn transferable skills such as organizational management, communication and "learning how to learn" (Skilbeck & Connell, 2004, p. 47). Flores (2006) suggests that those teachers with collaborative cultural experiences are more likely to develop and demonstrate positive teaching attitudes in their early teaching years. Similarly, McCormack et al.'s (2006) Australian study of teacher experiences suggests that not only formal, collaborative learning but also informal, unplanned learning with colleagues and former peers provides a significant source of support through the first year of teaching.

The importance of a sustained long-term professional learning approach that extends beyond the first year of employment has been reiterated in Australian research (Ewing & Smith, 2003; Skilbeck & Connell, 2003, 2004; McCormack et al., 2006; Hudson & Beutel, 2007). Evidence suggests that teachers are looking for more opportunities to improve their professional learning experience and engage their students, particularly in the use of computers in student learning in areas such as Mathematics and Physics (McKenzie et al, 2008). A focus on pedagogical support (for example the use of co-operative learning in classrooms) in professional learning can help to enhance early career teachers' accomplishments as well as maintain the enthusiasm they portray. Sustained throughout their careers, such strategies can also play a part to retain quality teachers in the profession (Ferguson-Patrick, 2008).

Hudson and Beutel (2007) report that good induction programs should include training of school staff in the delivery of quality programs, mentor training, funding for professional development and inclusion of reduced workloads for both

mentors and mentees. Their study explored first year induction experiences and found that beginning teachers welcomed the opportunity to attend professional development events to build networks and support outside the school setting. They acknowledge the wide variation among the various states in the quality of their programs, policies and procedures for inducting new teachers in the profession. Since it cannot be assumed that beginning teachers enter the profession with the same level of knowledge, skills and practices, they also call for teacher employment bodies in Australia to examine the induction models being implemented in Switzerland, France, New Zealand and China (Wong, 2005), which allow programs to be tailored to suit individual needs.

The impact of capable teachers on student learning outcomes has led US researchers to identify the critical significance of high quality induction and professional learning programs on the retention and support of early career teachers and therefore on the quality of teaching in schools. Collaboration among local school districts, county offices of education, colleges and universities to organize and deliver professional development for new teachers is encouraged so as to make a difference in the performance, retention and satisfaction of teachers (Riggs & Scott, 1999). An example is the Beginning Teacher Support and Assessment Program (BTSA), which is part of a state funded induction reform program in California that works to support the professional development of new teachers and to ensure they are retained in the profession (Darling-Hammond 2001, 2003). Wong also reports on well-funded and well-monitored quality teacher induction programs that offer support for at least the first two years of teaching in Switzerland, France, New Zealand and China (Wong, 2005).

Effective induction programs maximise support options for teachers by combining internal and external sources of expertise and assistance. Diversity and flexibility in support program strategies are most likely to produce the greatest impact (Martinez, cited in Ferguson-Patrick, 2008). As mentioned in the DET (2002) report *Ethic of care*, workplace learning models, such as coaching, mentoring and action research use both experienced professional teachers and external skilled facilitators in alternative approaches to professional development. In contrast, Le Maistre and Paré (2010) found that the beginning teachers interviewed for their 2010 Canadian study “received little or no support after they graduated or had been hired, while beginning professionals in physiotherapy, occupational therapy and social work were given considerable support from experienced colleagues...by explicit teaching and modelling...” (p. 559).

Beginning teachers usually have very high expectations of themselves when they start to teach. For some, it is difficult to accept ‘less than perfect solutions’ and they are unwilling to compromise and so constantly seek the perfect solution. This can result in them leaving the profession when unable to find or implement an ideal solution to ill-defined problems. However, for others, research shows that one of the reasons they stay in the profession is their ability to live with less than perfect solutions, ones that satisfy but are not necessarily the best. Taking this into account, Le Maistre and Paré (2010) report on the need for teacher preparation programs to help neophytes in this process by “being less categorical about providing clear-cut ‘ideal’ solutions to problems” and suggest problem-based learning (found in business and engineering programs) as a “strategy for providing student teachers with realistic, ill-defined problems [rather] than contrived situations that are more common in pedagogy textbooks” (pp. 563-564).

Aligned with the last point, Brady and Schuck (2005) recommend that for mentors to be able to effectively support ECTs, they need to be mindful that teaching is complex and dynamic. ECTs should be encouraged to accept and embrace that

complexity. Learning teams in schools are useful for expanding ECTs' perspectives and repertoires, and online networks could be developed to ameliorate the isolation that ECTs might experience, through opportunities to interact with ECTs and experienced staff outside their immediate communities.

The terms 'induction' and 'mentoring' are often used inter-changeably. Mentoring is one component of the beginning teacher induction process (Wong, 2005). The benefits of a strong mentoring program for novice teachers include increased retention rates, improvements in self-reflection and problem solving abilities, increased levels of professional development, reduced feelings of isolation, greater levels of confidence and self-esteem and motivation to continue in the teaching profession (Feiman-Nemser, 1996; Darling-Hammond, 2000, 2003; OECD, 2005; Fantilli & McDougall, 2009). As professional educators, effective mentors can also assist beginning teachers as they work through their personal and professional challenges and strive to develop a professional identity (Brott & Kajs, 2000; Barrera et al., 2010).

Research in NSW suggests it is imperative to have a well-funded and well-designed teacher induction and mentoring program aimed at supporting the transition from student teacher to a teacher of students in the school (Carter & Francis, 2001; Schuck, 2003a; Schuck, 2003b; Schuck et al., 2005; Brady & Schuck, 2005; Buchanan, 2006; NSW DET website 2010). While beginning teachers may be offered the assistance of a more experienced practitioner or mentor, this does not necessarily imply the existence of a quality induction program or that teachers even understand what mentoring means (McCloughan, 2004). The continuity and success of programs such as the Teacher Mentor Program in NSW (NSW DET website, 2010) is clearly linked to the number of experienced teachers willing and able to make a positive contribution to the lives of early career teachers.

Capable mentors not only support but also challenge traditional induction methods and look into alternate and innovative ways of supporting teachers. For instance, Achinstein & Barrett's (2004) study of new teacher-mentor pairs found that mentors supported the "reframing of managerial concerns to focus on multiple ways of understanding classroom challenges" (p. 732), rather than the more common approach that focuses on classroom control by teachers. Fantilli and McDougall (2009) report that new teachers, who want to grow in their profession, prefer to select and work with compatible, qualified mentors who are organized professionals with sound teaching practices or have a foundation from which to build a successful mentoring relationship. Margolis (2008) found that the opportunity for mentoring of beginning teachers is valuable for sustaining teachers through their next career cycle after four to six years of experience. Le Maistre and Paré (2010) also point to the symbolic value available to experienced teachers by mentoring beginning teachers. It is seen as a sign of their expertise and capacity for leadership.

The personal and professional stresses experienced by ECTs highlights the need for them to develop resilience and other well-being strategies if they are to have a real sense of belonging and a long-term connection to the teaching profession. Beginning teachers surveyed in McCallum and Price's (2008) South Australian study combined social and emotional strategies together, "indicating that an active and positive social dimension positively influences one's emotional state" (p. 6). Simple well-being strategies such as forming positive connections with other staff, leaving aside school politics; organised social activities in the workplace and outside of school; having a bright and inviting classroom environment; and contact with professional groups were mentioned by the teachers as contributing to their sense of belonging and smooth

settlement in teaching. As well, developing certain 'protective factors' such as "a sense of agency, a strong support group, taking pride in achievements and competence in areas of personal importance" can lead to increased teacher resilience (Howard & Johnson, quoted in McCallum & Price, 2008, p. 6).

Schuck, Brady and Griffin (2005) suggest that a framework for enhancing the experiences of ECTs needs to consider different recommendations for three different stakeholders: the system, school and teacher education institutions. Recommendations for systemic improvement include adequate training and time for mentors, electronic mentoring networks, and professional development of experienced staff focused on empowerment of ECTs. Schools should encourage and enable sharing and collaborative environments, school-based induction programs and regular meetings for ECTs across regions. Teacher education institutions should incorporate input from recent graduates, and include more content on interaction with school communities and on strategies for resilience in the early days of teaching.

In a review of research on teacher socialisation into school culture from 1969 to 2005, Cherubini (2009) found that "despite educational reforms in many of the developed countries, new teachers' initial concerns have not changed much for over 35 years" (p. 83). ECTs still fear public failure and underachievement and of being ostracised from school culture. Phrases such as "enduring" the first years of teaching and "pushed overboard" consistently appear in ECT's descriptions of early experiences (p. 92).

Tied in with the question of ECT stresses is the experience of being overloaded with teaching responsibilities in their earliest years. Teacher education reports have consistently called for reduced face-to-face teaching loads for beginning teachers and for ongoing support for the first year of professional practice (House of Representatives Standing Committee on Education & Vocational Training, 2007).

1.4.3 WHAT INFLUENCES OTHER ECTS TO LEAVE THE PROFESSION?

When ECTs decide to leave the profession they may do so for reasons other than dissatisfaction with their work. Some are young people choosing to travel or start families, possibly with the intention of returning to teaching (OECD, 2005). Mayer (2006), in particular, has studied the attraction to flexible and non-linear work pathways that sociologists are ascribing to the 'Generation X' age range and how this will affect the future attraction and retention of school teachers in Australia. In addition, as Skilbeck and Connell (2004) point out regarding Australian ECTs,

... in a highly competitive labour market for professional workers, and where initial teacher education fits people for a variety of careers, it cannot be assumed that either an early choice or a lifetime commitment to teaching will be the norm. Moreover, not all teachers who are capable and effective in the first decade of their teaching career will retain their initial vitality and enthusiasm. Career change for them can be beneficial – to the individual and to the school system. Time out to do other things, to broaden experience, and to reflect on personal values and career options need not be viewed negatively. Flexibility in employment is now accepted as a positive feature of the labour market. Those who opt out in this way are not necessarily rejecting a career in teaching. They may and do often return at a later stage ... (p. 56)

Among those ECTs who prefer to stay in the profession, however, many find it difficult to negotiate a balance between their own personal and professional values and beliefs, and those that prevail in the school system. This is exemplified in Jones's

(2005) UK study of ten newly qualified teachers who narrated their experiences in terms of their own expectations, values and beliefs and how they reconciled these with the reality of teaching and school socialisation. Not only are these teachers expected to become pedagogically proficient in their teaching content but also develop the “professional capacity to establish positive relationships with their colleagues and to reconcile their own often idealistic expectations with school reality” (p. 509). While the majority of the sample established positive relationships in the school and integrated well, the two teachers who resigned from their school cited “the perceived lack of professionalism and collaborative spirit by their colleagues” as the main reason for their decisions (p. 521).

Zeichner and Gore (1990) found that policies, traditions and personalities can create a school culture that challenges the beginning teacher in their socialization process. Weiss's (1999) study examined the relationships between school as a workplace and morale and career choice commitment of first year teachers in the US. The findings demonstrated the important relationship between school and new teachers' experience and the failure of the “current system to provide supportive induction experience in responding to the needs of new teachers for autonomy and discretion” (p. 870). The unique ‘teachable moments’ in terms of enthusiasm and commitment are also lost due to poor workplace conditions. Weiss argues strongly for an interdependent, participatory and supportive school culture, which appears to be closely related to staff morale, career choice commitment and likelihood of staying in the profession.

McCormack et al.'s (2006) study of 16 ECTs in Australia also found that dominant school cultures, lack of formal supervision for accreditation, and curriculum demands coupled with contextual factors greatly increase the challenges as “beginning teachers navigate their way to establish their own repertoire of teaching practice within the realities of schools and classrooms” (p. 110). A number of participants expressed disappointment “at the lack of positive feedback or recognition extended to them for their efforts and skills by colleagues and parents ... leading to a feeling of uncertainty, confusion and lack of status...” (p. 109).

In addition to school culture, ECTs' personal and professional histories not only shape and re-shape their identities but can also affect their experiences, teaching practices and the kinds of teachers they become. Flores (2006) explored the experiences of novices who felt overwhelmed by the amount and variety of duties they were expected to perform with a ‘learning while doing’ approach.

Other challenges facing ECTs are the increasing amounts of administrative work expected of them, heightened societal expectations, and greater accountability to stakeholders. As well, they may be expected to assume the same responsibilities as experienced teachers without the maturity to do so. It is also not unusual for beginning teachers to be placed in rural or remote locations distant from their intimate networks, thus experiencing both physical and emotional isolation. Without support for these challenges, many ECTs find it difficult to cope and leave teaching (Carter & Francis, 2001).

The most common problems cited in the research literature since the 1980s have been to do with classroom discipline, assessing students' work, relationships with parents, inadequate teaching resources and being time inefficient (Veenman, 1984; OECD 2005). The OECD (2005, p. 199) report indicates that 37% of Australian teachers generally identified “lack of resources or time” as their single biggest source of concern about their teaching. Beginning teachers of today not only face

these ongoing issues but also the challenges of changing curriculum, political pressure, rapidly changing technology, increasing student behavioural problems such as bullying, varying degrees of violence, and challenges associated with teaching diverse populations of children such as the disadvantaged and those at risk and from different ethnic backgrounds (McCallum & Price, 2008).

1.5 BEST PRACTICE

1.5.1 CURRENT PRACTICES IN THE NSW DET

The following information was provided to the Project by the NSW DET in November 2010. It indicates the Department's current initiatives to enhance ECTs' experiences:

Retention of beginning teachers

The separation rate for beginning teachers is very low.

The average resignation rate of teachers in their first five years of service in the years 2005–09 was 11.1%.

In 2009 the resignation rate for teachers in their first year of service was 3.3%.

(Data source: Personnel system and Leave Management system)

Support for beginning teachers

On 10 March 2007 the then Premier announced the *Support for Beginning Teachers* initiative which was phased in from 2008 with permanent on probation beginning teachers in the six non-metropolitan regions of the State and extended to all regions from 2009. This additional support provides schools with the equivalent of one hour per week of relief time for each permanent on probation beginning teacher.

The additional support has been designed to be utilised flexibly. For example, the time can be allocated to support new teachers participate in professional development, prepare lessons, receive advice from more experienced teachers, provide extra time to talk to parents or individual students.

Teacher Mentor Program

The Teacher Mentor Program, operating since 2004, provides teacher mentors to schools with trends of significant numbers of new permanent teacher appointments.

Teacher mentors work with newly appointed teachers to demonstrate quality teaching practices, observe lessons in consultation with newly appointed teachers, assist with assessment and reporting and guide the newly appointed teachers towards effective classroom management. Teacher mentors work with executive staff to support new scheme teachers towards completion of accreditation at Professional Competence.

The 2009-2010 Teacher Mentor Program features 50 FTE teacher mentors working in 90 schools spread across eight of the Department's 10 regions. There are 2 teacher mentor positions allocated to support 2 groups of 5 schools each in areas with trends of high numbers of temporary teacher engagements (introduced in the 2005-2006 program).

The Institute of Teachers

NSW has an articulated framework of professional teaching standards from graduate teachers to professional leadership and is the first state or territory to require new teachers to be accredited at the level of Professional Competence in terms of a framework of Professional Teaching Standards, through the NSW Institute of Teachers (from October 2004).

The Institute of Teachers supports quality teaching in all NSW schools. Its charter is to advance the status and standing of the teaching profession. The Institute oversees a system of accreditation and recognition of a teacher's professional capacity against professional standards. It also provides a process for the profession to influence the quality of teacher training and continuing professional development.

In addition to gaining accreditation at Professional Competence, NSW beginning (new scheme) teachers must provide evidence of their ongoing participation in professional development and learning to maintain their accreditation with the NSW Institute of Teachers.

Since August 2008 experienced NSW classroom teachers have been able to apply for recognition at the higher stages of the Professional Teaching Standards - Professional Accomplishment and Professional Leadership. In line with the NSW Institute of Teachers' requirements, the Department of Education and Training has developed corresponding policies and procedures for accreditation at the various levels as well as professional development aligned to the standards.

The procedures for beginning (new scheme) teachers apply to all beginning teachers including permanent, temporary and casual teachers and outline specifically the roles and responsibilities of beginning teachers, their supervisors, the principals and school education directors in the process. The specific language of the standards enables them to be demonstrated and observed in the classroom, leading to a more transparent, consistent and rigorous support process for new teachers.

Significant professional learning has been provided to support the achievement of accreditation of Professional Competence.

Exit surveys

The department is currently piloting an exit survey targeting the resignations of critical employee groups, including school teachers who resign in the first five years.

The pilot exit survey commenced on Friday 28 May 2010. The survey is in its early stage and will be evaluated.

1.5.2 SUMMARY OF BEST PRACTICES FROM THE LITERATURE

The literature draws attention to the differing needs of younger and of more mature ECTs. For example, when considering the policies relating to 'new generation teachers', Skilbeck and Connell (2004) emphasise the importance of

- their motivations and preparation to teach;
- school leadership and school environments as places in which to teach well;
- the attractiveness or otherwise of specific fields of teaching and locations of schools;
- professional identity both individual and collective;
- the nature of relevant and valued professional knowledge and expertise and its continuing development, assessed against exacting standards of professional expertise and quality;
- recognising and rewarding high quality teaching and outstanding professional commitment;
- career planning and advancement within a career of teaching (instead of out of teaching);
- the values which students, parents and society at large place upon schooling; and
- the kinds of leadership and support teachers can provide to students, families and communities in advancing Australia's goals as a knowledge society (pp. 29-30).

The OECD (2005) report, *Teachers Matter*, recommends the criteria and processes used to allocate beginning teachers should ensure that they are not concentrated in the more difficult and unpopular locations. In addition, all beginning teachers should participate in structured induction programmes that involve:

- a reduced teaching load,
- trained mentor teachers in schools, and
- close partnerships with teacher education institutions (pp. 205-206).

Mayer (2006, p. 67), drawing on the literature about younger generations of workers, suggests the teaching profession of the future should consider the following attractions to retain Australian ECTs:

- opportunities for thinking about a teaching career within the lifelong career and for flexible movement in and out of the teaching profession;
- opportunities for flexible work practices within the work of teaching;
- opportunities for autonomy in teachers' work practices;
- opportunities for advancement both within the profession and towards other jobs; and ways of presenting a vision of the profession as more than in-classroom teaching.

The formation of professional learning communities in schools to support and provide a collegial and enabling context is also noted to be beneficial in retaining ECTs (McLaughlin, 1997; Clarke & Hollingsworth, 2002; Le Cornu & Ewing, 2008)

The literature review has examined ECT's experiences and the various strategies that have been recommended to improve those experiences. Features repeatedly associated with the retention of beginning teachers are perceptions of success and sense of worth. Hence, actions are required to ensure that beginning teachers feel valued and that they receive the support needed to experience sustained success in their teaching.

The following four broad themes have emerged from the literature. These align with contemporary developments taking place in the DET and Commonwealth in recent years:

- Stakeholders can assist ECTs with issues of retention and recruitment by understanding and appreciating their reasons for becoming a teacher, including their background and their own schooling. This understanding, together

with a “genuine spirit of consultation and collaboration might raise the morale of the profession as well as induce the more disillusioned to remain” (Cockburn 1999, p. 235).

- There is a need for recognition of the profession of teaching at all levels. The teaching profession should be represented by an independent collective self-regulating organization of teachers (Dyson et al., 2007). This will help to attract and retain the best teachers, who will then instill and promote quality learning in their students.
- The role of teacher education programs is critical to improving new teachers' experiences. The challenge is to create programs that will prepare the beginning teacher for the intricacies of life in the classroom.
- There is the need for the various stakeholders (teachers, teacher employment bodies, schools, universities and other teacher education bodies) to form long-term partnerships so as to promote positive experiences among the ECTs. The literature also favours teachers building their own professional networks with the support of local schools and education departments and thereby co-constructing a collegial and facilitative learning environment.

2.1 METHODOLOGY

The aims of this four-and-a-half year project, as stipulated in the tender document (August 2005), were to investigate the experiences of a cohort of early career teachers (ECTs) to gain clearer understanding of the reasons that some ECTs choose to remain in the profession and others choose to leave; and to develop and inform strategies to increase the retention rate of effective teachers during their early years of teaching.

There have been numerous studies on teacher retention, and they have overwhelmingly used the traditional data gathering methods of survey, focus group and interview. This study employs a combination of quantitative and qualitative methodologies that captures the reasons ECTs stay in or leave the profession and documents their experiential narratives. In an attempt to gain fresh insights into a familiar and perennial problem, this project adopts innovative qualitative methods that not only complement the more conventional methods but also provide teachers with engaging and enjoyable ways of representing their thoughts and feelings (Schuck & Segal, 2002). As well as this qualitative data, the study incorporates mathematical modeling and optimal design theory (Choice Theory) to identify and quantify the choices that teachers make regarding decisions to stay in or leave teaching.

Our selected methods include the following:

- *Tracking Survey.* This 'conventional' survey was used to track participating graduates on an annual basis from 2006 to 2009, to gain a broadbrush picture of the movement of ECTs over these four years.
- *Phone-mediated journals/interviews.* A selection of teachers who were willing to be involved beyond the collection of data from the tracking surveys, participated in up to three phone interviews over the course of the project. In these conversations, they shared their metaphors, support/challenge zones, and experiences, as explained below. Participants could choose to present their metaphors, support and challenge zones, and journals in a written journal, through email responses and/or through phone mediation.
- *Metaphor.* Teachers were encouraged, with the provision of appropriate structure, to nominate metaphors to describe their teaching experience. Such a method enabled them to revisit their initial metaphor in later phone conversations with researchers, and change or even embellish their metaphor.
- *Support and Challenge Zones.* Teachers were provided (electronically and in hard copy) with a grid representing where they perceived themselves to be in terms of the support and challenge they enjoy. They were requested to position themselves on this grid.
- *Narratives.* Teachers who participated in the interviews were asked to discuss critical incidents, and associated feelings, that they had experienced during their teaching.
- *Best-Worst Survey.* DET personnel emailed 1700 ECTs to ask them to participate anonymously in a statistical survey. Details are given in Chapter 3.
- *Discrete Choice Experiment.* Choice scenarios distributed to 2500 ECTs. Details are given in Chapter 3.
- *Conference.* A participant feedback conference was held mid-way through the project in November 2007. It provided opportunities for checking and sharing of findings, but also operated as an occasion to gather data.

The development of the Choice methodology and the findings associated with it are included in Chapter 3. The rest of Chapter 2 explicates the methods used in the qualitative part of the study as well as the methods used to track ECTs over a period of time.

The theoretical construct upon which the qualitative study is based is a situated learning model known as situated theory (Lave & Wenger 1991). Situated theory emphasises learning in context; in this case learning to become a teacher and either remaining in or choosing to leave the profession. The construct brings together the experiences of the ECT, his or her interactions with professional peers, students, and such environmental artefacts as programs, student work and even courses and professional development materials. Since it is unlikely that any one matter will influence the ECTs' decisions regarding their future, this underlying theory enabled the study to identify the complex array of factors at work.

2.2 RESEARCH QUESTIONS

The research questions that directed the data collection and served as a framework for the interpretation of the data in the findings comprise an overarching question and four subsidiary questions. The overarching research question is:

- Why do ECTs choose to remain in the profession and why do others choose to leave?

The four subsidiary questions are:

- What are the relevant experiences of ECTs in their first four years of teaching?
- What influences ECTs to remain in the profession?
- What influences other ECTs to leave the profession?
- What strategies might assist in the retention of effective ECTs?

2.3 THE RESEARCH TEAM

The research team comprises researchers from the UTS Research Strength *Centre for Research in Learning and Change* (CRLC) and a Leading Research Centre at UTS, the *Centre for the Study of Choice* (CenSoC). The CRLC researchers are Associate Professor Sandy Schuck (team leader), Associate Professor Peter Aibusson, Dr John Buchanan and Dr Anne Prescott. The CenSoC researchers are Professor Jordan Louviere and Dr Paul Burke. Research Associate Dr Towhidul Islam assisted the CenSoC researchers, and Research Assistants Dr Terry Fitzgerald, Meera Varadharajan, Richard Schiliro and Rachael Kiang supported the CRLC researchers.

Assistance in sending out the Discrete Choice Experiments was provided by DET personnel and discussion about the project directions took place at regular intervals with various DET personnel.

2.4 ASSUMPTIONS UNDERLYING THE RESEARCH

The study has two major components: a qualitative section and a quantitative one. The two approaches set out to achieve different goals and answer different questions in the research. Different assumptions underpin each approach.

The qualitative component principally comprises data collected through interviews, focus groups, and roundtables at the project conference. Some of the data have been transformed into narratives as per the brief of the original tender. All of the data for this component are text based. An interpretive methodology has been used to make meaning of these data. In such methodologies, the number of participants is not important: the findings cannot be generalized; they are specific to the group being studied. The value of an interpretive approach is not to indicate trends or to generalize to the population but rather to provide contextual, rich and 'thick' data that enables the reader to understand the experiences being portrayed. Often, respondents are chosen purposefully (Bogdan & Biklen, 1998) because their experiences will illuminate the phenomenon under discussion. The assumption underlying interpretive studies is not that the findings will apply to all similar situations but rather that the findings will provide rich insights into the variety of experiences of the respondents.

The qualitative research methods in this study examine teacher retention through the perceived experiences of ECTs. Research of this type, involving the study of complex socially constructed phenomena, typically does not establish rigour through reliability and validity but through dimensions of trustworthiness (Denzin & Lincoln (Eds.), 1994). These dimensions include dependability, credibility, transferability and confirmability (Lincoln & Guba, 1985).

Dependability is considered strong where there is repeated data collection with multiple research participants generating repeat sets of data on similar phenomena. In this study this is evident in repeated sets of interviews with ECTs over an extended period.

Credibility relates in broad terms to the extent to which the research provides convincing evidence about the research topic. Contributors to credibility include prolonged engagement, negative case analysis, triangulation and peer debriefing (Lincoln and Guba, 1985). This study was conducted over four years and had prolonged engagement with the respondents. Peer debriefing occurred: among the researchers; with NSW DET representatives and mentors at stages during the project; and finally in discussion of a draft report, which has been modified after this consultation. Negative case analysis (i.e. a search for data that do not support the general patterns or explanations arising from analysis) of data from participants who continued to the third year of interviews suggested a consistent pattern of perceptions within that sample of ECTs. However, as a result of peer debriefing, such analysis was also conducted on data for participants who only completed two of the three interview sets. Some of these exhibited alternative perceptions pertinent to constructing an explanation for teacher retention in the profession. Examples of these cases have been included in the report. Triangulation is discussed separately in section 2.6 as it relates to both the qualitative and quantitative research methods.

Confirmability relates to the data audit trail or evidentiary warrant (Lincoln & Guba, 1985). Here the interview data and feedback from research participants at the conference, as well as member checking, provide a trail of evidence available for

verification. In addition, 'confirmation' from ECTs at the project conference indicate that the findings 'ring true' of their experiences and views of retention.

Transferability remains a challenge in qualitative research because samples are small and the aim of qualitative methods is not to produce universally applicable findings. Rather, the research methods provide the basis for thick descriptions of, in this case, experiences and perceptions that explain decisions regarding whether to stay or leave the teaching profession. The consistency of findings among participants continuing in the study for three years suggest their perceptions would be relevant to others. So too, does feedback on the draft findings from early career teachers who participated in the project conference. On the other hand, the different views of some in the study who did not continue into the third year of data collection, together with anecdotal feedback from NSW DET personnel on the draft report, imply that the transferability may be limited. In research of this type it is often best to allow the reader, cognizant of his or her own circumstances, to determine which findings are relevant and applicable. To allow this, thick description is essential (Lincoln & Guba, 1985). In this study, this is most evident in the narratives. The aim of the narratives is to ensure not just that the experiences relevant to retention are given expression but also to provide sufficient information about the early career teachers' circumstances to allow the reader to judge the transferability of the findings to other similar or different situations.

The quantitative component of the study comprised the Best/Worst (B/W) Surveys and the Discrete Choice Experiments (DCE). B/W survey items were developed from: qualitative data from the first set of interviews; input from DET personnel who worked with ECTs; and the research literature on retention of beginning teachers. Discussion about these data led to agreement between the researchers and the DET personnel on which factors should be represented in the B/W survey. The B/W surveys were then used to extend the results from the interpretive study by getting ECT respondents to indicate what factors they found most important in encouraging them to stay in the profession.

The DCE indicated what aspects of these important factors should be implemented or actioned for teachers to stay in the profession. For this part of the study, constructs of validity and reliability are important as the results can be generalized to the ECT teaching population in NSW.

2.5 METHODS

2.5.1 PARTICIPANTS

Participants for the tracking surveys were drawn from ECTs who had completed their degrees in 2005 and were in the 2006 graduating cohort. Teacher education graduates from all NSW universities existing at the time were approached to participate in the surveys. Unfortunately, due to delays in announcement of the successful tender bid, the research team was unable to access the graduates while they were still at university. This meant that fewer graduates were able to be contacted than originally desired. Altogether 329 ECTs indicated, by email, their willingness to participate in the project. These participants were asked to respond to a tracking survey once a year for the duration of the project. The participants did not provide any identifying details for themselves other than an email address.

The first tracking survey included a call for volunteers to participate in interviews over the course of the project. They were asked to provide a first name and contact number if they were willing to be approached. There were 122 ECTs who volunteered for the series of interviews. A list of the volunteers and their work conditions was compiled from the tracking survey details. Personnel from DET selected 54 ECTs for interviews from this list. These interviewees were selected to ensure diversity in secondary and primary experiences, type of school, geographical location, university program from which they had graduated and permanent, casual and temporary positions.

A larger group of ECTs (1700 ECTS in total) was emailed to participate anonymously in the Best-Worst Survey. They were contacted by DET personnel collaborating on the project. 258 people responded, a response rate of 15.1%. This allowed an allocation of 8 people to each block of a repeated design, which gave 96 observations per experimental row – and this has been shown by Louviere, Hensher and Swait (2000) to be more than sufficient to provide confidence in the results.

The ECTs who participated in the 2007 interviews were invited to a conference to be hosted in Coffs Harbour. Only ten were able to attend, due to personal or work factors. Another ten ECTs were invited from the list of volunteers who had not been selected for interviews. DET personnel nominated four mentor teachers and the research team nominated another mentor teacher to attend the conference.

In 2009, Choice Scenarios Surveys were emailed to the 2006, 2007 and 2008 cohorts of beginning teachers throughout NSW. A total of 2500 emails with a link to the survey were sent. Surveys were completed anonymously. 336 people responded, a response rate of 13%. The mathematical modeling developed by CenSoC allowed 16 observations per person and provided 5376 observations. This enabled the results to accurately predict real choices. More detail is provided in Chapter 3.

2.5.2 DATA COLLECTION

This section explains in detail the data collection methods used in the qualitative part of this project. The quantitative part is described in the following chapter on the B/W survey and DCE.

Tracking Survey. Surveys are arguably the most common research instrument in obtaining data from large populations. A survey was developed using Survey Monkey and this was sent out to all participants on the email list in May 2006. The tracking survey enabled the researchers to identify the variety of post-graduation employment possibilities that the graduating teachers experienced. Mindful of the workload of the ECTs, the survey was very brief and took about five minutes to complete. There were 193 responses to the survey.

The second version of the survey was sent out in April 2007. It comprised the same questions as the first survey. There were 165 responses to this survey. The third survey was sent out in April 2008 and 170 responses were received. The final version of the survey was sent to the email list in August 2009. It attracted 128 responses. The summary of the responses for each year is provided in Appendix 2.1.

Phone-mediated journals. Telephone interviews were conducted at three stages of the project. These provided ECTs with an opportunity to discuss the issues of importance to them in their teaching and insights into the phenomenon of beginning to teach. Goddard and Foster (2001 p.351) suggest that “The lived experience of beginning teachers cannot be represented and understood merely through an examination of responses to a Likert scale.” This study was concerned with gaining an authentic sense of the lived experiences of the ECTs being interviewed.

Telephone interviews have the benefit of being conducted while the respondent is in a familiar environment of his or her own choosing. They are also held in real time, which allows for interaction and clarification during conversations. Schuck and Segal (2002) found that most of the beginning teachers in their study did not manage to maintain written journals due to the overwhelming demands on their time as newly appointed teachers. They found, however, that telephone conversations, with an empathic but detached researcher, allowed the teachers to express their emotions and experiences about critical teaching incidents in ways that were, in many respects, cathartic outpourings. The phone call, then, took the place of the journal for many participants and was both an effective means of data collection and a means of support to beginning teachers.

The positive experiences of the ECTs in the Schuck and Segal (2002) study indicated that phone interviews would be a fruitful way for researchers to gather data and, at the same time, provide support for ECTs by giving them an opportunity to talk about their teaching journeys. As many of the teachers were dispersed across the state, the ease of contacting them for telephone interviews was of additional benefit.

It should also be understood that this study sought to track the experiences of individual ECTs, rather than to establish a community of practice. For this reason it eschewed the establishment of an online support mechanism. Brady and Schuck (2005) have further demonstrated that the provision of online discussion boards as a means of communicating with both colleagues and researchers produces a more limited response from teachers than was deemed appropriate for this project. Similarly, Vozzo, Aubusson, Steele and Watson (2004) found that while very few teachers took up the offered online mentoring, claiming lack of time and access, many responded positively to other forms of mentoring support e.g. person-to-person support provided by other staff, both inside and outside the school, or by their university colleagues and lecturers.

The 54 volunteers initially chosen by the DET officials were informed that they had been selected for the series of interviews. However, due to time constraints, and changes in volunteers' circumstances between time of volunteering in May 2006 and time of interviews from August 2006 onwards, twelve volunteers were no longer available. This meant that 42 ECTs were interviewed from August to November 2006. The interviewers asked them to choose an appropriate metaphor for their teaching experiences, using a set of photographs assembled by the research team. They were also asked to place themselves on a grid of challenge and support (see below). Appendix 2.2 is the schedule for the 2006 interviews and Appendix 2.3 shows a printout of the photographic metaphors and a URL which the conference participants were able to access for clearer images.

Metaphor. The use of metaphor is well established in research. Its power lies in the fact that it gives two ideas for the price of one. It promotes understanding from one field to a different one based upon a belief that they are analogous. It is possible

to map the properties of one enterprise onto another such that understanding is enhanced (Lakoff & Johnson 1980, 1999). Aubusson (2005) argues that the use of metaphor and analogy in educational research can generate insights into and new ways of thinking about a variety of educational issues.

Support and Challenge Zones. The support and challenge matrix was developed by Mariani (1997) as a means of representing degrees of challenge and support for learning. It enables learners, whether they be students or teachers, to position themselves in one of four quadrants (high challenge-high support; high challenge – low support; low challenge – high support; and low challenge – low support). The matrix can be used regularly as a tool to identify changes in teacher perceptions of their challenge and support, even if there is only a slight movement within a single quadrant. These dimensions are arguably applicable to teacher satisfaction at all levels. See Appendix 2.4 for detail of the matrix.

A second round of interviews was conducted with ECTs from the same group of volunteers in May-July 2007. Due to natural attrition over the previous year, only 28 of the original 42 were available for interviewing. Participants were asked about changes in their experiences from the previous year. See Appendix 2.5 for the 2007 interview schedule.

A final round of interviews was conducted with a small group of these volunteers in September and October 2009. Fourteen ECTs were interviewed. In addition to other questions, these participants were asked to revisit the metaphors they had chosen, and consider if they wanted to choose a new one. They were also asked to relocate themselves on the grid. See Appendix 2.6 for the 2009 interview schedule.

Participant Feedback Conference. Sharing work-in-progress through a conference mode has proved to be very successful in the case of the Australian Government Quality Teaching Program (2004-05). In the evaluation of that program, the two conferences received the overwhelming endorsement of teachers as a means of sharing ideas, and enhancing understanding.

For the current study, a conference was hosted at Coffs Harbour on 8 and 9 November 2007 with twenty ECTs, five mentor teachers, four staff from DET Head Office, and five UTS staff members. The aim of the conference was:

- to gather further data from ECTs in focus groups about their experiences in teaching,
- to check their perceptions of the qualitative findings at that point in time,
- to gather insights about the best/worst levels ascertained in the Best-Worst survey administered earlier in the year to the 2007 cohort of first year ECTs in NSW DET schools (see Chapter 3),
- to gather insights for the Choice modeling scenarios (see Chapter 3), and
- to share opportunities for support with the ECTs. See Appendix 2.7 for the 2007 conference program.

Results of the B/W Survey were disseminated and explained to the Conference participants and tested against their understandings. Preliminary findings from the 2006 and 2007 interviews were also shared with the attendees to get their responses to the findings thus far. Using focus group interviews, data were collected from the groups about their experiences as ECTs. Mentors and DET personnel had opportunities to discuss available support for ECTs.

2.6 ANALYSIS

The qualitative analysis process was developed by the UTS Centre for Research in Learning and Change (CRLC) researchers as they collaboratively explored the data from the three sets of interviews and from the participant feedback conference, using an interactive reduction mode of data analysis (Miles & Huberman, 1994). The data from each set of interviews were shared amongst the team, so that each researcher took responsibility for analysing one group of interviewees' data. The researchers read their set of data and placed these data in different categories that appeared to explicate the research questions. The team then met to discuss how the categories they had identified differed or overlapped. Categories were merged or added to represent all the analysis.

This process was repeated each year, in which a new round of interview data was gained. A similar process occurred with focus groups from the conference. It remained a dynamic process in which new themes were added when a finding did not fit existing ones and some themes were eliminated in later meetings as they could be subsumed in other themes.

The data are grouped under eight themes that arose from the analysis. These themes, which characterize the concerns expressed by the ECTs are:

- Isolation
- Collegiality
- Behaviour management
- Working conditions
- Professional learning
- Workload
- Casual/temporary teaching environments
- NSW IT accreditation

Narrative inquiry (Clandinin (Ed.) 2007; Clandinin & Connelly, 2000; Elliott, 2005) was used to collect, organise and report a set of participants' stories as data. Narratives are an effective way for researchers to create texts that stimulate a reader's imagination about the personal experiences of a research participant. Personal narratives were compiled from the interview data of three ECTs who had participated in all three interviews to get a longitudinal picture of their experiences over the years and narratives were compiled for two ECTs who had only participated in two interviews each, to provide contrast to the narratives from the first group.

Narrative enquiry involves taking raw, reported data, and rendering them as story. The value of using narratives as a vehicle for giving meaning to data is that it allows the reader to share the central characters' reflections and identities while considering its implications for us were the story our own. Story is, "an invitation to attend to the values, beliefs, opinions and assumptions we each [hold] with ourselves" (Nelson, 2008, p. 209), and offers a window into the central characters' values, beliefs, opinions, fears, hopes and even their prejudices. Stories give voice and spice to our everyday lives, experiences and interactions, and shed light differentially on the landscape of our being and doing. In the words of Connelly and Clandinin (1999, p. 2), "stories – these narratives of experience, are both personal – reflecting a person's life history – and social – reflecting the milieu, the contexts in which teachers live".

Campbell (2000) suggests that the use of story increases the scope for readers and researchers to interpret educational research findings. She adds that, “telling tales allows authors to demonstrate the importance and influence of cultural settings on teachers’ development and provides a rich context for exploration of ideas” (p.83).

Data from the conference were used in two different ways. First, data on experiences of the ECTs supplemented the data from the interviews and provided additional insights into the identified themes, confirming their inclusion; second, data on the choice aspects informed the development of the choice levels for the Choice modeling scenarios.

Tracking surveys provided a picture over four years, of changes in movement across schools.

Choice data analysis is discussed in Chapter 3.

2.7 TRIANGULATION

The data for this project were collected using a variety of different methods, both qualitative and quantitative. Each year of interview data collection was analysed by the CRLC researchers using a method of constant comparison (Glaser, 1965). The interviews were individually analysed for themes and then the team collaboratively compared data from the interviews to ensure agreement on the themes. A similar process was used in the second year of interviews and the themes and categories were then checked against the previous years’ findings for that person, and collaboratively verified. The set of themes was presented to the ECTs at the project conference as part of a member check, and data were collected from them as to the confirmability and credibility of the interview data.

The Best/Worst surveys were developed from the a range of data sources, including first year interviews, findings from relevant research studies and input from DET personnel who worked with beginning teachers. The surveys identified a set of twelve important factors for remaining in teaching (see chapter 3 for details). These factors were discussed at the project conference and with the relevant DET personnel and levels of actions were identified for each factor in preparation for the DCE. The DCE was developed from these data and piloted with 20 ECTs for clarity and accuracy. The DCE was distributed to 2006-2009 ECT cohorts in DET in early 2009. Findings from the DCE supported findings from the interviews and focus groups and provided triangulation through this different method of collecting and analyzing data. The literature also provides triangulation for the findings of this project.

2.8 ETHICS APPROVAL PROCESSES

An application to the UTS Human Research Ethics Committee (UTSHREC) was made for this research. The researchers undertook to maintain anonymity in all surveys and confidentiality for all interviews. Individuals were not identifiable by any person outside the UTS research team.

An undertaking was also given to participants that the results of the project would be made available to them on completion of the project.

UTSHREC approval was extended in May 2009 to allow for ten ipod Shuffles to be sent to choice survey participants as a way of thanking them for their involvement in the study. Recipients' names were drawn at random from those respondents who entered the draw.

2.9 IMPORTANT LIMITATIONS OF THE STUDY

This study sought to track beginning teachers over a number of years. The project also collected interview data each year from a sample of participants. Interview data were collected from small numbers of ECTs, and the ECTs who participated in all three interviews were self-selecting and were not randomly chosen to represent the entire ECT population. A characteristic of this interpretive research is that it cannot be used to generalize results: this is sometimes seen as a limitation by researchers from quantitative paradigms. As well, self-selection occurred in the interviews; it is possible that beginning teachers who were able to and chose to continue in the study are atypical.

There was attrition from the tracking survey, as teachers left or changed their email addresses. We were unable to ascertain which of these circumstances had occurred in each case. Consequently, we did not have access to data from those who left teaching, and/or became otherwise uncontactable over the years of the project

An important factor that ought to be considered in an examination of attraction and retention teachers is salary. In this study, the research team was not able to include questions about salary in the Choice data collection instruments. The absence of this data reduces confidence in research findings and the effects are unknown.

The timing of the invitation to graduates to participate in the research was not ideal. This meant that graduates from some universities were underrepresented in the sample. This could be a potential source of bias.

2.10 TIMELINE

During the time of the study there were a number of unforeseen delays – the contract took longer to be finalized than anticipated, changes in personnel at DET led to differing requirements and Best-Worst Survey and Choice Scenario Survey were delayed at the request of DET personnel. Table 2.1 indicates the timeline of the project.

Table 2.1 Timeline of the project

Year	February	March	April	May	June	July	August	September	October	November	December
2005									Project awarded to UTS 19 Oct 2005	Meeting with DET personnel to implement project 2 November	
										Ethics Approval	Graduates received invitation to participate (first round)
2006	Graduates receive invitation to participate (second round)		Development and uploading of tracking survey to Survey Monkey		Tracking survey baseline			Best-worst survey completed, tested and approved by DET Personnel	Analysis of interview data		
					Best-worst survey development			Telephone interviews with ECTs (n=42)			
					Selection of photographs and development of interview schedule						Request from DET to delay distribution of Best-worst survey until 2007

2007	Development of round 2 interviews and finalization for tracking survey 2	Tracking survey no. 2 distributed Best-worst survey distributed	Best-worst surveys distributed again, to increase response rate	Best-worst survey data analysis to develop Discrete Choice Experiment, levels for survey Interviews analysis	Participant Feedback Conference
		Telephone interviews with beginning teachers (n=28)			Analysis of conference data
2008	Tracking survey no. 3		Modifications sent to team 4 June.		
	Further development of Discrete Choice Experiment levels, using data from Best-worst survey and conference data		Email re changes sent to DET 10 June with warning regarding integrity of survey and additional time needed to change it		
	Pilot of Discrete Choice Experiment with ECTs from conference				
		Discrete Choice Experiment completed and ready for distribution		Modified survey as requested by DET. Completed survey sent to DET for approval. DET requests delay in distribution until 2009	Meeting with DET Personnel, Drs Smith and Stevens regarding the integrity of the current version of survey. Changes requested.
		Meeting with DET directors (6 May) – delay of survey requested until they had opportunity to have input into items			

2009	Discrete choice Experiment modified as requested and approved by DET	Discrete Choice Experiment distributed to 2500 ECTs	Extension sought for project till 30 June 2010 Ethics approval extend to include draw of ten ipod shuffles	Draft report on choice data	Meeting with Dr Stevens to discuss draft choice report	Tracking survey no. 4 (Final)	Final round of interviews (n=14) Supplemental analysis of choice data	Further analysis of choice data according to various groups	Retreat for research team to analysis and collate data, discuss report structure
2010	Development and preparation final report								

CHAPTER 3: DISCRETE CHOICE EXPERIMENT: CHOOSING TO STAY?

3.1 INTRODUCTION

The purpose of this discrete choice experiment (DCE) was to determine whether we could quantify the tradeoffs and preferences of a sample of NSW teachers regarding potential incentives and disincentives to remaining in employment. The initial phase of the choice study identified 31 potential drivers of teacher employment retention choices. We then used Best-Worst Scaling (Finn & Louviere, 1992; Marley & Louviere, 2005) to prioritise the list of drivers. This process is further explicated in section 3.2.

Following sections of the chapter then discuss the subsequent phase of the project in which we used a designed discrete choice experiment 'DCE', (Louviere & Woodworth, 1983; Louviere, Hensher & Swait, 2000) to construct pairs of options that offer different combinations of driver levels. A sample of NSW teachers to participate in the DCE survey was established using email lists provided by the NSW Department of Education and Training (DET). This chapter describes the DCE survey and associated results. Finally, we draw some conclusions about the results that should be helpful in making future decisions about retaining teachers in NSW.

3.2 BEST WORST SCALING: A SUMMARY OF THE TECHNIQUE AND ITS APPLICATION TO THIS STUDY

Best Worst Scaling (BWS) is a method that allows one to quantify how important an issue or object is to an individual or groups of individuals from a number of issues (objects) under consideration. BWS was first developed by Professor Louviere and introduced by Finn and Louviere in their article on how to appropriately assess the concern for food safety relative to other areas of public concern (Finn & Louviere, 1992).

In essence, BWS theory quantifies how people choose the best and worst items in a set. Sets may consist of different overarching items like brands or products (the items), whereby individuals indicate which option performs best and worst on a particular latent dimension (e.g., Woolworths is best on quality of service). Alternatively, sets may consist of factors, whereby individuals select the factors that matters most/least to them (e.g., fresh food vs. quality service). In BWS experiments, subjects simply indicate the best and worst options in a set. BWS also measures factor importance on a comparable ratio scale (Lancsar et al., 2007), as discussed by Marley and Louviere (2005), who provide formal proofs of measurement and model properties. Although Louviere prefers reference to the technique as BWS, often in commercial research it is referred to as 'maximum difference scaling,' as the items chosen best and worst are the two items that are furthest apart on each consumer's latent scale.

BWS has been applied in several research areas including public polling (Finn and Louviere, 1992); health economics (Lancsar et al., 2007); and corporate social responsibility/ethical research (Auger et al., 2007). BWS is useful in any context where human

decision-making is of interest, in particular where the level of trade-offs between any factors is desired to be classified in relative importance. The application of BWS in an educational context, therefore, is useful in being able to ascertain the factors that are most and least important (and quantify this on a statistically valid scale) to teachers in choosing to remain or leave the profession. That is, teachers are assumed to respond and behave to BWS tasks as any other decision maker has, as per other studies involving the BWS method. BWS has been used in education previously, in a study involving attraction and retention of Harvard graduates (Jans et al. 2001).

The advantage of BWS is that it involves a fairly simple task for respondents, but still provides rich information to the researcher – indeed the information is arguably even richer because the respondent must make trade-offs with other items. So rather than consider each item in isolation, one can learn relative importance. The alternative of asking respondents to rate items one at a time means that respondents have no disincentive to make any trade-offs when asked about items in isolation and may simply indicate that everything matters (Carson et al., 2000). Knowing that “everything matters” to participants does not help organisations understand where to focus their strategic efforts in the experience economy. Indeed, organisations must make trade-offs like consumers, and they must choose to focus on one factor over another (Sheth et al., 1991). Even asking about multiple factors one at a time is questionable with no knowledge about those respondents who may have looked at the set of scale items in isolation versus those who viewed items as a collective and reflected their implicit trade-offs. BWS is also advantageous because it is cognitively easy: there is no allocating of points or percentages to items, or a need to rank a lengthy list of items simultaneously.

For the Best/Worst surveys that were developed in this project the factors that were included as potential incentives and disincentives were identified through a range of data sources. These included ECT interviews in 2006, findings from other relevant research studies on retention of ECTs and input from DET personnel who worked with beginning teachers. Agreement amongst these three sources ensured that all relevant factors were included. In the case of using BWS in understanding the importance that early career teachers place on various factors that may influence them to remain in the profession, the task appeared online and a click of the radio button meant the DET could learn what was most and least important among a set of pre-determined items. This provided complete ranking information in any one set: Figure 3.1 illustrates the BWS survey.

MOST important	Second most important	Factor determining your choice to remain in school teaching	Second least important	LEAST important
<input type="radio"/>	<input type="radio"/>	Salaries The amount of money you get paid	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	Professional Challenge The extent to which your work is professionally satisfying	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	Parental Expectations The parents' expectations of you as a teacher	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	Student Behaviour The way students behave at school	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	Incentives This includes both financial incentives such as locality allowance, and non-financial incentives such as leave, etc.	<input type="radio"/>	<input type="radio"/>

progress

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Figure 3.1 Screenshot of extract of BWS survey

The subset of items to show in each set is determined by an experimental design, usually a balanced incomplete block design (BIBD). BIBDs are useful as they arrange all the items as efficiently as possible reducing the number of sets that are required to learn information about importance. The result is that each item occurs equally often and a controlled number of times with each other item (co-occurrence). For example, the following BIBD (figure 3.2) shows that each item will be considered on four occasions, twice with each other item. There were originally 35 ways (7C_4) to arrange the 7 items into sets of 4 – the BIBD allows one to reduce this down to just seven sets with minimal loss of statistical information and impact on bias.

Set	Item A	Item B	Item C	Item B
1	4	5	6	7
2	1	3	4	6
3	2	3	4	5
4	2	3	6	7
5	1	3	5	7
6	1	2	4	7
7	1	2	5	6

Figure 3.2 Balanced Incomplete Block Design (BIBD)

Sets would then be formed from each row, such that in this case, the respondent would have seen just four items in set 7 (items 1,2,5,6) and asked to choose the best and the worst. See Figure 3.3 below:

Set 7	Item	Best	Worst
A	1	✓	
B	2		
C	5		✓
D	6		

Figure 3.3 Choice of best and worst

In the case of the BWS application to the DET, there were 31 factors that needed to be arranged in terms of what most impacted the decision of teachers to remain in the profession. This allowed factor reduction to occur and a more salient set of features to be considered in the next stage of the research. A BIBD was constructed with 31 items, each item appearing 15 times, co-occurring twice with each other factor. Five items would appear in each set, resulting in a total of 93 sets. This is a lot less than the full combination possible to learn about full ranking: a total of 169,911 sets. Nonetheless, rather than ask each respondent to evaluate all 93 sets, each individual had to consider 12 sets only.

The analysis involves counting the number of times an item is ranked best (B-score) and the number of times it is ranked least (W-score). There are a number of ways to calculate an overall score of importance, a simple one being the difference in the two scores, or to take the square root of the ratio of the two scores (see Marley & Louviere 2005). The scores can be interpreted as having ratio properties. For example, if item A has a score of 6 and item B has a score of 2, then item A is 3 times as important as item B in an individual's decision making.

In the case of the DET project, the scores revealed the rankings and importance scores given in Table 3.1 (see also Appendix 3.1). The results presented in this table can be interpreted as following: factors that are important or of concern in the decision of teachers to remain or leave the profession relate to items higher on the table, such as the level of student involvement, the level of professional challenge and levels of collegial support. Any policy change or deployment of resources that changes the perceived levels of teachers on such items would have a larger impact than on the items listed at the bottom of the list. It should be noted, however, that changes in items at the lower ends of the table (e.g., the level of socialising or concern for parental expectations) may be important to teachers in their perceptions about the profession, but in relative terms, they will have less of an impact. The scores are interpretable in terms of having ratio properties: for instance, for the perceived level of collegial support a teacher experiences will be 2.39 more times as likely to impact on a teacher's decision to remain in the profession than general perceptions surrounding the school culture (a score of 1.0).

Table 3.1 Rankings and importance scores for teaching incentives

Incentive concept tested	Importance
Student Involvement - the extent to which you engage your students	2.58
Professional Challenge - the extent to which your work is professionally satisfying	2.52
Collegial Support – the level of support offered by other teachers	2.39
Professional Collaboration – the relationships you have with others who are involved in student learning or welfare	1.78
The support you receive during your first year – the orientation you have to the school and system (e.g. structured supervision; mentoring)	1.69

Executive Support – the type of support that is provided by the school executive (principal, deputy, head teacher, assistant principal)	1.65
Staff Culture – the interaction and support among staff	1.65
School “Climate” – the “tone” of the school (welcoming atmosphere)	1.64
Pedagogical Support – the quality of support given to you for planning and delivering teaching and learning	1.59
Workload – the time and effort you commit to teach effectively	1.53
Special Needs - support for your teaching of student with particular learning and/or behavioural challenges	1.32
Student Behaviour - the way students behave at school	1.12
Resources– things that support you in your job (e.g. ICT, facilities, space, materials)	1.12
Philosophical Fit – the extent to which your beliefs about teaching match those of the school	1.09
School Culture – the way your school does things, whether explicit or unspoken	1
Future Career Opportunities – options available for future promotion and/or transfer	0.99
Professional Respect – opportunities to participate in school decision making	0.96
Scope of Role – the variety of tasks you have to perform	0.83
Salaries – the amount of money you get paid	0.83
Local Conditions – environmental factors that affect your daily life as a teacher (e.g. geographic, housing, classroom, web access, isolation)	0.8
School Appreciation -The school community’s acknowledgement of your efforts and/or achievements	0.79
Incentives – This includes both financial incentives such as locality allowance, and non-financial incentives such as leave, etc.	0.66
Accreditation Requirements – support provided to assist you to meet the requirements of the Professional Teaching Standards	0.63
Teacher Preparation – extent to which your teacher education program prepared you for teaching	0.61
Class Size – the number of students in your classroom	0.57
Professional Isolation – your feelings of working alone	0.54
Support of Parents – the support of parents in classroom	0.43
Administrative Requirements – the daily paperwork required	0.43
Policies and Procedures – the policies you are required to implement in your teaching	0.39
Parental Expectations – the parents’ expectations of you as a teacher	0.37
Socialising – opportunities to participate in social activities	0.33

The top 11 factors were identified as those factors most important to respondents in their decisions to remain in the profession. In consultation with the DET, the top 12 factors were considered for further research in the Discrete Choice Experiment. This was so that the twelfth factor of student behaviour could be included.

In summary, BWS was a method that allowed the identification and reduction of items that are most important to ECTs in their decision to remain in the profession. Given such a large list of items, ranking the entire list would have been difficult and rating items one at a time would not provide insights into relative importance. The most important factor identified here is the ability to engage students. It can also be seen that factors of support from colleagues and principal and collaboration with colleagues are ranked very highly, as is workload.

In terms of issues of reliability and validity, BWS requires respondents to make trade-offs among items being assessed. Cohen (2003) made comparisons of BWS to rating scales, paired comparisons and found BWS to maximise discrimination among items with rating scales providing least discrimination about relative importance among the 20 items evaluated. Chrzan and Golovashkina (2006) compared BWS with five other importance measures (importance ratings, constant sum, Q-sort, unbounded rating scales, and magnitude estimation) and BWS outperformed the other measures with the highest level of predictive validity.

With regard to the validity and reliability of BWS in an educational context, BWS has worked in every field in which it has been applied, which includes virtually all the social and behavioural sciences, engineering, and several of the sciences, including physics. Reliability is very high, which is demonstrated by several test-retest studies that basically show the estimates lying on top of one another. Validity has been gauged only against 'true' values using simulated data, and BWS captures the true values up to a constant of proportionality. The only other way to 'test' the validity of BWS is to ask whether when we use it to narrow down a list of attributes it allows us to predict real choices accurately. We have done this in several cases, and we have demonstrated that we can accurately predict real choices by real people in real markets.

The rest of the chapter details the discrete choice experiment design and findings from the DCE.

3.3 CHOICE

The number of teachers who remain in employment with NSW DET in the NSW Public School System is a consequence of a large number of choices made by these employees. Everyone makes choices, but few academics and professionals know that we can study them. Fewer still know that we can model and predict them. Many business and social phenomena are brought about by knowing and acting on such individual/group decisions or choices. Some of these phenomena include NSW election totals, holiday resort revenues, museum visit options, pilot retention factors, and millions more. Specifically, the primary choice of interest in this report is the choice to remain in and/or leave the teaching profession.

Choices are often studied using aggregate choice data (e.g., the number of cars that use the Lane Cove Tunnel). That is, one obtains data on the number of cars per day/hour/etc, and tries to explain/predict car numbers using aggregate measures observed for travel zones or postcodes like travel times, travel costs, income differences, etc. In contrast, choice modelers study choices of individual choosers by obtaining data on individual choices, and try to explain/predict the choices by observing variables that vary across choice options for each individual, such as travel times and travel costs for each person for each route of travel for each transport mode that can be chosen, and variables that differ for choosers like age, gender, income, family size, home location, etc.

One must be careful when aggregating individual choices because it is easy to draw conclusions about individual behaviour that are misleading and simply due to aggregation biases involved in using averages. Humans rarely all behave alike; hence

aggregate choices may mask many potentially important differences. This choice study makes use of recent developments in latent class statistical models to ensure that we capture all individual differences that matter.

Theory and methods have been used to study choices since Thurstone (1927) developed the method of paired comparisons based on what we now call “random utility theory”. Several key modern developments underlie the work in this choice study, such as Daniel McFadden’s winning of the Nobel Prize in Economics in 2000 for his work in developing theory and associated statistical methods for analysing and modeling multiple choices instead of only paired choices, the development of DCEs based on McFadden’s work by Louviere and Woodworth (1983), and the development of optimal statistical design theory for DCEs by Street and Burgess (2008). We briefly summarise these key developments in the next section.

3.4 DISCRETE CHOICE EXPERIMENTS AND CHOICE MODELS

A discrete choice experiment (DCE) is a statistical experiment that allows an experimenter to estimate the parameters of a particular discrete choice model in a reasonably statistically efficient manner. Specifically, a DCE is a sample of choice sets drawn from all possible choice sets for a particular set of choice drivers and their associated levels. The sample is drawn in such a way that particular types of choice models can be estimated and tested. In the case of the current choice study, there are ten choice drivers (henceforth called “attributes” of employment options), and each of the ten attributes was assigned four levels or discrete values to describe possible actions or conditions that could be realised.

The selection of potential incentives and disincentives to remain in employment for the DCE was made in conjunction with the DET and the research team following a presentation of the BWS results. The final selection of the attributes and levels in these discussions were driven by two key points: 1) they were agreed on by DET representatives and the UTS research team as important as overarching factors in the decision of teachers to remain or leave the profession after considering the literature, qualitative data from interviews and project conference and BWS results; and 2) were believed to be under the control or influence of the DET in terms of policies or resources that it could provide either through a short or long term set of informed strategies. It should be noted that, at the time of discussions, other factors such as salaries and workload reductions were suggested for inclusion to ensure an appropriate basis to make willingness-to-pay calculations, but the ultimate decision of which attributes and levels to include in the experiment rested with DET representatives. The final attributes and associated levels selected to study in the DET are shown in Table 3.2.

Table 3.2 List of Attributes and Levels Used in DCE

Overarching Attribute	Associated Attribute Levels
1. AFFIRMATION AND INCLUSION	<ul style="list-style-type: none"> • Recognition (eg via emails; announcements) of personal milestones (eg birthdays) • Recognition (eg via emails; announcements) of activities/achievements in and outside of class (eg excursions; accreditation progress) • Voice in professional activities of school (eg at staff meetings; inclusion in committees) • Greeting and enquiries from executive staff about how you're going (interest shown)

2. TEACHING RESOURCES	<ul style="list-style-type: none"> • Pigeon hole or "common drawer" allowing shared access to other teachers' and/or school resources/materials • Electronic access to teaching resources (including access at home online) • Support for the use of computers in classrooms and in teaching and learning programs • Each teacher keeps school developed resources to themselves (no genuine sharing)
3. WORKING WITH MORE EXPERIENCED TEACHERS	<ul style="list-style-type: none"> • Cooperative planning for teaching and learning (Lesson preparation, design of teaching and assessment tasks) • Co-planning and co-teaching/team teaching a class together • Working together collaboratively with experienced teacher by observing and being observed in classroom • Little collaboration - work in isolation in planning and developing of teaching and learning activities
4. PLANNED PROFESSIONAL CONVERSATIONS	<ul style="list-style-type: none"> • With other beginning teachers at my school or at other schools in similar roles, subjects or stages • With my supervisor • With my mentor • Limited professional conversations about teaching practice
5. ACCESS TO TEACHER MENTOR	<ul style="list-style-type: none"> • If available (many people compete for my mentor's time) • If available (at a regular time each week) • On demand (whenever I feel there is a need) but very briefly • On demand (whenever I feel there is a need) for as long as I need
6. TEACHING MENTOR	<ul style="list-style-type: none"> • Online • Meet at another school • Through telephone or videoconferencing • Meet at my school
7. TEACHING MENTOR (Focus of mentoring support)	<ul style="list-style-type: none"> • Support for classroom management • Support in programming and assessment strategies • Support for career planning • Support in managing parents and community
8. ACCESS TO DET SPONSORED RESOURCES (MEDIUM)	<ul style="list-style-type: none"> • Hard copy documents • Videoconferencing • Web-based resources • Personal interaction
9. FOCUS OF DET BASED RESOURCES	<ul style="list-style-type: none"> • Legal requirements (eg employee rights and responsibilities; leave access; pay issues; welfare) • Teaching and learning • Professional development to support accreditation • Curriculum requirements
10. PROFESSIONAL DEVELOPMENT DAYS/ACTIVITIES (additional release)	<ul style="list-style-type: none"> • In-school collegial professional support • On-line on time professional learning • Attendance at program/workshop/conference • No specific professional development to achieve Professional Teaching Standards

The 10 attributes and 4 associated levels displayed in Table 3.2 can be combined into 4^{10} possible combinations, otherwise known as a full or complete factorial design. The total number of possible combinations is 1,048,576, and all possible pairs from this number of combinations would be 549,755,289,600. If instead of pairs, one wants choice sets that offer triples, quadruples or other, the numbers are exponentially larger still. We provide these numbers to make it clear why one must sample from the total number of possible pairs, triples, etc. Fortunately, recent developments in statistical theory allow us to draw samples with suitable statistical properties, with much of this work summarized in Street and Burgess (2007). We relied on their approach to design a set of 192 pairs for this project. We divided the pairs into 24 versions of eight pairs each, and randomly assigned each

teacher respondent to one of the 24 versions. The pairs were implemented in what we call a “choice survey”, and an example of the pairs is given below in Figure 3.4.

Scenario 1		
Features of Position	Position A	Position B
1. Affirmation and inclusion	Greeting and enquiries from executive staff about how you're going (interest shown)	Recognition (eg via emails; announcements) of activities/achievements in and outside of class (eg excursions; accreditation progress)
2. Teaching resources	Support for the use of computers in classrooms and in teaching and learning programs	Pigeon hole or "common drawer" allowing shared access to other teachers' and/or school resources/materials
3. Working with more experienced teachers	Working together collaboratively with experienced teacher by observing and being observed in classroom	Cooperative planning for teaching and learning (Lesson preparation, design of teaching and assessment tasks)
4. Planned professional conversations about teaching practice	With other beginning teachers at my school or at other schools in similar roles, subjects or stages	With my mentor
5. Access to mentor	If available (many people compete for my mentor's time)	On demand (whenever I feel there is a need) but very briefly
6. Mentor (Medium of interaction)	Meet at my school	Meet at another school
7. Mentor (Type of mentoring support)	Support in managing parents and community	Support in programming and assessment strategies
8. Access to DET resources	Hard copy documents	Web-based resources
9. Type of DET resources	Teaching and learning	Curriculum requirements
10. Professional Development to achieve Professional Teaching Standards	On-line on time professional learning	No specific professional development to achieve Professional Teaching Standards

1. Out of the following, which is your most preferred position? (Check only one box)

Position A Position B My current position

2. Out of the following, which is your least preferred position? (Check only one box)

Position A Position B My current position

3. Suppose the two teaching positions A and B were offered to you, which would you choose?

Position A Position B Neither

Figure 3.4 Example of pairs in choice survey

This was followed by scenarios 2 to 8 (see Appendix 3.2).

The 192 pairs of employment attribute levels are designed in such a way that the survey respondents must make tradeoffs among the attributes and associated levels. That is, if they want more of - say - attribute 5, they must give up some of – say – attribute 8. Of course, this is exactly what happens in real life. If one wants the NSW Government to spend more money on education, then one has to be willing to give up some spending on parks and playgrounds. So, DCEs force respondents to

prioritise the attributes and associated levels, and the choices that they make reveal these priorities and tradeoffs. A choice model is simply a statistical model that quantifies the tradeoffs and preferences.

Each respondent completed the eight choice scenarios and answered several other questions relating to their current employment and future intentions; the characteristics of the school they currently work at; and areas that they teach. Demographic characteristics were also gathered via questions about their gender, age and qualifications. A full list of questions and results can be found in Appendix 3.3.

Now we discuss the key statistical results from the choice survey.

3.5 MODELS AND RESULTS

We first summarise the results of the choice survey by tabulating the results. A DCE is a type of crosstab (contingency) table. The DCE that we implemented to create the 192 pairs represents a sparse, incomplete contingency table where each of the “sides” (dimensions) that comprise the table is independent (i.e. they are orthogonal). As a consequence, we can summarise the sample aggregate results in cross-tabulation form. However, as previously noted, one must be careful in interpreting the sample aggregate results because these are averages that can mask individual differences. We explore these individual differences using sophisticated latent class models later in the report, but for now, we present and discuss the cross-tabular results. The main attribute results for the aggregate sample are summarised in Appendix 3.4, followed by a comparison of two key measures, namely the difference in best and worst choice counts and the square root of the ratio of best counts to worst counts.

The results can be interpreted as follows: more positive best minus worst differences or higher square root values indicate higher preferences for levels, with the opposite true for less positive best minus worst figures or lower square root figures. For example, level 3 (voice in professional activities of school) is the preferred level of attribute 1 (affirmation and inclusion), with level 1 (recognition via emails, announcements) being very much less preferred than all other levels of attribute 1. Other attribute levels can be similarly interpreted within each attribute, but not across attributes. This is because the scores are relative to the variation of level values within an attribute, with some attributes varying across a range of positive and negative levels (e.g., teaching resources) whilst some attributes vary among positive attribute levels only (e.g., affirmation).

Now we turn our attention to assessing differences in respondents. The calculations reported above for the aggregate sample and McFadden’s (1974) conditional logit model restrict the preferences of individuals such that they are homogeneous (and require errors to be i.i.d. extreme value). It is well known that differences in preferences for attribute levels and/or differences in error variances will bias preferences estimated using this model. So, less restrictive models that relax these assumptions have been proposed.

One such model is the scale adjusted latent class model (a type of finite mixture model) that allows preference parameters to differ for discrete but unobserved (latent) classes of people, while also allowing the underlying variability of the random errors to differ between several discrete latent classes. That is, variation in individual responses is allowed to take on two or more discrete

values over the sample. Until Magidson and Vermunt (2005), latent class models allowed preference for attribute levels to vary from class to class, but required error variances to be constant for all classes. The constant error variance requirement confounds true preference variability with individual differences in error variances; hence, apparently significant differences in preference parameters between latent classes may be due to differences in choice consistency (error variance). We use the LatentGOLD software developed by Magidson and Vermunt (2005) to relax the restriction that error variances must be constant. In turn, this allows us to allow latent preference and variance classes to be functions of demographic and other covariates.

We estimated the scale adjusted latent class (SALC) model using Latent Gold, version 4.5 (Magidson & Vermunt, 2005), and utilising 'age' to capture variance heterogeneity (i.e. scale classes) and socio-demographics, and other measures to account for preference differences (i.e. latent classes). The procedure allows one to test for model improvements by estimating additional latent variance or preference classes, and testing whether adding an extra class significantly improves the fit of the model to the choice data.

3.5.1 VARIANCE DIFFERENCES

Variance differences in the estimated model are explained by 'plan for next 12 months', 'learning disabilities', 'gender' and 'education level'. We identified two variance classes, with class two exhibiting about 4.5 times as much choice variability as class one. Approximately 74% of the sample belongs to class 1, with the remainder in class 2. These results are presented below in Table 3.3 and Table 3.4. Table 3.3 contains the results for associations between answers to survey questions and preference class membership. Table 3.4 contains the estimation results for the attributes and associated levels for the two preference classes.

For measures associated with class membership, respondents who plan to leave the profession are more likely to be in class 2, which is the more inconsistent group. Respondents who report no students with learning disabilities are more likely to be in class 2. Males are more likely to be in class 2. Respondents with a GradDip level of education are also more likely to be in class 2.

Table 3.3 Estimation Results for Variance Classes

		Class 1		Class 2	
		coef	z-value	coef	z-value
Plans for next 12 months?	Plan to remain in profession	2.258	3.058	-2.258	-3.058
	Plan to leave	-2.153	-2.532	2.153	2.532
	Other	-0.104	-0.203	0.104	0.203
Learning Disabilities	Yes, it takes up the majority of my time	2.843	2.604	-2.843	-2.604
	Yes, but it is one student among many	-0.497	-1.117	0.497	1.117
	No	-2.346	-2.796	2.346	2.796
Gender	Male	-1.064	-2.327	1.064	2.327
	Female	1.064	2.327	-1.064	-2.327
Education	MSc and PhD	2.778	2.558	-2.778	-2.558
	Grad Dip	-2.831	-2.95	2.831	2.95
	Bachelor	0.053	0.139	-0.053	-0.139
% of sample		74.43%		25.57%	

3.5.2 PREFERENCE DIFFERENCES

We also found two classes of respondents in terms of their preferences for attributes and their associated levels. The results of fitting the model to the choice data associated with differences in these preferences are in Table 3.4 below. Approximately 67% of the sample is in preference class 1, with the remainder in preference class 2. Respondents who plan to remain in the profession are more likely to be in class 1. Respondents who have students with learning disabilities that take up most of their time are more likely to be in class 1. More highly educated respondents are more likely to be in class 1.

Table 3.4 Estimation Results for Preference Classes

		Class 1		Class 2	
		coef	z-value	coef	z-value
	Intercept	0.137	0.494	-0.137	-0.494
Plans for next 12 months?	Plan to remain in profession	0.833	3.027	-0.833	-3.027
	Plan to leave	-0.356	-1.325	0.356	1.325
	Other	-0.477	-1.855	0.477	1.855
Learning Disabilities	Yes, it takes up the majority of my time	0.93	2.422	-0.93	-2.422
	Yes, but it is one student among many	-0.037	-0.223	0.037	0.223
	No	-0.893	-2.731	0.893	2.731
Education	MSc and PhD	0.969	2.205	-0.969	-2.205
	Grad Dip	-0.672	-1.845	0.672	1.845
	Bachelor	-0.297	-1.262	0.297	1.262
% of sample		67.22%		32.28%	

The latent class model allows us to estimate the preferences of each underlying class in the sample, conditioning on variance and preference heterogeneity. Below we break the results down by each attribute to allow for easier interpretation; Table 3.5 displays the z-scores associated with estimated mean preference parameters for each of the two latent classes. Appendix 3.5 lists a more detailed set of results with the actual mean preference estimate.

Each preference class has a model intercept, which reflects the propensity to stay with the present school position, as opposed to choosing one of the options described in the pair of options in a particular scenario. Class 1, the largest class of respondents, is more likely to choose one of the options than to choose to stay with their present position, which is reflected in the fixed intercept. However, the random intercept suggests that in general, class one is more inclined on average to choose their present position, although the variance in the propensity to choose present position is very large, as reflected in a large z-score. The purpose of the random intercept in this model is to allow for choices to be correlated over successive scenarios. That is, the random intercept picks up the propensity of a respondent who prefers their present position to choose it more often.

Table 3.5 LC Estimates of Preference Parameters

Model Effects	Class 1 67% of sample		Class 2 32% of sample		Between Class Differences	
	Z Est.	Sig	Z Est.	Sig	Z Est.	Sig
Fixed Intercept (current school employment position)	-8.792	✗	-3.882	✗	-4.910	✗
Random Intercept (for current school employment position)	12.747	✓	-5.139	✗	17.886	✓
7a. AFFIRMATION AND INCLUSION						
Recognition (eg via emails; announcements) of personal milestones (eg birthdays)	-2.502	✗	-4.457	✗	1.955	
Recognition of activities/achievements in and outside of class (eg excursions; accreditation progress)	1.225		-0.773		1.998	
Voice in professional activities of school (eg at staff meetings; inclusion in committees)	0.980		3.706	✓	-2.726	✗
Greeting and enquiries from executive staff about how you're going (interest shown)	0.332		0.876		-0.544	
7b. TEACHING RESOURCES						
Pigeon hole or "common drawer" allowing shared access to other teachers' and/or school resources/materials	2.954	✓	2.061	✓	0.893	
Electronic access to teaching resources (including access at home online)	5.126	✓	3.646	✓	1.480	
Support for the use of computers in classrooms and in teaching and learning programs	3.005	✓	3.774	✓	-0.769	
Each teacher keeps school developed resources to themselves (no genuine sharing)	-9.472	✗	-5.718	✗	-3.754	✗
7c. WORKING WITH MORE EXPERIENCED TEACHERS						
Cooperative planning for teaching and learning (lesson preparation, design of teaching and assessment tasks)	2.870	✓	4.435	✓	-1.565	
Coplanning and co-teaching/team teaching a class together	-0.310		4.004	✓	-4.314	✗
Working together collaboratively with experienced teacher by observing and being observed in classroom	3.742	✓	-0.972		4.714	✓
Little collaboration - work in isolation in planning and developing of teaching and learning activities	-5.992	✗	-5.645	✗	-0.347	
7d. PLANNED PROFESSIONAL CONVERSATIONS ABOUT TEACHING PRACTICE						
With other beginning teachers at my school or at other schools in similar roles, subjects or stages	2.457	✓	-1.467		3.924	✓
With my supervisor	2.138	✓	1.722		0.416	
With my mentor	1.521		1.487		0.034	
Limited professional conversations about teaching practice	-5.877	✗	-1.981		-3.896	✗
7e. ACCESS TO TEACHER MENTOR						
If available (many people compete for my mentor's time)	-0.827		-2.796	✗	1.969	
If available (at a regular time each week)	0.624		-1.451		2.075	✓
On demand (whenever I feel there is a need) but very briefly	-1.079		1.569		-2.648	✗
On demand (whenever I feel there is a need) for as long as I need	1.238		2.933	✓	-1.695	
7f. TEACHING MENTOR (Medium of interaction)						
Online	-2.861	✗	1.806		-4.667	✗
Meet at another school	-2.434	✗	0.023		-2.457	✗
Through telephone or videoconferencing	-0.380		-0.102		-0.278	
Meet at my school	5.751	✓	-2.070	✗	7.821	✓
7g. TEACHING MENTOR (Focus of mentoring support)						
Support for classroom management	2.712	✓	2.570	✓	0.142	
Support in programming and assessment strategies	-0.170		4.344	✓	-4.514	✗
Support for career planning	-0.060		-3.410	✗	3.350	✓
Support in managing parents and community	-2.284	✗	-1.880		-0.404	
7h. ACCESS TO DET-SPONSORED RESOURCES (MEDIUM)						
Hard copy documents	1.414		-1.988		3.402	✓
Videoconferencing	-2.967	✗	1.211		-4.178	✗
Web-based resources	-0.273		2.830	✓	-3.103	✗
Personal interaction	1.844		-2.398	✗	4.242	✓
7i. FOCUS OF DET-BASED RESOURCES						
Legal requirements (eg employee rights and responsibilities; leave access; pay issues; welfare)	-3.057	✗	-3.574	✗	0.517	
Teaching and learning	1.136		2.201	✓	-1.065	

Professional development to support accreditation	-0.373		1.767	-2.140	✘
Curriculum requirements	2.550	✓	-0.127	2.677	✓
7j. PROFESSIONAL DEVELOPMENT DAYS/ACTIVITIES (additional release)					
In-school collegial professional support	-0.962		2.879	-3.841	✘
On-line on time professional learning	-0.689		1.858	-2.547	✘
Attendance at program/workshop/conference	4.540	✓	1.801	2.739	✓
No specific professional development to achieve Professional Teaching Standards	-2.446	✘	-3.099	0.653	

The first set of estimates relate to Class 1, making up 67% of the sample, recalling that those who indicated a plan to remain in the profession largely drove membership in this class. The second set of estimates relate to Class 2, making up 32% of the sample, recalling that those who indicated a plan to leave the profession in the next 12 months largely predicted membership in this class. The first and second columns of 'ticks' and 'crosses' can be interpreted as follows: 'ticks' ('crosses') indicate changes in an attribute level which are predicted to have a positive (negative) impact on their preference for a given position in teaching relative to other attribute levels. Those attribute levels without a tick or cross have little impact on preferences for teaching positions relative to the status quo.

The final column tests whether the differences in preferences between the two classes differ significantly. Specifically, a positive estimate (with a tick) indicates that Class 1 has a more pronounced affinity to a given level relative to those teachers predicted to be in Class 2. For instance, teachers in Class 1 would prefer DET-based resources to focus on curriculum requirements, but this is not of concern to those in Class 2. The absence of a tick or cross in this final column indicates that both groups share a similar set of preferences in relation to a given attribute level. For instance, both groups are less likely to prefer DET-based resources that focus on legal requirements relative to other possible content options. A summary of likes and dislikes to help profile the two classes is presented in Appendix 3.6

3.6 WHO CHOOSES WHICH ATTRIBUTE LEVELS: PROFILE OF CHOOSERS

The analysis of choice data indicated statistically significant differences by specific categories. The categories exhibiting significant difference included the following independent variables of teacher participants:

- teaching in *large schools* (i.e. $n > 1000$ pupils) compared to *small schools* (i.e. < 300 students);
- teaching in *primary* school compared to *secondary* schools;
- gender;
- teaching in *rural* schools compared to *city* schools;
- having good compared to poor access to broadband;
- having been a student at government - non-government school; and
- age (categorised as 20-24, 25-29; 30-34 or 35+)
- education (completed grad diploma or other; bachelor; doctoral or masters)

The purpose of this section of the chapter is to summarise the statistical results of modelling which levels of each attribute are chosen by various types of people in the choice survey. We ran 10 separate statistical choice models to establish which covariates were associated with choices of each job feature level. These associations are summarised in a set of 'lookup tables'

(Appendices 3.7 and 3.8). These tables indicate who is more or less likely to choose a particular feature level if it is offered to them.

Care needs to be taken in interpreting these data. Being less likely to choose a particular attribute does not mean that the attribute is unattractive. The attribute may not be desirable but simply more important to some than others. For example, teachers in rural schools were more likely than teachers in city schools to 'choose' work conditions that included DET resources that focus on legal requirements. However this does not, of itself, indicate that professional learning that focuses on legal requirements is a desirable attribute for early career teachers in rural schools.

ECTs all have much in common, which can be addressed. However, there is also a need to recognise that one size will not fit all. The circumstances of early career teachers in e.g., rural and city schools or primary and secondary schools, are different. Hence, some significant variations in the choices that they make are unsurprising. The differences in choices according to ECTs' circumstances, school types, and personal characteristics indicate that some variation may be required in addressing the characteristics of workplaces to make teaching more desirable to all beginning teachers.

3.7 DISCUSSION AND CONCLUSIONS

The purpose of this choice study was to examine the issue of recruitment and retention of beginning teachers, which is of significant concern to the NSW Department of Education and Training (DET). Ensuring that effective teachers remain in the profession is essential to a sustainable teacher workforce. It is a challenging problem as newly appointed teachers often are overwhelmed by workload and role complexity.

We explored factors that lead ECTs to leave or stay in teaching, with a view to developing strategies for retaining teachers in schools. The UTS research team reviewed literature on early career retention, and conducted primary qualitative and quantitative research to identify several factors that then were incorporated into a choice experiment designed to examine this issue in more detail. The factors also were identified and described in collaboration with NSW DET representatives to ensure a match with strategic initiatives that NSW DET can directly and/or indirectly influence. The levels also were evaluated by ECTs to ensure comprehensiveness of factors and associated levels.

It is worth noting that the choice study used an innovative and unique research approach developed by CenSoC to understand and predict teachers' stay or leave choices. Specifically, we designed and implemented a discrete choice experiment in which we presented survey respondents a series of scenarios that required them to make choices that revealed their tradeoffs and preferences for sets of incentives and incentives to stay or leave teaching.

The study results indicate that there are two unique segments of ECTs. The larger segment (about 75% of the sample), is predominately those who plan to remain in the profession, who face higher demands associated with managing students with learning disabilities, and who are primarily females with more advanced levels of tertiary qualifications. The smaller segment

(about 25% of the sample) are those who reported that they plan to leave the profession, and are predominately males, a large proportion of whom hold a graduate diploma in teaching.

The educational qualification differences between the two segments may suggest several motivational differences to remain in/leave the profession, including incentives to recover sunk educational costs (including time and money), greater ability to exit the profession with alternative qualifications, or possibly a primary instead of secondary interest in the profession that may have been seen as a “back-up” to original vocational interests.

We now discuss the strategic insights that the model results indicate about how to approach questions of managing both segments.

Similarities in the segments indicate initiatives that the NSW DET should consider as likely to encourage the majority of ECTs to remain in the profession. For example, one major factor to which both segments are likely to respond relates to teaching resources. That is, both segments dislike siloing resources among teachers, whereas initiatives that encourage resources sharing (electronic or offline via a common draw) are valued. Similarly, both segments seek to minimise isolation in planning and development activities. While the segments differ in their perceptions about how to work with more experienced teachers, both favour cooperatively planning for teaching and learning (including lesson preparation, design of teaching and assessment tasks).

NSW DET may need to consider carefully whether to introduce initiatives that may be responded to differently by the two segments. As mentioned, while working with more experienced teachers is attractive to all ECTs, only those who intend to remain in the profession (the primary segment) view this as attractive when implemented via initiatives that encourage working together collaboratively with experienced teachers by observing and being observed in the classroom. The smaller segment has a greater likelihood of leaving the profession, but this segment also is indifferent to this initiative relative to other strategies.

The largest difference is associated with the medium by which ECTs interact with their assigned mentor. The segment who is more likely to report that they intend to remain in the profession view the medium of interaction with mentors as being attractive only when meeting in person at the teachers’ school, and this segment dislikes interactions online. In contrast, the other segment is indifferent towards the medium of interaction with mentors. Yet, both segments agree that meeting mentors at another school is unattractive. The segments also differ in relation to mediums to gather information about NSW DET-sponsored resources. Web-based resources are liked by those on the fringes of the profession, who dislike access via personal interaction.

Planned professional conversations about teaching practices are essential to all ECTs, but even more so for the segment dominated by respondents likely to stay in the profession. The latter segment sees little difference as to whether the conversations occur with supervisors or other beginning teachers; however, conversations only with other beginning teachers are valued by the segment likely to leave the profession.

The choice modelling results overall suggest that differences in various ways to address issues of importance to ECTs are much larger in the segment more likely to stay in the profession, with one exception. That is, teachers who are more likely to stay in the profession do not seem to value mentor discussions that focus on support in programming and assessment strategies or career

planning. In contrast, the segment that is more likely to leave the profession places considerably more emphasis on the question of mentor focus. Surprisingly, that segment values using mentors for support in programming and assessment, and see career planning not only as of little value, but also as a waste of precious time with mentors. The two segments only agree in seeing value on learning about classroom management through conversations with mentors.

To summarise, the most important factors to impact on choices to stay or leave were: sharing teaching resources, collaborative planning for teaching and learning, effective mentoring and support from experienced teachers.

4.1 INTRODUCTION

All the qualitative data collected over the four years of the project were analysed for common themes and points of differences using a yearly grouping. They were then analysed for changes over the years. A number of themes were identified as central and ongoing. This chapter is organized around those themes. The Best/Worst Surveys (BWS) were developed from themes arising in the first round of interviews, together with input from relevant personnel in the DET and findings in the literature. The rankings in the BWS are noted in the relevant themes to provide triangulation. The discrete choice experiment (DCE) was developed from the BWS results, as well as interview and focus group data. The findings from the DCE are also inserted into the central themes. This chapter therefore draws on both qualitative and quantitative data for the findings and triangulates all research approaches to answer the research questions.

The chapter starts with five narratives, developed from the data of a range of ECTs who participated in project interviews. The rationale for use of narratives and the methodology of narrative enquiry is discussed in Chapter 2, the methodology chapter. Through these narratives we are able to obtain deep insights into our subsidiary research questions concerning: the relevant experiences of ECTs; why they stay in the profession; what might influence them to leave; and what strategies might assist in their retention. The ECTs describe their experiences to us, and those who completed all interviews provide insights into the four questions, offering suggestions for strategies that might assist in retention.

Three narratives provided here belong to ECTs who participated in all three sets of interviews over the four year project. As noted in the methodology chapter, fourteen ECTs participated in the full complement of interviews. The ECTs whose narratives are provided here, were selected from this group as they had all worked in NSW DET schools for the entire duration of the project. They also provide insights into a range of experiences as one is a primary school teacher and the other two are secondary school teachers, one from a remote school and one from an urban setting. However, their experiences cannot be generalized or be said to be representative of the experiences of all ECTs. It is likely that those who chose to continue to be interviewed did so because they were eager to have their voices heard on a range of issues. It is possible that those who decided not to continue to the third interview might have felt that their needs were being met and they had no further requirement for a friendly ear. While the stories of these three ECTs share many similarities with the other stories from the group who participated in all interviews, we are unable to assess how representative these narratives are of the wider ECT population.

We looked for data that might tell a different story from the pattern of data found in these three narratives. However, none were forthcoming in the three-interview sample. Consequently, we examined data from ECTs who participated only in the first two of the three sets of interviews. We have selected two narratives from ECTs in this group. For balance we have selected two narratives that present a more optimistic view of the ECTs' experiences. Again these narratives cannot be assumed to be representative. The narratives are used to present qualitative data that allow human stories to be told. They are not chosen at random but selected because they tell stories that provide rich insights and make meaning of ECT experiences. The combination of these narratives provides insights into the participants' journeys across four years of

teaching. They illustrate how teachers developed over the years and the changing nature of the challenges they faced. These narratives inform our research questions. We begin in the next section by presenting these rich narratives of the experiences of the ECTs.

4.2 THE FIVE NARRATIVES

The first three narratives recreated in this section are designed to depict the progress of one woman and two men, each of whom was interviewed three times – in 2006, 2007 and 2009. This group was chosen because they met a number of criteria. Firstly, and most importantly, they had participated in all three interview sessions which allowed the team to ascertain how these ECTs were travelling over the course of the project. Secondly, they were all still teaching, so had been in the profession continuously for four years. This provided valuable insights as to whether conditions had changed for them, and as to the nature of the challenges and triumphs they had experienced over this period of time.

Narratives were selected from graduates of different universities. There was a balance of males and females, and a broad age range. All had started their teaching careers in the state system and were still teaching in this system. The first two narratives are developed from the experiences of mature-aged ECTs who had come to teaching from other careers. They both taught in secondary schools. The third narrative is from an ECT who went into primary teaching on leaving school, as her first career. Pseudonyms are used in all narratives to protect confidentiality of participants.

Given that the aim of the narratives is to provide rich and insightful pictures of the experiences of a number of different ECTs in different contexts and of different demographics, the narratives should not be taken to be representative of one generic ECT experience. Rather they demonstrate how different the first few years can be for ECTs.

4.2.1 JACK

Jack completed his Dip Ed as a mature-age University student after working as a professional musician for 20 years. He became a teacher to teach music to school students. Jack commenced his first year of teaching in his mid-forties and in his first year taught Music, English, Maths, French and Japanese to years 7 to 10 at a small outback school (170 enrolments; class sizes 22 maximum). This narrative comprises incidents and experiences that Jack described in his three interviews, held in 2006, 2007 and 2009.

In his first interview, Jack told us his university experience had not prepared him sufficiently for teaching. He critiqued the gap between theory and practice and in particular wished they had told him he would be teaching subjects other than his specialist area of music. As well as being a music teacher he had IT qualifications. Ironically he found himself teaching LOTE, for which he had no training or experience.

Jack found that there was a huge amount of preparation time required, particularly for unfamiliar subjects. Even teaching English was a struggle at first because he had not seen the curriculum. Maths was manageable because he taught the lowest Maths class, but even so the majority of students had behavioural issues. He noted that teaching in this rural area meant that there were no ESL students.

The school had supportive policies in place for disciplining students and the Head Teacher (HT) in particular offered personal support for the teachers. Jack found that professional development meetings were helpful for focusing on discipline issues and sharing resources. Even so, Jack told us that he and the other teachers in the school experienced very high levels of frustration and anxiety. This was mainly due to the behavior of the students: discipline was Jack's major concern. He said the culture of his small outback school is affected by a majority of students who are rude and disrespectful and do not want to achieve. Between 30 and 50 students will be away each day and many arrive late. Some have broken a parole. A whole class can be disrupted by just a few of the students, leaving him with only several minutes of teaching time. This makes learning difficult for those who do want to achieve. Parents in the district who can afford it send their children to boarding school rather than to this local high school.

Jack felt challenged by the poor behaviour of some of the students. There were few pathways available for managing these students. One avenue was to contact their parents. Some parents were helpful when contacted about their children's behaviour but others were hostile. Jack said he felt sad for those who came from rough homes and had nowhere else to go but school.

While he had developed a number of teaching and relationship strategies to help him adjust and cope in class, Jack's experience in the first year left him feeling helpless nearly every day and looking forward to holidays and other out-of-classroom events. He could not see himself teaching for the next 20 years:

If I were to stay in teaching then the attitude of the students would have to change and be more positive. Also parents need to be more supportive of teachers. In my view it is not an issue of money or holidays, it is the attitude of the students that needs to change for the better if I'm to stay in teaching. (Jack, first interview, 2006)

In his second year Jack noted that his workload at the school was similar or slightly higher, with a mixture of primary and senior secondary classes (second interview, 2007). While still a music teacher, he had a different range of other subjects to teach, including IT, PD and English. He also taught IT to adults as part of the school community program.

In his second interview, Jack continued to be seriously concerned about discipline, particularly in years 11/12. About half of these students seemed to have low expectations of themselves and were not interested in gaining the HSC. They were attending school rather than go on the dole. Some of the better students started lowering their expectations as a result. The music and computer rooms were well-equipped, but the students would 'just trash them' and then complain about them being broken. Sport was the activity that they liked best, and the school provided many opportunities for them to engage in non-competitive sports.

Jack had a merit system of rewards but the senior students often treated it as a joke. He said "the kids are running the school". The students often refused to comply with his disciplining and their parents were either unapproachable or hostile to his requests for help. Other teachers were similarly concerned about these issues. The school wanted behavioural issues dealt with in class, rather than referred to the principal and senior managers. In fact, when discussing this in the second interview, Jack expressed surprise that the principal had actually followed school policy and confiscated a mobile phone. He did not seem to see this as a usual occurrence.

According to Jack, the school provided many opportunities for professional development and Jack was permitted to go to courses when he wanted. His HT was helpful and encouraging, as were the other teachers. In the second interview, Jack noted the collegiality of the staff as a positive feature of the school. However, formal mentoring was only offered for the first time at the school in Jack's second year, and existed mostly for the beginning teachers in their first year. This meant Jack was not able to be mentored. Indeed, Jack was a mentor himself in that second year — to a graduate teacher of English who was finding it difficult to teach at the school. He felt that she had benefited from the conversations and seeing other teachers deal with the same problems.

As he had done in his first year, Jack spoke again of his own frustration and that of other teachers at the school. He reiterated that he could not see himself teaching for another 20 years because the students did not seem to care about his IT and music classes, no matter how much time he spent preparing for them. Teaching Primary School was less demanding, but if he could have left easily for another school he would have. He was aware, though, that he might end up at a school with worse problems and even bigger class sizes.

When asked about any successes he might have experienced in that year in his second interview, Jack spoke about one that involved a boy from a family with a bad reputation to whom he had lent drumsticks. Drumming was the only school activity that interested the boy. When he broke a drumstick, the boy offered to pay for it. Jack felt that the student's acknowledging that he had broken the drumstick was a major breakthrough. Jack had invested quite a lot of time over the year building the trust of this boy's sister and cousin, and the boy had noticed.

Jack developed a number of strategies that allowed him to cope better in his second year. "At least the students are not attempting to crush me now, as they try to do with new teachers". He "ignored" those who were argumentative. He said it was an advantage to be able to teach his specialist subjects of Music and IT.

Jack said he was trying to learn more and improve himself. He completed his Institute of Teachers' accreditation after a lot of work putting together the necessary evidence. He appreciated how the process required him to examine his progress as a teacher, but he did say that if it had not been mandatory he would not have spent so many evening and weekend hours on it as it was very time consuming.

By the third interview, in 2009, Jack was still at the same school but now teaching only subjects in his subject area (IT and Music). He preferred this to teaching outside his area of expertise. After nearly four years in this remote and rural school, he was eligible for a two-year temporary position elsewhere in the DET system. He was aware that he would be placed in another school at the end of the fourth year.

Jack mentioned how the issue of staffing isolated schools was significant for him. He applied for a transfer after three years of teaching at this school but did not get one. He felt there should be a definite guarantee for teachers to get a transfer after three years, otherwise there was the risk that teachers would prefer to work as a casual in a location of their choosing rather than chance going out to the country like he did.

Jack's opinion was that often the syllabuses being taught are not reflective of the real world and this is limiting for the students who are not gaining knowledge and skills relevant to industry. He said he still often felt low as he put in a lot of

effort into his classes but was constantly fighting the negative attitude of the students and their parents. The majority of both students and parents seemed not to value education nor appreciate what he did as a teacher.

In the third interview, after almost four years of teaching Jack told us that his anxiety level had decreased. He was more experienced and was getting fairly high support from his supervisor. More importantly, the students knew him better and he was teaching only the subjects he was trained in. Even so, he would still have his “bad days”. He often felt that he was not achieving much. “This is making me tired and unsatisfied, as though I am hitting my head against a brick wall”. He could understand why other teachers said “what is the point?” Jack said he was still unsure about whether he would stay in teaching. He re-iterated that the decision would not be based on money or holidays. If he were to stay in teaching he would want the attitude of the students to be more positive and the parents to be more supportive of teachers.

Jack expressed his frustration at driving 100 km to attend a workshop and discover that the presenters rush the presentation and cut it short. In his school many teachers seemed to attend Teacher Professional Learning courses just to get away from the students for the day and have the opportunity to do some shopping.

In Jack’s school, there were four Principals in four years. He said there needed to be more stable leadership at the level of Principal and complained that the Principals would spend all of their time on administration tasks rather than providing disciplinary support and finding out what was happening in classes. He suggested that a policy change the DET could make in this regard would be to employ professional administrative staff so that Principals could be free to use their knowledge and experience managing student behaviour and working more closely with teachers, particularly new teachers.

This narrative offers insights into the experiences Jack had as an ECT. Over the four years, spent at one remote and isolated school, Jack seemed to develop strategies for managing discipline, and found teaching a little easier as a result of teaching his specialist subjects. He enjoyed the collegiality at the school and the support of his Head Teacher but would have benefited from having a formal mentor as was the case with ECTs who arrived at the school the following and subsequent years. Jack was looking forward to being transferred to another school and was hopeful that the attitude of students and parents would be better in his next school. The opportunity of transferring to a better school appeared to be the factor that would keep him in teaching. The factor that might influence his decision to leave is the attitude of his students. He felt that their resistance to learning would be a factor motivating him to leave. Jack suggested that more administrative support for executive staff which would provide them with time to better support ECTs would be a good strategy to aid in retention.

4.2.2 JIM

Before commencing his Bachelor of Teaching, Jim was a professional engineer looking for a new profession that had greater value to society and dealt more with people. He was attracted to teaching Mathematics in schools. In his first year he taught at a DET school which had years 7 to 10 only. This narrative comprises incidents and experiences that Jim described in his three interviews, held in 2006, 2007 and 2009.

In interview 1 Jim outlined the main challenges he faced as a new teacher: teaching load and behaviour management. In his interview in 2006, he told us that he felt it important that beginning teachers have a reduced teaching load. University had not prepared him for the amount of work in his first year, preparing lesson plans and resources.

Jim also complained about the physical work environment in this interview – he noted that while teaching is a "profession", the physical work environment is inadequate – his desk is small, the few computers available for teachers are too slow, and the technology still restricted to 'computer rooms' rather than in the classroom.

Jim said his Head Teacher was very supportive and had high standards, which increased the pressure on him. The school generally had a cooperative and helpful staff. A Head Teacher Mentor also spent two days a week at the school, but Jim had only an hour each week with her.

In his second interview, Jim reported that he was still at the same school. He said he was still working very hard, but the challenges he faced were less daunting because his management skills had improved. He had developed better rapport with his students and been encouraged by his Principal telling him he had made significant progress during the year. He felt less supported this year, however. His previous mentor left the school and he was disappointed that he no longer had a mentor. As well, there were fewer formal meetings with the HT and less time for informal meetings.

Jim's accreditation process with NSW IT was now complete but he was doubtful about its benefit and importance. He said that the accreditation had added extra activities he needed to accomplish and consumed time with his mentor that he felt he could have used for professional development. He saw accreditation as a moving goal post.

Jim described his teaching experience in his second year as positive, despite the reduction in support and the increase in his expected workload. With more experience this year, he was able to handle most situations better. His advice to beginning teachers was to be organised and to make the most of mentoring opportunities. He suggested that ECTs have their mentors observe as many lessons as they can and discuss these lessons immediately afterwards when possible.

By the third interview in 2009, Jim was still teaching Maths at the same DET school, but he had started teaching Information and Software Technology (IST) as well. In this fourth year of his teaching, he felt less supported than previously because there was a new Principal, and one of the Deputy Principals was also new. As a result, Jim observed that student behaviour became worse but the new senior executive had not put a process or plan into place to deal with the more challenging student behaviours that Jim and other teachers were seeing in the classroom. His HT was still very supportive, however.

While there was a high degree of teamwork in Jim's faculty there were many things happening and he was extremely busy. Taking a new subject of IST was difficult as there were few resources, just a very basic program left behind for him to work from. He said he felt like he was in his first year once again because he had to do lots of preparation of resources for his new subject. The Digital Education Revolution exacerbated his feeling of being overwhelmed, with laptops being rolled out to students and staff. He felt he must now use this new technology in his classroom and spend time exploring its applications.

In the third interview, Jim said commented on how in 2007 and 2008 he had felt a sense of stability and felt comfortable in the school, but in the 18 months to the end of 2009, the very high staff turnover had had a severe impact across the whole

school. There were now many more inexperienced casual and temporary teachers who were unable to handle the students. As a result, the students had become much more unsettled.

Jim said he would remain in teaching because he can see the value in what he is doing and he considers teaching to be worthwhile. However, he might not remain in the same school. If his HT, who has provided him with a high level of support and guidance, were to leave he would be more inclined to transfer to another school. He would also consider moving to a private school. He can see himself still teaching in five years because he has already had a career change (from professional engineer to teacher) and teaching fits in well with his family life.

Jim had some strong recommendations for the DET to improve the conditions of beginning teachers. First and most important, he felt that a reduction in teaching load was essential. He also felt that the DET should give more time to those in their second year of teaching. Once a teacher has completed their first year and come off probation then they are 'dumped', he said. They should be given support and feedback in their second year and even their third year of teaching.

Second, supervisors of beginning teachers should be educated to conduct productive meetings with their inexperienced staff, and the DET should give new teachers more access to their mentors by having a mentor program in every school, rather than sharing mentors between two or three schools. Jim's third recommendation concerned professional development. He would prefer a more structured program of professional development for new teachers so they may be given the opportunity to attend workshops outside of the school.

Jim's narrative about his teaching experiences indicates that his journey was very dependent on the support at the school and his familiarity with the subjects he was teaching. He found teaching much easier in his second and third year but seemed to struggle in his fourth year when high staff turnover meant that there were disruptions and tensions occurring across the school. Keeping up with new initiatives such as the Digital Education Revolution also seemed to create stress for him. However, Jim notes that he will stay in teaching as he believes it is a worthwhile career and fits well with his family life. Jim's suggestion that ECTs get reduced workloads has subsequently been implemented by the DET. He also felt that support should be offered after the first year and noted that having a mentor in every school would be very helpful.

4.2.5 JULIA

Julia went into teaching in order to help people and because she had liked earlier work and family experiences with teaching children. In her first year, she was a part-time (0.8) ESL primary school teacher, a position she gained immediately after graduation. Teaching is something she will build on and she wants to do a postgraduate course in TESOL as a way of continuing to learn. This narrative comprises incidents and experiences that Julia described in her three interviews, held in 2006, 2007 and 2009.

In her first interview, Julia said there was not enough practical application in her University Teacher Education course. Nevertheless, she indicated that she was confident she would be a good teacher because of her work experience and she felt ready for the challenge of teaching.

She said her work was highly challenging and variable on any given day. She was supported and helped by two other ESL teachers, although the level of challenge was greater than the support she received. Some of the classroom strategies she learned from other teachers had been very helpful.

Julia had a number of supervisors during the course of the year. While she described them all as being interested in her, she felt that they didn't play as active a role as they could have. Julia wondered if her development was being impeded by insufficient feedback from her supervisors concerning her programs. As well, because two of the supervisors were not in the ESL area, she argued that they did not fully understand her specific needs.

One of her major concerns was classroom management. Her school had a good disciplinary program but she felt it was not being used effectively. Classroom programming was another challenge at first, but with the help of other teachers she had developed by term 3 a system which worked for her.

In her second interview, Julia was still at the same primary school teaching ESL but now working full-time. She was feeling much more confident about managing classroom behaviour. Discipline was easier because this year she was working with older children who had come to know what to expect of her at the school. Her programming skills had improved and she had also settled comfortably into her own programming style. She said "I think my programming skills have improved significantly because I have been able to write a program that someone could follow".

Julia's major challenge in her second year, she said, was a short-lived conflict among teachers in her area about allocating time at the beginning of Term 2 for new arrivals who had no knowledge of English. She felt very supported during this period by her supervisor, the Principal and another ESL teacher. In hindsight, she saw it as a valuable learning experience in planning for the unexpected and understanding the politics of teaching.

Julia was very positive about her teaching and predicted being in the profession in another 40 years, continuing to learn from the challenges she will meet. She said: "If I teach a really good lesson after preparing well, and I have gone in and gotten through everything, then I feel really good about it and consider it as a success".

Julia told us that her advice to beginning teachers was to make sure they ask their mentor questions, even if they may seem unimportant or about a small issue, and to not dismiss anything as silly or irrelevant. Her advice to mentors was to make themselves available to help the new teacher and regard every question as relevant. Mentors should also help new teachers with timetabling and planning, and with developing structure and routine, even if they think the teacher does not need help. A new teacher would also develop confidence by team teaching with the mentor, who would observe and give feedback.

Julia was ambivalent about the NSW Institute of Teachers' accreditation process. She said it is a good idea to have a Teachers' Institute and the accreditation but felt she did not learn from the process of accreditation and had resented the time spent formally writing everything down. She said she was looking forward to the next level of accreditation in four to five years, when she will approach it with much more experience. She was keen to continue learning and was planning on doing a Masters next year.

After three years at her previous school, Julia moved to another DET school as a primary ESL Teacher. This school has a different approach to teaching ESL and her focus has been on reading support and assisting new arrivals. At the time of the third interview, in 2009, she was doing no RFF teaching.

In Julia's third interview, as a new teacher at this school, she told us she felt more supported than previously and found student behaviour less challenging.

She made the comment that as a teacher you never stop learning and so you should never stop asking questions. In her first year at the previous school she had had a perception that asking questions was not encouraged and this led to her feeling unsupported at times. In her new school, she said she was more confident in asking for help and all staff were prepared to provide assistance. This had made being at the school much easier for her.

Julia predicts staying in teaching for the long-term and cannot see herself doing anything else. The reason she will stay is because she enjoys the "I got it moment!" This happens when students understand something she has taught them and it makes sense to them. Then they learn new things, such as writing a particular letter or reading a word, and make educational progress.

Julia would like to see the DET introduce a number of policy changes for the employment of new teachers. New teachers, including temporary teachers, need to get more time off in their first year in order to prepare their work. She quoted the expression "teaching is the only profession that eats its young" as a way of complaining that beginning teachers are expected to do exactly the same amount as experienced teachers.

Executive staff, too, should be given more time to provide team teaching and other support to new teachers they are supervising, she said. She noted how when she was working at a fast-food chain as a 15-year-old "flipping hamburgers," her supervisor and other workers gave her more time and attention than she was given as a beginning teacher.

Julia also suggested that more structured and targeted professional development could be provided to new teachers, depending on their real needs rather than their perceived needs. For example, if a teacher needed help with classroom management then they could be sent on relevant behaviour modification courses rather than inappropriate literacy in-services.

Her view is that new teachers should be offered more openness and a less judgmental attitude by the staff in their schools. All teachers, not just new teachers, should be encouraged to ask questions and be prepared to watch each other's lessons.

The narrative shows how Julia found each year a little easier and developed strategies for behaviour management. She also appreciated a different climate in her second school where teachers were encouraged to ask questions and be supportive of each other. She noted that she would be likely to stay in teaching as it was so rewarding when students understood work that you were teaching them. Among the strategies that Julia suggested to aid retention and the quality of ECTs' experiences were more targeted support based on ECTs' requirements, and staff that were more collegial and open to helping ECTs.

The following two narratives come from ECTs who participated in the first two interviews but did not choose to participate in the third interview. They have been selected because they provide rich pictures of contexts that differ from the ones above.

4.2.4 RAYMOND

Raymond appears to have “found his professional home” in teaching. He began teaching History, Geography and HSIE (Human Society and its Environment) in 2001, and attained permanent status at a boys’ school in western Sydney in 2005. A redundancy and associated pay-out from his former employer made it possible for him to undertake a full-time Diploma of Education.

At the first interview in 2006, Raymond observed that after initial problems in establishing his credentials, the experience has been “a positive, uphill curve”. He enjoys a natural rapport with the boys at the school. He coaches the rugby union team and is the year 7 advisor. He described himself as

confident and positive about what I do. My classroom is a very positive environment. I take great pride in my room and try to give the boys a special feeling about the room.

He particularly enjoys his small senior class of three Band 5 students. He summed up: “Teaching is magnificent, extremely positive, so much satisfaction and so rewarding. It is the best profession to be in”.

Support at the school is very positive in Raymond’s experience; there are two Head Teacher Mentors. One, who arrived in the year of Raymond’s first interview, was described as “brilliant and very positive”.

Raymond conceded that there are challenges, however. Schooling has changed considerably since he went to school. He described the present generation of boys, “who question and are defiant, unlike my generation when we just listened to our teachers”. Raymond didn’t find his tertiary experience prepared him well for dealing with discipline. He lamented that the good students are held back by those whose aim is to disrupt. He described the literacy standards of children coming into high school as “atrocious”. He also identified “language problems” among some students who seem to demonstrate potential. He did not elaborate as to whether these students suffer from language-related learning difficulties, and/or speak English as an additional language, however. Raymond referred to a three-year delay in his accreditation process, but did not posit as to why this might be. He did indicate that he entered teaching before accreditation was necessary, and was doing it voluntarily.

As stated above, Raymond was very enthusiastic about teaching at this time. He nominated one of the best tips for successful teaching as “connectedness; ability of a teacher to connect with students is a huge thing”. He also observed, “there is so much potential in students” and remarked on the “need to release all that potential to achieve their best. That’s my aim”. He sees himself being a Head Teacher/Mentor in a few years’ time.

At the time of the second interview, Raymond was at the same school, teaching almost exclusively senior classes, and none below year 10. He was teaching Ancient and Modern History, Business Studies, HSIE, History and Geography. He recounted that it is, “much more satisfying, in my view, to take senior classes and to teach when it counts”. He described the related workload as “considerably harder”.

Raymond believes that being an older beginning teacher assists in his being seen as an “authority figure” among the boys. It also helps that he knows his subject areas well. While he recalled arriving at the school “with a great deal of trepidation”, he can’t see himself leaving it in the near future, as he is highly committed to boys’ education, particularly those from disadvantaged backgrounds, such as at this school. He observed, “the boys are a challenge, but about 95 percent of them are decent human beings”.

Raymond believes he has diminished his problems with classroom misbehaviour by being “firm and fair. The boys will respect you in the end and I have a certain amount of respect for them too”. Once a teacher’s reputation for firmness is established, he added, you often don’t need to carry out your threats; “I haven’t given any detention for over six months”. He also sets out his rules, regulations and consequences early in the year, because, “the boys can be pretty rude. If they see the teachers as not strong, they will push the button as far as they can go”. He added, “I think next year will be even better”. He already has other teachers observing his class for the purpose of improving their own management skills. Indeed, Raymond informed us that soon after this interview, he was to become the Head Teacher Administration.

Much of the success in Raymond’s teaching he attributes to the positive rapport he has developed with the students:

We also have students coming from ‘broken homes’ and trouble in their lives. They come and talk to me because they feel comfortable. I have a room that is not only conducive to teaching but is comfortable as well. I don’t tolerate any bullying and the room is safe.

Raymond makes his room available for students to study if they need this, and says that they appreciate this gesture of trust on his part. He attributes some of his positive rapport with his students to experience gained in his previous work as a personnel manager: “If you talk to [the boys] like an adult, they act like one” he observed. He has also maintained a good rapport with the school’s executive. He believes he is liked in part because of his positive attitude, adding that some teachers are very negative.

“Quite conservative ... I tend to be a chalk and talk man”, is how Raymond summed up his teaching approach, but added that that he increasingly supplements this by experimenting with other techniques, such as visual materials and group work, including peer assessment.

Raymond summarised the main challenges in his teaching so far as:

*First year – getting his classroom management right;
Second year - improving the structure of his lessons and differentiating according to various students’ needs;
Third year - arranging content to optimise the learning outcomes for his senior students.*

There are three elements that Raymond feels have helped him to meet the challenges of teaching: experience, observations of colleagues, and input from literacy and numeracy experts who observed his teaching. Among other things he has learnt techniques to modulate his voice to greater effect, as well as using non-verbal attention-getters. Having taught some of the same boys for three years has also assisted in rapport building and in a mutual increase in expectations. He added that there is no substitute for good preparation in teaching.

Raymond observed that his view of teaching had changed over the years, partly due to the influence of inservice courses on boys’ education. He views his teaching as being akin to conducting an orchestra. He noted that the main rewards of

teaching are intrinsic, rather than externals such as salary. Among his proudest achievements is all three of his Modern History boys getting band 4 in the HSC.

His advice to other beginning teachers included a warning that “the first term will be hell on earth”, but to persist through this barrier. Raymond also recommended concentrating on classroom management as a precursor to effective teaching; “you can’t teach an unruly class”, and to, “have an open mind”. His advice to mentors is to “be sympathetic” rather than cynical or critical and to be, “patient to answer silly questions”.

Raymond concluded, “I am what I am today because I have had some amazingly good teachers along the way who have taught me so much ... since my teens I have always wanted to be a teacher”. Raymond was 55 at the time of the first interview.

Raymond loves teaching and clearly intends to stay in it. Factors that keep him in teaching appear to be his love of the job, his achievements with his students, and other intrinsic rewards such as his rapport with his students and with school executive, and his desire to help students achieve their potential. Raymond did not participate in the third interview, so was not asked about reasons for staying, intentions for the future or strategies to aid retention, but it is clear from his narrative that he had no plans to leave teaching in the foreseeable future.

4.2.5 ANNA

Anna is teaching a Year 2 class after completing a degree in Early Childhood which prepared her to teach 0-8 year olds. She has a full time permanent position and has been at the same school for two years. She has taught the same year level for both years. Anna enthused that she had wanted to be a teacher for some time. She had done work experience in a school while still a school student herself and “loved it”. She went into teaching because she “absolutely love[s] kids”.

In her first interview, Anna mused that during her first year she had her “good and bad days”. Early on, she kept feeling as though “things were piling on top of her” and that she “can’t get on top of things”. At first, she struggled with the work required of a beginning teacher. She had to spend a lot of time at home at night preparing lessons as well as working most Saturdays. As the year progressed she has come to manage this better but it remains “hard” and she still feels “overwhelmed at times”.

Anna described her class as having children with a vast range of abilities and needs. She is trying to meet the needs of every child but it is stressful when she feels that she is not being successful in this.

One of the things she said she had struggled with was programming. She had not known how to program in the beginning. By the time of the interview (September), she had improved her programming skills and techniques. Her long-term planning was now “working well”.

She said that classroom management had not been a problem for her because the “kids in the class are pretty well-behaved and generally okay”. Also the school has a “good discipline policy” emphasising extensive positive reinforcement.

One of her main concerns has been dealing with parents. She feels that she should really know how to communicate with parents but it can be “challenging and nerve-racking”. In this school, she says, that the “parents are lovely and supportive”. Many parents are very active in different roles at the school. Working with parents, she elaborated, becomes an issue when parents come to her with a problem. Sometimes she is not sure what to do. So, she always says she’ll “get back to them”. This does not seem satisfactory to her.

Anna felt under some pressure from other teachers at the school to perform because she had been appointed as a ‘permanent’ teacher. She knew that she should ask for help when she needed it but she was reluctant to do so because “everyone is so busy”. In addition, she had high expectations of herself and wanted to live up to the expectations of others. Nevertheless, the school staff was very supportive. She had a mentor teacher who taught Year 1; a kindergarten teacher who had been particularly supportive; and a “good” principal. Her supervisor had also been helpful with preparing for NSW IT accreditation. The process had been facilitated by having release from face to face at the same time as her supervisor and integrated well with her normal work.

At the time of her first interview she said that she was in a “good school” with supportive staff and that things would “only get better”. The year has been one of gradual improvement. For example, she explained that, as the year progressed she had become more “comfortable” with the class and her students had also become more “comfortable” with her. She said she was learning a great deal from the experience.

In the second interview, Anna indicated that things had continued to improve. Her first year experience with programming had meant that she was more confident about planning for her second year with another Year 2 class. Having the same year group for the second time was considered advantageous. Much of the “stuff” she had used in the previous year could be used again.

According to Anna, her biggest challenge remained meeting the needs of all children. In this second year, her year group had been graded and she had the “bottom” class. She considered these students harder to work with than those she had in her class the previous year. Although her second year of teaching had been hard, the school had support structures and processes in place to help her with students who were experiencing difficulties.

The Reading Recovery Teacher (RRT) in the school had been very helpful. She provided different reading/literacy activities and resources for Anna to use with her class. Anna also observed the RRT teaching in Year 1 class. This was particularly beneficial. There was also a Teacher Learning Team operating in the school, in which Anna participated. This provided her with the opportunity for professional learning with colleagues in her school. This too, Anna says, had been “very helpful”. In stark contrast to her first year when she met her supervisor regularly, in her second year they hardly met formally. Nevertheless, her supervisor continued to be welcoming if she sought help. She still had a mentor who remained supportive but Anna argued that it would be advantageous to have a mentor who taught in the same year level.

During her second year of teaching, Anna said that she has taken on more extra-curricular activities in the school. While this has been rewarding, she also explained that it was demanding. She had to develop better time management skills to allow her to cope with the increasing demands.

The awkwardness that Anna had felt the previous year, in meeting and dealing with parents, was resolved. Anna acknowledged the help she had had from her supervisor in addressing this concern. The most beneficial thing her supervisor had done was to sit in on some of her interviews with parents to provide advice.

On reflection on the NSW IT accreditation process, she thought that it had “involved a lot of work and was fiddly and time consuming”. She was grateful that her supervisor had “helped (her) a lot”.

Anna had given no thought to doing anything other than staying in the teaching profession. She was in what she called a “good” school with no significant behaviour management problems; a highly supportive mentor, supervisor and principal as well as having a collegial group of teachers to work with. The environment had been conducive to her professional learning and enabled her to experience significant rewards in her teaching. As with Raymond, Anna had not participated in the third interview so did not provide answers to questions about her future plans and strategies to enhance retention.

4.2.6 CENTRAL IDEAS FROM THE NARRATIVES

The narratives provide insights into the experiences of five ECTs. The ECTs had different backgrounds, contexts and experiences. Through reading these narratives we can gain a sense of what life as an ECT meant to these five people. It can be seen that there is great variation in the experiences and in the way that the ECTs interpreted them. This variation should provide a rich picture of early experiences as an ECT.

A number of common themes emerged from the five narratives above. While not claiming to be representative of the experiences of all ECTs, the repetition of certain issues in several of the narratives, indicates that a closer look at these issues is warranted if conditions for ECTs are to be enhanced. These themes provide information about the experiences of the ECTs and also indicate directions for strategies to enhance retention.

A common issue that arose from the narratives was an initial feeling of being overwhelmed and not having sufficient time to do all that was required. Related to this, some schools seemed to have unrealistic expectations of ECTs: Jack was given a huge workload with a large number of different subjects to teach; Anna had taken on extra-curricular activities in the second year which added to demands on her. The recently introduced DET strategy of reducing workload for ECTs is likely to address this concern.

Support of the ECTs was variable. Where it was good, it made a great difference to the way the ECTs managed their work. However, some ECTs did not have designated mentors and felt unsupported in their work. It is interesting to note that most ECTs felt that they got less support after their first year of teaching and that this often made their later years of teaching more challenging than the first year. A suggestion to continue mentoring support into second and subsequent years was made by a number of ECTs.

Classroom management was a problem for most of the ECTs and they criticised their Teacher Education programs for not helping them develop more effective strategies to use when teaching. A number of ECTs commented on the lack of stability of both executive and staff at their schools and noted how this led to poor student behaviour and low staff morale.

Finally, most of the ECTs above indicated that they had found the accreditation process in their first year to be too time-consuming, and with doubtful benefits. It must be noted, however, that they would have been amongst the initial intake of new scheme teachers to go through accreditation at the competency level and relevant staff often were uncertain about the process and requirements at this early stage of implementation. This process has improved in subsequent years.

The narratives of these five teachers demonstrate how varied, challenging and rewarding ECT experiences can be.

According to them, their reasons for staying were:

- a belief and hope that their situation would improve e.g. by transfer to a better school;
- a good fit with family and lifestyle;
- to obtain a return on the investment made in changing careers and becoming a teacher;
- the contribution to society they were able to make through teaching;
- the rewards of contributing to students' growth and learning;
- the satisfaction of working with young people.

4.3 FINDINGS AND DISCUSSION FROM THE INTERVIEWS, BWS AND DCE

An extensive data set was obtained by considering all the interviews and focus groups conducted throughout the project. An analysis of this large data set of interviews with all participants in the project revealed eight general themes. As well as this qualitative data set, the quantitative data from the Best-Worst study (BWS) and the Discrete Choice Experiment (DCE) provided triangulation on most of the constructs below. The data from the DCE could be separated into two classes of respondents according to preference variability. Those who planned to stay in the profession were likely to be in class 1; those who planned to leave were more likely to be in class 2 (see section 3.5.2). Data for each of these two classes are discussed for each theme in which they were relevant. Themes that appeared of critical importance in all the sources of data were the first three. The eight themes are:

- Collegiality and support
- Student engagement and behaviour management
- Working conditions and teaching resources
- Professional learning
- Workload or amount of work
- Isolation
- Casual/temporary teaching environments
- NSW IT accreditation.

These themes are discussed below and illustrated by quotations from the interviews. As well, relevant findings from the Best-Worst Survey and the Discrete Choice Experiment are included in the discussion of each theme. As with the narratives, pseudonyms are used for participants. As noted earlier, there were three interview sets, one in 2006, one in 2007 and one in 2009.

4.3.1 COLLEGIALITY AND SUPPORT

Our analysis shows that the quality of collegial support ECTs receive makes a substantial difference to their ability to manage their teaching. They find it discouraging to be in the company of colleagues who are unsupportive or contradictory in their attitudes and behaviour. Barry, a mature-aged Industrial Arts teacher secondary teacher said:

The biggest problem for me now is other teachers' slack and unprofessional attitude and how this impacts upon other people who just want to be doing their job. There are others who are extremely professional and I seek solace in their presence ...[Over the years, I've] progressively started to become more professional myself. Consequently, I can see how unprofessional other teachers are and how it affects me and my class students. Thus, I engage in a confrontation. Since, teachers don't impose school rules across the board, this impacts on how classrooms operate. The frustration is more to do with teachers than students. (Interview 2006)

By contrast, when experienced colleagues share their expertise and their resources generously, ECTs hear how other teachers manage and they might be more inclined to stay in teaching. Anna, in the narrative above, found that being able to observe the Reading Recovery Teacher and participating in a Teacher Learning Team had been extremely helpful for her development as a teacher.

The ECTs value having a mentor who is interested in their progress and who offers help and acknowledgement without being asked. This might be a difficult 'juggling trick' for those charged with mentoring – the fine line between over- and under-support, and the varying needs of their early career protégés. Bill observed:

The other HT beats around the bush a little bit and is not that clear or articulate. I find that difficult because as a new teacher, I would prefer him to say what exactly he wants and I don't always know this. So, I have two different people that I am working under with two different teaching and management styles. So, this has been a bit more difficult. (Interview 2007)

In contrast, Keith, a mature-aged IT and Special Needs teacher in a very challenging school felt very well-supported, and as a result was positive about his teaching:

"... love the job, though things are a bit harder than I expected because of the school I am in. ... My mentor has always been hard on me: didn't believe in mollycoddling me. So I wrote programs, developed the curriculum; the lot. This gave me a very good insight of what teaching is about." (Interview 2006).

The benefits of mentors appear to be profound for new teachers. For Jim, it was his mentor's departure from the school that brought this into stark contrast, making him realize what a crucial source of support this was. Julia commented that the support she received as a teacher compared unfavourably to that she had received as a 15-year-old in a fast food restaurant. While it might be presumptuous to make too many comparisons, the complexities and breadth of responsibilities of teaching probably exceed those of Julia's previous part-time job.

It is interesting to note that in some instances, our ECTs were becoming mentors in their second year of teaching.

Collegiality and support for early career teachers have appeared as a dominant theme in the quantitative elements of the research. Indeed, seven of the top ten factors identified in the best/worst research related to elements of collegiality, support or collaboration with a range of different people. It suggests the importance of maintaining the DET initiatives that support

first-year orientation to individual schools and systems, but it is just as important for induction to occur at a local level by executive staff. Above all, the most dominant theme in the research has been working with the support and collaboration of other teachers, either in an official mentoring program or via relationships that develop in teaching. Developing collegiality and support, however, is less about opportunities to provide social networks (the lowest BWS ranked item) or involve parents to gain their support (27th item) and meet their expectations (second lowest item). It is less about recognizing personal milestones, but more about having a voice within a school. These findings suggest that existing mentoring and support programs are working, evidenced in cases where such programs are not available (for various reasons) and narratives of frustration and isolation emerge.

The DCE provides more insights into how elements of support can continue to be provided (e.g., DET online resources, DET mentoring program). They also indicate opportunities to expand or introduce new programs. For example, among those likely to remain in the profession, the DCE results suggest their indifference to how they might access their mentors (e.g. on demand), but the medium of access is preferably at the ECTs' own schools. This group of ECTs does not place value on mentoring experiences that may take place online or at another school (see Appendix 3.6).

Such views on meeting mentors at the ECTs' own schools, however, are in contrast to the views of those who indicated their likelihood of leaving the profession: their preferences, in general, are for online and web-based resources. Both groups do desire conversations about teaching practice, both favouring conversations with their supervisor. Again, for those on the fringes of the profession, they do not strongly show their desire to undertake opportunities relating to co-planning and co-teaching with more experienced teachers.

4.3.2 STUDENT ENGAGEMENT AND BEHAVIOUR MANAGEMENT

Student engagement and the related concept of behaviour management are a cause of considerable concern to ECTs, particularly in their first year of teaching. A consistent complaint is that ECTs were unprepared by both their theoretical studies at University and their Professional Experiences (practicums) for the problems of managing unruly classrooms. It is possible, too, that problems with behaviour are under-reported by ECTs, who are afraid of appearing less than competent and in control.

Participants in interviews also complained that within schools there are often inconsistent processes for managing the behaviour of children. Less experienced teachers become 'fair game' for students, when the Principal and teachers at a school exercise different disciplinary procedures, or when the school executive does not support the teacher's behaviour management decisions. The DET's policies on student discipline were seen by some teachers as an impediment to their capacity to manage inappropriate behaviour. Charles, a high school teacher, told us:

From what I've been told the Education Department has literally tied the hands of schools in regards to expulsion of students with bad behaviour records and these students know that they can get away with murder.... a teacher cannot place a student on afternoon detention due to the fact that the student will miss their bus.
(Interview 2006)

Problems with discipline are exacerbated by real or apparent lack of support from colleagues and senior staff. Denis, a mature-aged teacher, reported:

I have found the classroom management challenging at times, particularly early on in the year. As for support, I have felt at times I have had none and mostly very little at a school level. It has been sink or swim and communication within my school is basically non-existent. If the school was a private business it would go broke! I feel I have been lucky that I have 20 years' work experience behind me and have used strategies built up through this period to overcome obstacles. (Interview 2006)

Linda, a recent graduate teaching in a non-government school, reported the following incident:

Two boys were taken away from class (for punching me) today and then brought back. However, there was no explanation given to me. I find there is no support from the Principal. I have spoken to him a couple of times but he has a very softly- softly approach and nothing gets done. Communication is lacking. Also, as a principal, he needs to show students that he means business and must have a more disciplined and strict approach rather than merely talking to them. I have also asked him to come to my class but he hasn't done so till now. (Interview 2006)

Teaching students who are not interested in learning is also a problem. Jack discussed how he saw himself leaving the profession if he did not get a chance to work with students who were engaged in learning. Other ECTs (for example, Julia) commented on how they were motivated when students showed engagement in their classes. Engagement with learning or lack thereof was closely related to behavior of students as the following quotation shows:

Lynette, a mature-aged computing and special education teacher in a difficult-to-staff school, reported:

I see students with very high rates of non-attendance, drug use by parents, coming from violent homes and traumatic backgrounds. Lots of parents are very young or single mothers having a really hard time, with education not important and parents not interested. ... As a result, students as young as seven years and up can be very violent due to their upbringing and 'don't care' attitude (and they really mean it). Even kindergarten classes can be very difficult to control. Classroom discipline is a major issue. (Interview 2006)

Learning how to deal with parents can also be a problem for inexperienced teachers. Participants complained about some parents' lack of interest on the one hand or their hostility on the other. They also reported their discomfort at being effectively child-minders for some students in later years of high school, who were staying at school even though they and their parents had little interest in their education. Brian, a secondary Science teacher, said:

It's less about teaching science and much more about teaching social skills.
(Interview 2006)

The problems of classroom management are exacerbated for casual and part-time staff. Lauren, a primary school teacher, recounted:

Because I am part-time it is difficult for me to follow up students who misbehaved because I was either not at the school to give them detention or I had playground duty at lunch so I could not make them do detention with me ...I did not expect teaching to be as difficult as it was and it was the students' poor behaviour that made it so hard. (Interview 2009)

Brenda, casual teacher, commented:

I love teaching but behaviour is a big problem. Getting them to be quiet and setting the tone for the whole day is a big challenge. Also, students can disrupt the whole class and it is hard as a beginning teacher because I get distracted. (Interview 2006)

Christopher, a mature-aged teacher in a primary school, recounted:

A major shock was the behaviour of the children, particularly in low socio-economic areas. During my early days working as a casual, I had a few traumatic experiences. I was kicked and punched and I was sworn at. ... Another time, a chair was thrown at me. I immediately got assistance from other teachers for help. They were overwhelmingly helpful and very supportive of me.... I almost left teaching. (Interview 2006)

Mai-Lin, who has now left the profession, recounted of her teaching days:

Students wouldn't listen to me; couldn't control the class but I didn't think things would get out of hand this much to make me leave.

...I needed to establish myself more and it takes time for students to get to know and trust me; I feel I don't have any authority at school to enforce discipline; for example, I couldn't send a boy outside class for being disruptive as it is against the law and other teachers warned me about this.

...Test incident (really had a huge impact on me): When one student put his hand up as if to ask for help (about 20 minutes after test started), I went to him to ask what and he said he needed a pencil. As I had already given him a pencil at the beginning of the test, I told him this and showed him the pencil he was trying to hide. When I said this, he says " I am trying to do my test and how come you are bothering me" (as if he was framing me up).

...Very difficult to deal with so many issues as teachers' hands are tied and we have to be very careful when disciplining the student (eg. not allowed to touch their mobile phones, cannot discipline a male student alone).

Tried to contact parents and let them know but the parents don't care and are simply not interested; no response.

Some teachers manage classroom management better than others (could be due to my young age and lack of experience?); As power is tied to the title and position in school, students behave accordingly.

...Don't at all mind the workload as I love teaching. However, I found that real teaching is only 20% and the rest is to do with other issues. (Interview 2006)

Mai-Lin spoke to the DET about changing schools:

... but they said I can't (as committed to this school for two years) ... If I knew of the classroom management challenges and made aware before, during tertiary time, I probably would have left the course or maybe tried applying in the Catholic school system. A lot is to do with law and how limited powers teachers have. (Interview 2006)

It appears from our respondents' accounts that student engagement and student behaviour are significant factors for teachers, especially new ones. Problems with classroom discipline are seen to lead to a feeling of powerlessness on the part of teachers. Lack of support from the school executive and parents can exacerbate this problem.

Many ECTs felt that their preservice education underprepared them for dealing with discipline and parents. We concede that preservice education is limited in its ability to equip ECTs to deal with matters of discipline. More student time could be spent in role playing, discussing and reading about discipline procedures, but no preservice course can prepare a teacher for any and every eventuality that might arise. Jack perceived his lecturers to be privileging their research over their

teaching. While this may be a problem to be addressed, it is to be hoped that research projects, including this one, identify educational challenges, causes and responses.

The BWS results suggest that the most important factor that underlies ECTs' thoughts about the value of their profession is in relation to the extent to which they will be able to involve and engage their students (see Table 3.1). Interestingly, the issue of student discipline, while a recurrent and strong theme in the narratives, was less dominant in the BWS relative to other themes already discussed. In particular, the factor "Student Behaviour – the way students behave at school" was the 12th most important factor. In subsequent focus groups discussing the BWS results (project conference, 2007) as a member check, ECTs clarified that they saw engagement of students inextricably linked with student behaviour: if students were engaged, then discipline would fall into place. This interpretation of the terms by the ECTs might explain the differing importance of these two factors in the BWS.

The DCE results suggest that ECTs welcome opportunities to discuss issues of behaviour management with their mentor, relative to discussion of topics of career planning or managing parents and the community. This is an important focus of discussions for both of the two teacher segments identified (see Appendix 3.6).

Another aspect of student management investigated in the BWS and DCE related to attending to those with special needs (11th most important item in BWS task). This aspect was particularly relevant in being indicative of membership in the first latent segment. 29% of respondents reported that students with considerable learning disabilities take up the majority of their time, and 52% reported that this was true to some extent (i.e. one student among many). That is, only 19% of teachers reported that managing students with learning disabilities did not feature in their role.

4.3.3 WORKING CONDITIONS AND TEACHING RESOURCES

ECTs tell us working conditions and physical environment are important for both their personal comfort and sense of professionalism. In this analysis, 'working conditions' means the environment in which the teachers work. It includes available resources, the state of the staffroom and classrooms in which they spend their time, as well as the general environment of the school, its maintenance and upkeep.

Bob, in his narrative above, had a good deal to say about his working conditions. More specifically he said:

Though I have all the resources, the school, being in the public education system, has limited resources, no internet access, poor quality photocopier, poor quality learning spaces in terms of the classroom etc and this gets difficult and is worrying me. We have had two new staff members who have started this year and who also complain about the lack of resource availability in the school, photocopiers etc.
(Interview 2007)

Other ECTs also commented on the physical environment at their schools. They were critical of a number of issues which included the poor physical condition of staffroom and classrooms, and poorly functioning equipment. These comments were particularly evident from career-change teachers who made comparisons with other workplaces. Jim spoke of the "appalling and unprofessional working conditions" he had encountered, and he saw this as an example of "teachers being taken for granted".

Resource-scarcity at school can impinge on job satisfaction. As Bill told us:

It is very difficult to access computers at my school so I have to spend my time at home doing it, which is not fair. Teachers already take enough work home! ...The only problem is that there needs to be more access to computers in the staffroom. (Interview 2009)

The BWS supported the data that ECTs do have a desire for resources to aid their teaching (13th ranked item in BWS). In the BWS and DCE both segments of teachers (those who were likely to remain and those who were likely to leave the profession) share similar views about their appreciation for shared resources, including those that can be accessed online at home (see Appendix 3.6).

However, when discussing the physical working conditions, our findings are that this issue came up in the qualitative data but was not seen as central in the BWS. The physical working conditions of teachers play an integral role in their experiences and satisfaction. Nonetheless, these conditions are often extraneous, a “given” that teachers adapt and respond to accordingly. The issue of local conditions impacting on a teacher’s decision to stay in the profession was relatively low and overall the issues of geography, housing, classroom, web access were ranked as 20th most important. Likewise, the issue of class size was the 25th most important factor in determining whether a teacher would leave the profession. This low level of concern (at least in relative terms) is also observed in relation to incentives (22nd) and salaries (19th).

There is a great deal of variety in the working conditions of ECTs, an issue that was discussed with DET representatives in determining what factors to investigate further as part of the DCE. As the DCE was designed to balance insight across a range of working experiences (e.g., city, rural; high school; primary) in a feasible fashion and to investigate those factors that were able to impact policy change, most issues of working conditions were agreed to be extraneous to the role of the DET and were not included in the DCE.

4.3.4 PROFESSIONAL LEARNING

Some ECTs noted in their interviews that they valued the opportunities they receive for professional learning outside their school environment. They explained that learning off-site is less distracting than on-line learning or attending workshops and seminars at their own schools. As well, teachers find it more amenable for meeting and learning from other teachers with concerns similar to their own. They highlighted the value of meeting with peers and of not having interruptions to the sessions. Pauline, who teaches German at a secondary school, prefers:

... to attend external workshops and conferences because I get the opportunity to network with teachers from other schools. This is beneficial because I can share and pool resources and also get exposed to new ideas and approaches to teaching. Workshops and conferences were good because they also supplement my small faculty. (Interview 2009)

Colin is of the opinion:

If the training is technology based then it is often best done online, however, if it is more school based then it is better to go to a conference because you benefit from hearing the perspectives of the other participants and these interactions are often very beneficial. I feel that people chose workshops and conferences as their

preferred option because it gives them some time off school and it allows them to be totally focused and not distracted by other things when gaining their PD. (Interview 2009)

Teachers spoke of 'good professional learning experiences' provided by DET. Other examples of professional learning that ECTs valued came through professional conversations with their colleagues, supervisors and mentors. They also benefited from observing others teach or co-teaching with more experienced teachers.

The narratives tell of teachers joining the profession to help others to learn, but often it is their own learning that is vital to maintain their satisfaction with their career path. ECTs seek professional challenges that stimulate them or result in satisfying experiences. This factor was rated as the second most important factor in the BWS for remaining in teaching (see Table 3.1). Some narratives suggested experiences where a lack of preparation in their University programs has made the desire for teaching support stronger. At an aggregate level, however, the lack of preparation in education programs was important, but not a dominant factor in any decision to depart the profession (24th ranked item in BWS). Learning "on-the-job" is characteristic of many professions and ECTs seem to feel the development of their abilities is reliant on learning from others.

The seeking of intellectual challenges and desire to continue learning appears strongest amongst those who have expressed a greater likelihood to leave the profession (DCE Latent Segment #2 — see Appendix 3.6). The two attributes relating to focus in terms of mentoring and DET-based resources both indicate that programming and assessment, teaching and learning are of greater value to such teachers relative to other areas. The value of a (hypothetical) teaching position without any professional development activities in the DCE was dramatically discounted by all participants. This issue is particularly relevant when one considers that 84% of respondents were no longer doing any additional formal study, and that only 8% were continuing some form of postgraduate study in Education. Most teachers have gained their highest qualification in the form of a bachelor degree (68%) or graduate diploma (18%).

The results from these different areas indicated a strong interest in professional development through external courses, collaborative learning, and professional discussions at schools, including, implicitly, the time that would be necessary for these to take place.

4.3.5 WORKLOAD OR AMOUNT OF WORK

One of the difficulties most commonly reported by ECTs is the amount of work they have to do in their first years of teaching in addition to finding their feet as new professionals. The ECTs who provided data for the qualitative part of the study were not beneficiaries of the recently introduced initiative to reduce workload for DET ECTs, as this initiative was introduced after the start of the longitudinal study. These data therefore confirm the value of this initiative in the strident calls that these ECTs made for such a reduction.

Neill, a new graduate teaching in a small school, argued:

The challenge is teaching and preparing for subjects that I am not familiar with and not trained for (I am trained in the science area). Hence, I spend a lot of time developing everything I need for the subjects by myself. (Interview 2007)

Penelope, a mature aged History teacher, advised us:

[to improve the workload challenges, I would like] a lighter load — the expectations of an Aboriginal Studies teacher needs to be thought through, especially the role of linking with the community. How are you supposed to do this when you are trapped in your school all the time? I am supposed to be meeting with another Aboriginal Studies teacher to help her and share ideas and this has to be done when we both have free periods, which is a rarity. Basically, 50 minutes is very little time for networking. (Interview 2007)

Vijay, an IT specialist who did a fast track BEd, said:

There is very little support given to me as a beginning teacher. I have been given a full work load of 30 periods per week. But, there is no in-school mentor to whom I can ask for any urgent questions or support. After my requests, they arranged one external mentor, but that was also for just 1 day per week for 5 weeks. ... My HT also looks after the school's Intranet etc. So, I am not getting enough support from him either. ... In my opinion, the DET should allocate a person in the school who can provide proper support for the beginning teacher. Plus, the beginning teacher should be given less work load, as it could be helpful to cope with the new things in the school environment in the first year of teaching. (Interview 2006)

Implicit in Vijay's comments is the possibility in at least some schools that responsibility for intranet and related functions may fall to teachers of ICT and/or their supervisors/mentors. If RFF time is not allocated for this, this may further add to the burden on such teachers. This is just one example where teachers' particular talents are called upon for extracurricular and/or administrative reasons. In her first two years, one ECT, Josephine, was called upon to coordinate the school's entry in the Rock Eisteddfod. In her third year of teaching, Josephine left for the private system. This is not to imply a direct cause and effect between the two incidents.

For many teachers, it is the amount of work rather than its level of difficulty that is overwhelming. Oliver, a secondary Science teacher, said:

It's not that I am finding the work difficult. It's just that I am working a lot harder and taking work home etc. Also, last year, the issue was more to do with classroom management. This year, I have got a hand on the classroom management and it is the workload that is the issue, such as marking and writing reports. (Interview 2007)

Many of the ECTs were expected to take on a range of new subjects (as in Jack's case) or direction of a large project such as the Rock Eisteddfod (as in Josephine's case). All this occurred concurrently with trying to adjust to demands related to behaviour management, getting on with staff and working with parents and community. Most of the ECTs spoke of a need for reduced workload.

We also note that casual or temporary teachers do not get any of the first year benefits of extra release time. As casual teachers were not respondents in the BWS, we were not able to assess how important this issue was to them through the quantitative results.

The BWS was sent to ECTs who started teaching in 2006, before the DET workload reduction initiative was introduced. The BWS method enabled us to separate various related issues of workload, often entangled with working conditions, resources and support. Whilst support for teaching is vital in the eyes of ECTs, issues of workload are less dominant in the quantitative components of the research. Overall, the issue of workload expressed as the time and effort a teacher commits to teaching

effectively was the 10th most important factor in determining decisions to stay. Teachers appear relatively indifferent to the scope of the role that they face (18th item in BWS) and even issues of administrative requirements relating to daily paperwork (28th out of 31) do not dominate as much as other elements in their decision to remain in the profession. A creeping increase in workload, relating to administration, along with executing policies and procedures (29th item), features in most professions, and is not necessarily a factor that is unique to the teaching profession (see Table 3.1).

The DCE was sent to three cohorts; those starting teaching in 2006, 2007 and 2008. Some of these ECTs were beneficiaries of the workload reduction scheme. The issue of workload features in the DCE results, but is largely related to issues regarding the resources available to manage normal duties. One exception is the factor that asked teachers to consider additional release time for professional development. Whilst all teachers supported having such release time, those likely to remain in the profession were more interested to use such a workload arrangement to attend a program/workshop or conference. In contrast, those considering leaving the profession were more interested in the collegial support that could be professionally arranged at the school. Both groups showed little interest in any workload arrangement where online on-time professional learning could occur (see Appendix 3.6).

4.3.6 ISOLATION

We have identified four categories of isolation that impacted on the ECTs who participated in the study. These are physical, geographical, professional and emotional isolation and they are described briefly below.

Physical isolation is the feeling of being alone in the classroom, without the support of another teacher, or being in the company of colleagues who may be withholding their encouragement, or who may have none to give. Bill, a mature-aged music teacher used these words to describe his sense of isolation at his school:

What I like least is being surrounded by people who have taught for a long time and with so much negativity ... (Interview 2006)

Casual teachers, in particular, may experience physical isolation when they have a reduced number of opportunities for structured communication from the DET, compounded by little assurance of a continuing position. Brenda, a mature-aged casual primary teacher said:

As a casual, DET doesn't keep us up to date and we are not told of all information. This should be comprehensive and for casuals, to make sure we can access all information. (Interview 2006)

It should be kept in mind that casual teachers may be working in a multiplicity of situations, demanding a very high level of familiarisation with processes, policies, names and other information in order to function effectively in each circumstance.

Geographical isolation usually occurs when the teacher is in a rural or remote school. Professional development opportunities at such schools require considerable travel, there are fewer opportunities for collegial interaction outside the school, and socio-economic factors may lead to students and their parents having little interest in learning. Jack's narrative above illustrates some problems that might be faced by teachers in regional schools. Again, this circumstance is further complicated for casuals working in more than one school in a rural region.

As Jack's narrative illustrates, some senior students remain in school mainly because there are few other options. He felt largely unsupported by the school executive and by parents, in his efforts to deal with student discipline. We do not know if he grew up in a small town, but presumably this town represented considerable difference to wherever he had undertaken his tertiary studies. Given that Jack was a professional musician, he is likely to have brought a good deal of related expertise to his teaching.

Being displaced from 'home' is also a significant issue for teachers. Isolation is not restricted to small communities. The city might be a very lonely place for somebody who grew up in a small town. Displacement from 'home' may be an important component in the mix of issues being faced by early career teachers.

Professional isolation refers to those occasions when a teacher may be the only teacher of a subject in a school, be teaching out of his/her field of expertise, of mature age, or simply not able to obtain the resources needed to teach as well as possible. Physical and professional isolation are closely intertwined. These comments from Lauren, a primary school teacher illustrates this:

It was a personal decision for me to leave teaching as I found it too stressful. I did not think that the DET could have done things too differently but I do think that having more support with team teaching at the start would have been beneficial. (Interview 2009)

Some of the respondents felt 'lost in a big system'. Jane reported feeling like "a faceless number and not very welcome or valuable particularly when dealing with the DET". (Interview 2006)

Emotional isolation is the feeling of separateness that comes with struggling on one's own, of not succeeding and not admitting to needing help or wanting to ask for it. Lucy, who left teaching to go into administrative work, put it this way:

I quit because of my fear of failure. I did not feel that I had the inner strength to be a classroom teacher. I felt that I needed to have a stronger personality to manage my classroom and because of this I felt that I could not teach long-term. It was commented that I could have put on an 'act' for the students and come across as a tough teacher, however I said that I wanted to keep it real with the kids and I did not want to be seen as someone who put on an act. (Interview 2009)

By contrast, Yvonne, a mature-aged primary teacher, appreciated her Principal's kindness and acknowledgement in sending a personalised thank you note to her. She said:

...at the end of each term the Principal had a thank you card placed in my pigeon hole encouraging me and letting me know that she appreciates the challenges I am facing and how pleased she is with the way I am meeting them. This sort of encouragement makes you feel supported and appreciated. (Interview 2006)

Similarly, Jim referred to the Principal's comments that he had made significant progress during the year. He indicated that he had found these supportive comments helpful and encouraging.

When asked what advice they would give new teachers, the responses of several participants are echoed in Bill's comments:

Don't wait for support; always ask for it. ...Speak to many different teachers; every different perspective helps and you can take what you want. (Interview 2007)

As illustrated by Jack's narrative, some teachers experienced a 'quadruple whammy'. They felt physically, geographically, professionally and emotionally isolated.

The narratives point to concerns about isolation in its various forms, however this is not necessarily reflected in the quantitative results as an important factor that is likely to determine the majority of teachers' decisions to remain in or leave the profession. In particular, the item labelled "Professional Isolation", described as "your feelings of working alone", was ranked 26th in importance out of 31 items (see Appendix 3.1). Nonetheless, this does not suggest that feelings of isolation are not reasons why some teachers leave the profession nor can be ignored at an individual level – it simply suggests that, on average, other factors such as support, resources and student engagement are likely to feature more readily in ECTs' future decisions.

For some, the interviews have provided an opportunity to voice their concerns, to engage in a larger community and potentially overcome issues of isolation. Of course, the results of the project do point to positive ways to avoid isolation, especially professional and emotional aspects, through programs that foster sharing of resources, mentoring and collegiality. That is, another interpretation on the quantitative results is that the desire for support is borne out by a motivation to avoid isolation and the sense of being alone in beginning one's career in teaching.

4.3.7 CASUAL/TEMPORARY TEACHING ENVIRONMENTS

One issue that was mentioned in earlier sections, was the lack of information available to casual teachers. Rules and protocols were often not discussed with them, leaving the casual teacher with a minimal understanding of how the school operated. This led to physical isolation as discussed in section 4.3.6.

Another difficulty experienced by casual teachers concerned behaviour management. This is discussed in section 4.3.2.

A recurring frustration with ECTs who are employed as temporary or casual teachers is the lack of entitlements to benefits received by permanent teachers. Temporary teachers do not get resourcing for lesser workloads and usually do not have a mentor supporting them. As well, they suffer from insecurity and discontinuity. Lynette said:

I'm also frustrated because of my temporary position. It's so hard to get a permanent position. This is the biggest challenge and frustration for me now. There are at present 23000 casual teachers employed. Even though I might have a four-year contract, if funding is taken, I lose the job. (Interview 2007)

The issue of casual/temporary teaching environments was not included as an explicit factor in either the BWS or DCE studies. The results, however, indicate that a welcoming culture (8th most important item) and ability to "fit in" are important elements for all teachers. 94% of respondents were working full-time, with another 4% employed in a part-time capacity (see Appendix 3.1). The majority of the results are, therefore, to be interpreted as the preferences of those not in casual/temporary teaching environments. The sampling frame was chosen to minimise costs and maximise its extrapolation to the majority of teachers currently under DET's influence; in a similar way, those teaching at private schools were excluded from the study.

4.3.8 ACCREDITATION WITH THE NSW INSTITUTE OF TEACHERS (NSW IT)

While most participants saw the value of teacher accreditation through the NSW Institute of Teachers, many also were concerned about the amount of work it entailed, especially in their first year when they were becoming acclimatised to teaching. As well, during the years of this project it was apparent that there was confusion on the part of candidates and their supervisors about how accreditation should be approached. This accreditation process was introduced during the first year that ECTs in the longitudinal study started teaching. Consequently, such confusion is not unexpected, as with any innovation. Anecdotal reports from later years indicate that many of these problems have been addressed.

In their narratives, our ECTs responded with a mixture of views in terms of both the cost and benefits of the accreditation process. Oliver indicated:

[The accreditation process] wasn't a big deal especially towards the end. I didn't feel it was a big job. I didn't find it that beneficial. I can see the need for it. Was very happy with the support that I got for it from my previous HT and Acting Principal from the school I was in last year. (Interview 2007)

Francesca, a primary teacher, commented:

I coped OK. I think [accreditation] is a big thing to be doing in the first year of teaching and in fact is something that should be left until the second year. It involves a lot of work in terms of annotation and documentation, marking off by the supervisor, completion of professional development etc. You do these things anyway but you don't need to document it if not for the accreditation. So, because of all this extra stuff that needs to be done, it is best left until the second year. ...I am glad it is over. (Interview 2007)

Grace, a mature-aged kindergarten teacher, said of the process,

No, [it's not beneficial] at all ...It's too early to have the process in the first year out when you are just trying to keep afloat. (Interview 2007)

Yvonne, a mature-aged primary teacher, indicated:

Personally I think new scheme teachers should be given two years to complete this process, this allows more time for reflection and also allows time to give evidence of evaluation and changes made to your classroom practice....I was fortunate that our school gives a lot of support to new teachers which unfortunately I cannot say for many of my friends in their respective schools.... I do however still resent paying \$80.00 to the Teachers Institute every year - I believe that it is a money-making exercise and so far cannot see its viability or benefit to me. (Interview 2007)

Georgina, a primary teacher in a hard-to-staff school, offered the following observation:

I wish the teacher accreditation program was second year, not now. It's a huge ask at the end of the first year, like preparing a teaching portfolio etc on top of everything. I preferred to just concentrate on my kids and teaching in the first year. My supervisor needed to help and it involved so much work for everybody. (Interview 2006)

The process was seen as burdensome and time-consuming by many, and by some as irrelevant. However, the ECTs who were the most cynical and critical of the accreditation process were often those who had not had support or guidance from a well informed mentor or HT who understood how it works and what is required. Not all teachers were critical, however. It

should also be noted that the experiences discussed here occurred at the time that the accreditation process was first introduced, and it is to be hoped that many of the difficulties have now been resolved.

Interaction with conference attendees and the narratives revealed various views regarding the accreditation. Most reported issues in relation to balancing this with current workloads, but some recognised its value in their current teaching practice and in their future career opportunities. Overall, there is a mid-range concern for future career opportunities (future promotion, transfer) as revealed in the BWS study (16th out of 31 items). The support for achieving requirements for professional teaching standards was less of a concern to most (23rd item in BWS). Indeed, the DCE revealed relative indifference to DET-based resources that focused on professional development to support accreditation among both segments identified. Similarly, mentors were viewed by those more likely to leave the profession as valuable for providing insight into classroom management and assessment rather than for offering support for career planning. Therefore the data indicate that there would appear to be a negative impact if accreditation and career planning dominated mentor discussions (see Appendices 3.1 and 3.6).

4.4 CONCLUSION: A SCHOOL SCENARIO

We conclude this section with a description of a hypothetical ideal school for an ECT, one that offers support and encouragement to our beginning teachers. In this school, retention of ECTs is excellent and staff morale is high. This scenario identifies some of the factors that influence the retention of early career teachers.

The school is characterised by a modest turnover of staff. Staff members only tend to leave for promotion reasons or because they are moving to a new locality. Consequently, the staff is a wholesome mix of experienced teachers and 'new blood'. Executive staff members are similarly likely to be experienced and to have an interest in mentoring new staff into the school culture. This school may well be seen as a school in which most teachers aspire to get positions. The staff has high expectations for the students. The teachers collaborate in school planning and classroom programming with a culture of resource sharing.

The modest turnover of staff contributes to consistency in behavior management. This, in turn, may contribute to the ECTs' feeling of reassurance that there are routines and rules for managing behavior, and that they are not alone in dealing with recalcitrant students. Indeed, most of the students are aware of the expectations of staff and the general atmosphere is one of respect between staff and student.

Given that 'discipline' is not a substantive issue for the ECTs in this school, they are able to devote their time to their teaching and their students' learning. Thus, they have the opportunity to investigate new ways of teaching and are able to build positive relationships with their students, supported by senior staff and colleagues who affirm their work and are willing to offer help and guidance at all times.

In this school ECTs will face a number of complex challenges and demands but the collegial, supportive atmosphere will help the ECT to move from surviving to thriving.

Chapter 5 summarises the findings discussed here, and makes recommendations for retaining effective early career teachers.

CHAPTER 5: DISCUSSION AND CONCLUSION

5.1 INTRODUCTION

The aims of this project are:

- to investigate the experiences of a cohort of ECTs to obtain clearer understanding of the reasons for ECTs choosing to remain in the profession, or choosing to leave the profession, and
- to develop and inform strategies to increase the retention rate of effective teachers during their early years of teaching.

A summary of the findings from chapters 3 and 4 is provided below, in answer to the first aim. The recommendations we provided to the NSWDEC fulfill the second of these aims.

The chapter begins with a brief reminder of the significance of the study and the research methodology. The findings on why ECTs stay in the profession and why others leave are provided. We then offer suggestions for further research.

5.2 SIGNIFICANCE OF THE STUDY AND RESEARCH METHODOLOGY

The research questions that directed the data collection and served as a framework for the interpretation of the data comprise an overarching question and four subsidiary questions. The overarching research question is:

Why do ECTs choose to choose to remain in the profession and why do they leave?

The four subsidiary questions are:

- What are the relevant experiences of ECTs in their first four years of teaching?
- What influences ECTs to remain in the profession?
- What influences ECTs to leave the profession?
- What strategies might assist in the retention of effective ECTs?

The Methodology Chapter (Chapter 2) explores in detail our rationale for the suite of research methods adopted in this study. The findings from this study and from other studies about retention of early career teachers are further explicated in Chapter 1 (the literature review); Chapter 3 (Best-Worst surveys (BWS) and the Discrete Choice Experiment (DCE)); and Chapter 4 (findings from the interviews, focus groups, and the five narratives; and triangulation with the BWS and DCE results).

5.3 FINDINGS

The key findings of this project are summarised below:

The Best-Worst Survey distributed to the 2006 entry cohort, indicated that the ten most important factors in influencing ECTs' decisions to stay in the profession were the following (in order of importance):

1. Student involvement or the extent to which the teacher was or felt able to engage their students.
2. Professional challenge or the extent to which the work was professionally satisfying.
3. Collegial support (or the level of support offered by other teachers)
4. Professional collaboration or the relationships with others who are involved in student welfare and learning.
5. The support received during the ECTs' first year, which included the orientation to the school and system (for example, structured supervision and mentoring).
6. Executive support or the support provided by the School Executive (Principal, Deputy, Head Teacher, Assistant Principal).
7. Staff culture or the interaction and support among staff
8. School 'climate' or the tone of the school (welcoming atmosphere).
9. Pedagogical Support, or the quality of support given for planning and delivering teaching and learning.
10. Workload or the time and effort you commit to teach effectively.

Findings from the Discrete Choice Experiment indicated that there were clear divides between the group which indicated an expectation to stay in teaching and the group expecting to leave teaching. Factors likely to influence the preferences of ECTs regarding working conditions differ for these two groups.

Those who indicated an intention to stay noted the importance of good support, from mentors and from experienced colleagues. Those who said their intention was to leave were more likely to share characteristics of being "loners", male, and disliking collaborative professional learning structures. There were a number of other factors, but it was clear that there was great variation in the factors that induced them to stay in the profession, and many of these were local and dependent on the context of the teacher.

Findings from the full set of interviews across the four years of the project and focus groups at the project conference revealed a number of themes relevant to understanding why teachers stay in, or leave, the profession. It must be noted that as this was a longitudinal study, the interviewees were drawn from a cohort that started teaching in 2006. Consequently, they were not beneficiaries of initiatives for early career teachers that were subsequently introduced by the DET. As well, although 52 respondents were initially selected for interviews, the number of respondents diminished with each set of interviews. This is not unusual in longitudinal studies and the aim of the qualitative component of this study is to provide rich data on different experiences, rather than to generalise from these data. The results of the BWS and DCE indicated how these themes were important to the whole cohort in their decisions as to whether to remain in the profession or leave it. The themes are collected below. The ones that appeared important both in the qualitative and quantitative components of the project are noted first.

- Collegiality was important for job satisfaction, including working closely with more experienced teachers.
- Support of the ECTs was variable. Where it was good, the ECT tended to find it easier to become a productive teacher; where it was poor or non-existent, the ECT found teaching more difficult. There was a need for support in second and subsequent years of teaching.

- ECTs felt supported when colleagues exhibited understanding of their novice status and demonstrated realistic expectations and offered practical help and support
- Colleagues, executive and community who showed they valued the contributions of the ECT were important in affirming the ECTs' commitment to teaching.
- Behaviour management was a problem for most of the ECTs. External courses on behavior management were helpful and school structures that provided a consistent approach to classroom management also supported them.
- ECTs expressed a strong desire to engage their students and found a major challenge to be students who were resistant to learning.
- Schools with stable staff and executive usually led to better student behavior and better staff morale.
- Basic resources with which to carry out teaching needed to be readily available.
- Participants, in particular, second career teachers were generally critical of the physical working conditions, and suggested these conditions indicated a lack of regard for their professionalism.
- ECTs appreciated the opportunity for professional learning, both through external courses and through learning at their workplace with colleagues. They indicated that being professionally challenged and stimulated was important to them.
- A reduced teaching workload appeared important to respondents in the interviews, as well as one of the factors influencing ECTs to remain in the profession.
- Teachers sometimes experienced feelings of isolation.
- Casual and temporary teachers requested access to the same level of professional support as permanent staff.
- The NSW IT accreditation process was introduced in the first year of teaching of the participants in this study. This meant that the process was often confusing for the teachers involved, and those trying to mentor them.

The next section summarises the first aim of this project — to answer the questions why do ECTs choose to remain in the profession; and why do they leave?

5.3.1 WHY DO TEACHERS STAY IN THE PROFESSION?

The answer to this question is both simple and complex. The simple answer is that most teachers enter the profession with a desire to be good teachers; to help their students learn and contribute to the next generation. During their early years, as they become better teachers they also become increasingly likely to stay in the profession. The only characteristic common to every ECT who remained in teaching (and as a participant in this study) was that they reported that they were becoming better teachers and that teaching was becoming gradually more manageable for them.

The answer is complex because teaching is a difficult and challenging profession that is arguably never mastered; and because the environments in which ECTs find themselves vary enormously. ECTs, when they begin, are not yet complete, able, independent teachers. Most have some weaknesses that are exposed and the more challenging their teaching situation is the more likely it is that they will find it difficult to experience the sense of personal achievement that effective

teaching can bring. For example, ECTs almost universally struggle with the management of the behaviour of their classes, particularly in their first year and particularly early in this first year. The struggle when they start varies in intensity, but many report being stressed, needing to work hard late at night and having a sense of helplessness - at least with some classes some of the time. If this state of play endured it is hard to imagine that many would remain in the profession for the long term.

Fortunately, for most, circumstances improve. The overwhelming evidence of this longitudinal study is that, for most, the experience of teaching gets better as the ECTs become better teachers. They want to teach. They want to be good teachers. As they learn to be better teachers this experience of personal professional improvement together with the resultant improvement in their classes contributes to their desire to remain in the profession.

If the above assertion holds true, then two broad factors become critical to the retention of teachers: the opportunity for professional learning; and the contribution of their work environment (including support, collegiality and possibility physical environment) to their sense of self-worth as teachers. Some, whom we could call the 'supported stayers' find themselves in supportive environments: valued and welcomed by colleagues; supported by a proactive mentor; and regularly assisted by experienced teachers. This contributes to their professional learning as well as their sense of collegiality and belonging in the school (and perhaps the profession more widely). Under these conditions ECTs are likely to become better at teaching more quickly and experience more success more often than those in unsupportive environments.

Professional learning *in situ*, involving good feedback and advice, with opportunities to learn by collaborating with colleagues, makes an important contribution to the experience of ECTs as they become immersed in the complex tasks inherent in teaching. Professional learning with others at their school is critical. Their professional learning is further enhanced by sustained discussion with peers at workshops and sessions led by experts – particularly where this focus is on perceived key predictors of success, such as effective behaviour management. Such meetings, with time away from their school to reflect and talk with peers, may also contribute to the morale of ECTs. Their desire for input from experts outside their school suggests that the solutions to all their problems cannot be found within the knowledge base of a single school. Furthermore, having the tools to teach well is important. This includes access to shared teaching resources and materials in their school as well as to modern teaching technologies.

Some ECTs find themselves in less supportive environments than that described above, these could be called 'resilient stayers'. For reasons that are unclear, this group may be over-represented in the sample of teachers who continued participation in this study from start to finish. We speculate that it may have been a function of the sampling process in that those who have had negative experiences may have been likely to want to continue to voice their views over the four years of the study. On the other hand, our recent experiences with ECTs participating in interviews and focus groups suggest that they value the opportunity to talk about their experiences because talking about them helps them to cope with the difficulties and perhaps the isolation that they face. For those who felt less well assisted by colleagues and systems, the research process may have provided support. Such influences would contribute to an over-reporting of negative experiences in this study.

The views expressed by these ECTs underscore the needs they have which they feel are unmet and the recommendations they have to improve their lot. Most of these teachers report that when they began teaching they were highly motivated to teach with a strong focus on helping young people to achieve and succeed in life. These teachers add to our understanding of the work environments that may influence their thinking about staying or leaving. For example they express frustration at what could be broadly described as isolation, poor communication, unprofessional working conditions and excessive workloads.

Their largely negative experiences point to the need for them to gain access to the factors appreciated by the 'supported stayers'. Specifically, they seek the support and an environment that is conducive to becoming better teachers. They speak of the hard road they have walked, often with little or modest assistance, and elaborate on how difficult it has been to get to a stage where they derive satisfaction from teaching. They began with an altruistic focus on making a difference for their students but during their first year they regressed to concentrating on themselves, their survival and coping with stresses such as: a full teaching load, difficult classes, resistance to learning and, sometimes, ambivalent colleagues. For most of these teachers it is not until their second year that they begin to speak of 'things getting better' and then they still talk of how much there remains to do.

The key question here then is: why do these teachers who feel relatively unsupported remain in the frequently difficult teaching situations they describe? Some of the evidence suggests that they feel they have made a substantial investment in this career and are loath to nullify that investment by leaving. Importantly, the evidence suggests that over time they do experience success and satisfaction but it is likely that, under the conditions described, these particular teachers are also in possession of significant resilience that allows them to cope with or survive the prolonged difficult period or 'dry spell' as they learn their profession. Certainly their stories reveal often small and isolated positive experiences that appear to take on great significance and provide a sense of triumph. Consider for example the teacher whose 'highlight' was a student who offered to pay for a broken drumstick. In short, some ECTs do not appear to need much to provide the signs of progress that keep them going. Nevertheless, it remains clear that for some teachers this is insufficient and some leave the profession.

5.3.2 WHY DO TEACHERS LEAVE THE PROFESSION?

Unfortunately, it proved very difficult in this research to maintain contact with those who had actually left the profession. A few corresponded with the research team with stories of despair and disillusionment but none remained for the full duration of the study. We have not reported these cases because the research team cannot be confident that they are representative of those who leave or that they provide clear guidance on how to retain ECTs. The lack of data from teachers who have quit the profession makes it difficult to provide definitive advice on why ECTs leave. More evidence is available from those in the study who express an intention to leave or uncertainty about remaining, but care should be taken in extrapolating to those who actually leave. There appear to be four groups of potential leavers. The first two are most evident in interview data. The third group is most evident in the choice experiment. The last group is described in Skilbeck and Connell (2004) as teachers leaving teaching because of natural progression to other careers or to have a family. Some of these will be planning to return to teaching later.

The two groups of potential leavers evident in the interview data are of great interest. Both have come to teaching for primarily altruistic reasons. One of the groups, whom we could call 'radical idealists', was quite small in our sample but its actual size in the population is unknown. This group has creative and novel or radical views of education, how to teach and what a teacher ought to be. Often they want to use rich technologies to improve pedagogy or help students achieve goals that may be different from those promoted in more traditional curriculum and assessment regimes. They find their preferred approaches to teaching difficult to enact in what they perceive as a conservative educational environment. Unable or unwilling to compromise they intend to leave. It would be advantageous to retain these radical idealists in the profession though the changes required might be so fundamental that they would be difficult to address on the current educational trajectory.

The second group of ECTs who talk of leaving overlaps with the resilient stayers, who are described above as experiencing significant difficulty and feeling inadequately supported. These 'reluctant leavers' also speak of small successes and how things are getting better but for them things are improving neither enough nor quickly. A key factor influencing them to remain is that they usually have been strongly motivated to become teachers and have made a considerable investment in a teaching career. Some of this group have relinquished successful careers to enter teaching. The general position of this group could be described as: 'wait and see if things improve', and if they do not, then they will reluctantly leave. Fortunately, the factors most likely to influence them to stay are identical to those which improve the lot of ECTs who intend to stay. Their need however, if they are not to be lost to the profession, is more intense and urgent.

The choice experiment indicates that the decisions of one group of potential leavers are influenced by a different set of factors from the ones that encourage those who are likely to stay. This group could be described as 'loners', either by choice or circumstance, who do not seek or find person to person interaction and perhaps prefer to avoid cooperative endeavours. Where factors are highlighted as important to this group only, it is unwise to address these lest they negatively influence those who are retained in the profession. Rather, a better course of action would be to seek to create the supportive environments, working conditions and professional learning opportunities (described above in section 5.3) that contribute to the ECTs becoming better teachers, with the resulting perceptions of success that they might experience.

5.3.3 ENHANCING SUPPORT

ECTs in schools with strong support structures expressed satisfaction with their teaching experiences. Support includes mentoring and expert teacher support, school executive support and peer support. ECTs found support from all these groups essential. As a general principle, we encourage the DET to initiate a system which requires school executives to establish and audit goals and procedures for supporting ECTs, including stricter standards on provision and availability of mentoring.

In terms of attractiveness for retention, it is noteworthy that collaboration with a more experienced teacher was rated higher in survey responses than working with a mentor. This may be explained in terms of the different activities, relative status of the teachers and roles played. Working with an experienced teacher was primarily associated with collaborative activities such as co-teaching, co-programming and co-lesson planning, whereas mentoring was primarily associated with feedback, reflection and advice. This indicates that there may be a need to reshape the type of assistance provided and re-

conceptualise the role of mentor. Alternatively, a flexible partnership between a mentor, experienced teacher and ECT may permit a more generative network of support that better matches the needs and desires of ECTs.

5.4 RECOMMENDATIONS

Recommendations related to research findings have been provide to NSWDEC under separate cover as requested.

5.5 FUTURE DIRECTIONS

This research study had a brief to investigate experiences in the first years of teaching. These findings are valuable for guiding recommendations aimed at improving early career teaching experiences. However, it would be useful to conduct research in other areas in the future, as these studies would be able to provide insights to complement the ones we have identified.

Future studies could investigate:

- What reasons people give for leaving the profession. One of the difficulties of most studies, this one included, is that there is no access to those who have left teaching and their voices remain unheard. Investigating the reasons put forward at exit interviews would shed valuable light on attrition factors. The DET is currently piloting an exit survey and this is likely to provide valuable information.
- Why teachers who have been teaching continuously for between five and ten years, stay in teaching. What are the factors that motivate teachers and make teaching a positive experience for them? Our study focused on early career teachers in their first four years of teaching. Looking at retention after the first years might provide useful insights into the strengths and positives offered by the profession.
- A comparative investigation of the characteristics, and positive and negative features of a number of different professions might also shed light on the particular profile of teaching.
- An investigation of how 'people of difference' experience being ECTs. Their experiences would indicate if their circumstances facilitate or constrain being an ECT.
- Finally, an investigation of teacher resilience would be useful in suggesting ways that we can support our early career teachers better.

5.6 CONCLUSIONS

It is imperative that this research report and its recommendations be considered in context. Firstly, no two ECTs' experiences are identical. It is therefore difficult if not impossible to be prescriptive in the advice, support and help offered. Secondly, it should be noted that it is difficult in these early years for the teacher to picture his or her experienced self having gained several years' experience.

The participants for the qualitative component of the study were recruited in 2005 and 2006. Data were collected over a number of years from 2006 onwards. Many of the NSW DET initiatives to support ECTs were not in place during these participants' first year of teaching. These participants would not have been beneficiaries of the reduced workload currently available through the Beginning Teachers' Resource Allocation funding and some would not have benefited from the extensive mentoring support that current ECTs are expected to receive. These initiatives are consistent with the directions that the data from this study suggest should be taken to attract and retain teachers in the profession. A significant number of recommendations suggest the DEC build on, continue, expand, and evaluate current initiatives.

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APPENDICES

Note: the Appendix numbers relate to the Chapter numbers

APPENDIX 2.1

Survey Results

[My Surveys](#) | [Logout](#)

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Survey: Retention Project Survey

What is your email address?

190 Responses

[Responses](#)

Gender

193 Responses

- Male	44	%22	1	
- Female	149	%77	2	

Mean= 1.8, Standard Deviation= 0.42

Age

191 Responses

- 20-23	65	%34	1	
- 24-35	76	%39	2	
- 36-49	41	%21	3	
- 50+	9	%4	4	

Mean= 2.0, Standard Deviation= 0.86

What year did you complete your course?

182 Responses

- 2005	170	%93	1	
- 2004	12	%6	2	
- 2003	0	%0	3	
- Other	9			

Mean= 1.1, Standard Deviation= 0.25

Which teacher preparation course have you completed?

167 Responses

- B Teach	46	%27	1	
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- Grad Dip Ed	47	%28	2	
- B Ed	58	%34	3	
- Degree + Dip Ed	16	%9	4	
- <u>Other</u>	37			

Mean= 2.3, Standard Deviation= 0.97

Which university did you attend for the above course?

187 Responses

- Australian Catholic University	4	%2	9	
- Charles Sturt University	18	%9	7	
- Macquarie University	8	%4	3	
- Newcastle University	44	%23	4	
- Southern Cross University	4	%2	11	
- University of New England	6	%3	6	
- University of New South Wales	5	%2	10	
- University of Sydney	6	%3	8	
- University of Technology, Sydney	46	%24	1	
- University of Western Sydney	16	%8	2	
- University of Wollongong	30	%16	5	
- <u>Other</u>	3			

Mean= 4.1, Standard Deviation= 2.61

What area of teacher preparation did you complete?

186 Responses

- Early childhood	5	%2	1	
- Primary	94	%50	2	
- Secondary	87	%46	3	
- <u>Other</u>	5			

Mean= 2.4, Standard Deviation= 0.55

If you completed a Grad Dip Ed, what was the KLA?

59 Responses

- Creative Arts	7	%11	1	
- English	12	%20	2	
- HSIE	7	%11	3	
- LOTE	0	%0	4	
- Mathematics	8	%13	5	
- PDHPE	8	%13	6	
- Science	12	%20	7	
- Technology	5	%8	8	

- Other 16

Mean= 4.5, Standard Deviation= 2.40

What is your specialisation?

148 Responses

- Not applicable	109	%73	1	
- LOTE	3	%2	2	
- Special education	9	%6	3	
- Music	7	%4	4	
- Computer education	8	%5	5	
- ESL	3	%2	6	
- Library	3	%2	7	
- Art	6	%4	8	
- <u>Other</u>	37			

Mean= 2.0, Standard Deviation= 1.95

What is your current status as a teacher?

166 Responses

- Not in employment	7	%4	1	
- Employed outside teaching	5	%3	2	
- Permanent full-time teaching in a school	103	%62	3	
- Permanent part-time teaching in a school	9	%5	4	
- Casual teaching	42	%25	5	
- <u>Other</u>	33			

Mean= 3.4, Standard Deviation= 1.04

What is the approximate length of time spent at your current school?

184 Responses

- Less than 3 months	45	%24	1	
- 3-6 months	92	%50	2	
- 6-12 months	13	%7	3	
- 1-2 years	9	%4	4	
- 2-3 years	1	%0	5	
- 3 or more years	1	%0	6	
- Not applicable	23	%12	7	

Mean= 2.6, Standard Deviation= 1.86

What is the postcode for your current school?

153 Responses

Responses

What type of school is it?

163 Responses

- Senior (only) high school	2	%1	1	
- Secondary school	65	%39	2	
- Central school	5	%3	3	
- Primary school	81	%49	4	
- Not applicable	10	%6	5	
- Other	22			

Mean= 3.2, Standard Deviation= 1.08

Who is your current employer?

171 Responses

- NSW Department of Education and Training	134	%78	1	
- Catholic systemic	10	%5	2	
- Independent	16	%9	3	
- Not applicable	11	%6	4	
- Other	19			

Mean= 1.4, Standard Deviation= 0.91

Have you taught anywhere prior to this?

18 Responses

- Yes	9	%50	1	
- No	9	%50	2	

Mean= 1.5, Standard Deviation= 0.51

If so, how long?

66 Responses

Responses

Survey Results

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Survey: Retention Project Survey 2007

Questions

Please give yourself a code name (eg. Sunshine, Big Bird etc)

164 Responses

[Responses](#)

What is your email address?

165 Responses

[Responses](#)

If you responded to the survey last year, what email address did you use?

157 Responses

[Responses](#)

Age

163 Responses

- 20-23	38	%23	1	██████████
- 24-35	85	%52	2	██████████
- 36-49	32	%19	3	██████████
- 50+	8	%4	4	██████████

Mean= 2.1, Standard Deviation= 0.79

Gender

161 Responses

- Male	30	%18	1	██████████
- Female	131	%81	2	██████████

Mean= 1.8, Standard Deviation= 0.39

What year did you complete your course?

154 Responses

- 2005	146	%94	1	██████████
- 2004	6	%3	2	██████████

- 2003	2	%1	3	
- Other	9			

Mean= 1.1, Standard Deviation= 0.30

Which teacher preparation course have you completed?

141 Responses

- B Teach	37	%26	1	
- Grad Dip Ed	36	%25	2	
- B Ed	54	%38	3	
- Degree + Dip Ed	14	%9	4	
- Other	37			

Mean= 2.3, Standard Deviation= 0.97

Which university did you attend for the above course?

158 Responses

- Australian Catholic University	5	%3	9	
- Charles Sturt University	17	%10	7	
- Macquarie University	10	%6	3	
- Newcastle University	32	%20	4	
- Southern Cross University	8	%5	11	
- University of New England	5	%3	6	
- University of New South Wales	7	%4	10	
- University of Sydney	7	%4	8	
- University of Technology, Sydney	33	%20	1	
- University of Western Sydney	12	%7	2	
- University of Wollongong	22	%13	5	
- Other	6			

Mean= 4.6, Standard Deviation= 2.95

What area of teacher preparation did you complete?

162 Responses

- Early childhood	6	%3	1	
- Primary	81	%50	2	
- Secondary	75	%46	3	
- Other	6			

Mean= 2.4, Standard Deviation= 0.57

If you completed a Grad Dip Ed, what was the KLA?

51 Responses

- Creative Arts	3	%5	1	
- English	14	%27	2	
- HSIE	7	%13	3	
- LOTE	0	%0	4	
- Mathematics	8	%15	5	
- PDHPE	3	%5	6	
- Science	13	%25	7	
- Technology	3	%5	8	
- Other	8			

Mean= 4.4, Standard Deviation= 2.31

What is your specialisation?

123 Responses

- Not applicable	84	%68	1	
- LOTE	2	%1	2	
- Special education	14	%11	3	
- Music	5	%4	4	
- Computer education	5	%4	5	
- ESL	6	%4	6	
- Library	1	%0	7	
- Art	6	%4	8	
- Other	30			

Mean= 2.2, Standard Deviation= 2.02

What is your current status as a teacher?

137 Responses

- Not in employment	7	%5	1	
- Employed outside teaching	6	%4	2	
- Permanent full-time teaching in a school	100	%72	3	
- Permanent part-time teaching in a school	3	%2	4	
- Casual teaching	21	%15	5	
- Other	30			

Mean= 3.2, Standard Deviation= 0.93

What is the approximate length of time spent at your current school?

161 Responses

- Less than 3 months	18	%11	1	
- 3-6 months	13	%8	2	
- 6-12 months	12	%7	3	
- 1-2 years	91	%56	4	

UTS Online Survey Manager

- 2-3 years	9	%5	5	█
- 3 or more years	1	%0	6	█
- Not applicable	17	%10	7	█

Mean= 3.8, Standard Deviation= 1.55

What is the postcode for your current school?

137 Responses

[Responses](#)

What type of school is it?

137 Responses

- Senior (only) high school	3	%2	1	█
- Secondary school	48	%35	2	█
- Central school	9	%6	3	█
- Primary school	63	%45	4	█
- Not applicable	14	%10	5	█
- <u>Other</u>	21			

Mean= 3.3, Standard Deviation= 1.11

What is the size of the student population of the school you are in?

144 Responses

- 0 - 49	6	%4	1	█
- 50 - 100	7	%4	2	█
- 101 - 200	10	%6	3	█
- 201 - 450	32	%22	4	█
- 450+	89	%61	5	█

Mean= 4.3, Standard Deviation= 1.08

Who is your current employer?

152 Responses

- NSW Department of Education and Training	106	%69	1	█
- Catholic systemic	17	%11	2	█
- Independent	18	%11	3	█
- Not applicable	11	%7	4	█
- <u>Other</u>	10			

Mean= 1.6, Standard Deviation= 0.96

Have you taught anywhere prior to this?

161 Responses

- Yes	79	%49	1	█
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- No
Mean = 1.5, Standard Deviation = 0.50

82 %50 2 

If so, how long?

79 Responses

[Responses](#)

Survey Results

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Survey: Retention Project 2008

Questions

What is your email address?

170 Responses

[Responses](#)

If you responded to the survey last year, what email address did you use?

167 Responses

[Responses](#)

Age

168 Responses

- 20-23	11	%6	1	
- 24-35	104	%61	2	
- 36-49	42	%25	3	
- 50+	11	%6	4	

Mean= 2.3, Standard Deviation= 0.69

Gender

168 Responses

- Male	36	%21	1	
- Female	132	%78	2	

Mean= 1.8, Standard Deviation= 0.41

What year did you complete your course?

155 Responses

- 2005	143	%92	1	
- 2004	12	%7	2	
- 2003	0	%0	3	
- Other	14			

Mean= 1.1, Standard Deviation= 0.27

Which teacher preparation course have you completed?

150 Responses

- B Teach	40	%26	1	
- Grad Dip Ed	39	%26	2	
- B Ed	49	%32	3	
- Degree + Dip Ed	22	%14	4	
- Other	26			

Mean= 2.4, Standard Deviation= 1.03

Which university did you attend for the above course?

166 Responses

- Australian Catholic University	4	%2	9	
- Charles Sturt University	19	%11	7	
- Macquarie University	9	%5	3	
- Newcastle University	41	%24	4	
- Southern Cross University	8	%4	11	
- University of New England	6	%3	6	
- University of New South Wales	6	%3	10	
- University of Sydney	5	%3	8	
- University of Technology, Sydney	31	%18	1	
- University of Western Sydney	15	%9	2	
- University of Wollongong	22	%13	5	
- Other	5			

Mean= 4.5, Standard Deviation= 2.81

What area of teacher preparation did you complete?

167 Responses

- Early childhood	4	%2	1	
- Primary	73	%43	2	
- Secondary	90	%53	3	
- Other	5			

Mean= 2.5, Standard Deviation= 0.55

If you completed a Grad Dip Ed, what was the KLA?

63 Responses

- Creative Arts	6	%9	1	
- English	12	%19	2	
- HSIE	12	%19	3	
- LOTE	0	%0	4	
- Mathematics	11	%17	5	

Which teacher preparation course have you completed?

150 Responses

- B Teach	40	%26	1	
- Grad Dip Ed	39	%26	2	
- B Ed	49	%32	3	
- Degree + Dip Ed	22	%14	4	
- Other	26			

Mean= 2.4, Standard Deviation= 1.03

Which university did you attend for the above course?

166 Responses

- Australian Catholic University	4	%2	9	
- Charles Sturt University	19	%11	7	
- Macquarie University	9	%5	3	
- Newcastle University	41	%24	4	
- Southern Cross University	8	%4	11	
- University of New England	6	%3	6	
- University of New South Wales	6	%3	10	
- University of Sydney	5	%3	8	
- University of Technology, Sydney	31	%18	1	
- University of Western Sydney	15	%9	2	
- University of Wollongong	22	%13	5	
- Other	5			

Mean= 4.5, Standard Deviation= 2.81

What area of teacher preparation did you complete?

167 Responses

- Early childhood	4	%2	1	
- Primary	73	%43	2	
- Secondary	90	%53	3	
- Other	5			

Mean= 2.5, Standard Deviation= 0.55

If you completed a Grad Dip Ed, what was the KLA?

63 Responses

- Creative Arts	6	%9	1	
- English	12	%19	2	
- HSIE	12	%19	3	
- LOTE	0	%0	4	
- Mathematics	11	%17	5	

Which teacher preparation course have you completed?

150 Responses

- B Teach	40	%26	1	
- Grad Dip Ed	39	%26	2	
- B Ed	49	%32	3	
- Degree + Dip Ed	22	%14	4	
- Other	26			

Mean= 2.4, Standard Deviation= 1.03

Which university did you attend for the above course?

166 Responses

- Australian Catholic University	4	%2	9	
- Charles Sturt University	19	%11	7	
- Macquarie University	9	%5	3	
- Newcastle University	41	%24	4	
- Southern Cross University	8	%4	11	
- University of New England	6	%3	6	
- University of New South Wales	6	%3	10	
- University of Sydney	5	%3	8	
- University of Technology, Sydney	31	%18	1	
- University of Western Sydney	15	%9	2	
- University of Wollongong	22	%13	5	
- Other	5			

Mean= 4.5, Standard Deviation= 2.81

What area of teacher preparation did you complete?

167 Responses

- Early childhood	4	%2	1	
- Primary	73	%43	2	
- Secondary	90	%53	3	
- Other	5			

Mean= 2.5, Standard Deviation= 0.55

If you completed a Grad Dip Ed, what was the KLA?

63 Responses

- Creative Arts	6	%9	1	
- English	12	%19	2	
- HSIE	12	%19	3	
- LOTE	0	%0	4	
- Mathematics	11	%17	5	

Survey Results

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Survey: Retention Project Survey 2009

Questions

What is your email address?

128 Responses

[Responses](#)

If you responded to the survey last year, what email address did you use?

123 Responses

[Responses](#)

Age

129 Responses

- 20-23	1	%0	1	
- 24-35	83	%64	2	
- 36-49	34	%26	3	
- 50+	11	%8	4	

Mean= 2.4, Standard Deviation= 0.66

Gender

127 Responses

- Male	24	%18	1	
- Female	103	%81	2	

Mean= 1.8, Standard Deviation= 0.39

What year did you complete your course?

117 Responses

- 2005	110	%94	1	
- 2004	7	%5	2	
- 2003	0	%0	3	
- Other	12			

Mean= 1.1, Standard Deviation= 0.24

Which teacher preparation course have you completed?

110 Responses

- B Teach	24	%21	1	
- Grad Dip Ed	35	%31	2	
- B Ed	35	%31	3	
- Degree + Dip Ed	16	%14	4	
- Other	25			

Mean= 2.4, Standard Deviation= 0.99

Which university did you attend for the above course?

127 Responses

- Australian Catholic University	4	%3	9	
- Charles Sturt University	15	%11	7	
- Macquarie University	7	%5	3	
- Newcastle University	22	%17	4	
- Southern Cross University	5	%3	11	
- University of New England	5	%3	6	
- University of New South Wales	5	%3	10	
- University of Sydney	7	%5	8	
- University of Technology, Sydney	29	%22	1	
- University of Western Sydney	8	%6	2	
- University of Wollongong	20	%15	5	
- Other	5			

Mean= 4.6, Standard Deviation= 2.91

What area of teacher preparation did you complete?

127 Responses

- Early childhood	2	%1	1	
- Primary	60	%47	2	
- Secondary	65	%51	3	
- Other	3			

Mean= 2.5, Standard Deviation= 0.53

If you completed a Grad Dip Ed, what was the KLA?

50 Responses

- Creative Arts	5	%10	1	
- English	12	%24	2	
- HSIE	7	%14	3	
- LOTE	0	%0	4	
- Mathematics	10	%20	5	

- PDHPE	3	%6	6	
- Science	13	%26	7	
- Technology	0	%0	8	
- Other	9			

Mean= 4.2, Standard Deviation= 2.20

What is your specialisation?

102 Responses

- Not applicable	74	%72	1	
- LOTE	3	%2	2	
- Special education	9	%8	3	
- Music	4	%3	4	
- Computer education	1	%0	5	
- ESL	3	%2	6	
- Library	2	%1	7	
- Art	6	%5	8	
- Other	17			

Mean= 2.0, Standard Deviation= 2.04

What is your current status as a teacher?

111 Responses

- Not in employment	5	%4	1	
- Employed outside teaching	12	%10	2	
- Permanent full-time teaching in a school	78	%70	3	
- Permanent part-time teaching in a school	5	%4	4	
- Casual teaching	11	%9	5	
- Other	21			

Mean= 3.0, Standard Deviation= 0.86

What is the approximate length of time spent at your current school?

127 Responses

- Less than 3 months	8	%6	1	
- 3-6 months	6	%4	2	
- 6-12 months	11	%8	3	
- 1-2 years	10	%7	4	
- 2-3 years	23	%18	5	
- 3 or more years	53	%41	6	
- Not applicable	16	%12	7	

Mean= 5.0, Standard Deviation= 1.67

What is the postcode for your current school?

107 Responses

[Responses](#)

What type of school is it?

111 Responses

- Senior (only) high school	5	%4	1	
- Secondary school	42	%37	2	
- Central school	4	%3	3	
- Primary school	48	%43	4	
- Not applicable	12	%10	5	
- <u>Other</u>	15			

Mean= 3.2, Standard Deviation= 1.18

What is the size of the student population of the school you are in?

112 Responses

- 0 - 49	4	%3	1	
- 50 - 100	6	%5	2	
- 101 - 200	6	%5	3	
- 201 - 450	23	%20	4	
- 450+	73	%65	5	

Mean= 4.4, Standard Deviation= 1.05

Who is your current employer?

117 Responses

- NSW Department of Education and Training	77	%65	1	
- Catholic systemic	9	%7	2	
- Independent	19	%16	3	
- Not applicable	12	%10	4	
- <u>Other</u>	13			

Mean= 1.7, Standard Deviation= 1.08

Have you taught anywhere prior to this?

124 Responses

- Yes	68	%54	1	
- No	56	%45	2	

Mean= 1.5, Standard Deviation= 0.50

If so, how long?

68 Responses

DET RETENTION PROJECT- UTS INTERVIEW SCHEDULE 2006

• **INTRODUCTION:**

- Full name confirmed
- Consent form, note taking, tape OK
- Reiteration of confidentiality
- Main part

• **CONTEXT:**

Please explain briefly the nature of your current teaching position. For example, type of school, types of classes, types of subjects, casual/permanent placement

• **REASONS FOR GOING INTO TEACHING (OR FOR LEAVING):**

Please explain your reasons for going into teaching (or leaving).

• **REASONS FOR CHOOSING METAPHOR IMAGE AND GRID POSITION:**

Now that you have seen the metaphor diagrams and the accompanying grid, could you please explain your reasons for choosing your metaphor and your position on the grid.

• **CHALLENGES:**

We would be interested to know the different types of challenges that you face in your teaching, the kinds of support available and where you think additional support is required. Also any important incidents or occurrences in your teaching experience this year, which were either very encouraging or discouraging for you. Please describe the incident, your feelings about it and any likely implications for you as a teacher.

• **SUPPORT:**

Could you please give your thoughts on the support you are receiving and how this encourages or discourages you.

- COMMENTS ON TERTIARY AND PRAC EXPERIENCE:

Please comment on how you found your experience of teacher education at University and on the practicum components of it.

- COMMENTS ON TEACHER ACCREDITATION PROCESS:

We would like to know your thoughts on the Institute of Teachers accreditation process and whether or how this has impacted on your overall teaching experience.

- ADVICE FOR BEGINNING TEACHERS:

What do you think are the important issues for beginning teachers, and what advice would give them?

- FUTURE:

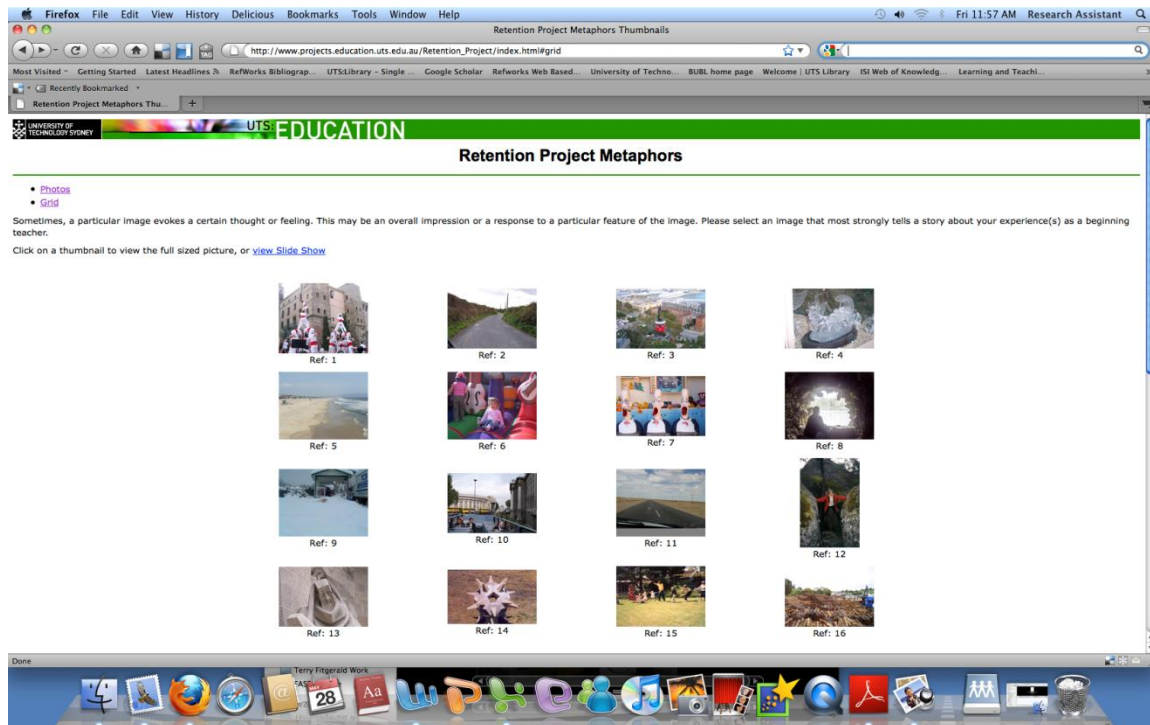
How do you see your future in teaching?

- SUMMARY OF YOU OVERALL EXPERIENCE

Thank you

RETENTION PROJECT METAPHOR PHOTOGRAPHS

Screenshot of the 16 photographs representing the metaphors



For a clearer view of these photographs, see also http://www.projects.education.uts.edu.au/Retention_Project/index.html

CHALLENGE AND SUPPORT GRID

For details given to participants about the grid, see also

http://www.projects.education.uts.edu.au/Retention_Project/index.html

Your experience of teaching can best be described in terms of the support you receive (that is, the help you get from the school staff and infrastructure) and the engagement teaching presents (that is, the involvement and interest you experience). This grid enables you to position yourself in relation to these two dimensions.

Please indicate with a tick in one of the small squares below, how you see your work situation. For example, if you feel that you have a fairly unchallenging situation, with high levels of support (which might leave you feeling 'comfortable and cruising'), you might put the tick somewhere near the one in the grid below, in E5. On the other hand, if you are experiencing low support and high challenge (top left hand of the grid - we haven't placed a tick there) you might be experiencing feelings of anxiety and frustration.

		High challenge						
(Anxiety/ Frustration)		A	B	C	D	E	F	(Development, engagement)
1								
2								
3								
Low support								High support
4								
5						✓		
6								
(Boredom/apathy)		Low challenge						(Comfort/cruising)

APPENDIX 2.5

INTERVIEW SCHEDULE 2007

INTRODUCTION

Name and Initial

Thank you for agreeing to participate again this year; we value your feedback

Reiteration on confidentiality

Briefly explain the nature and reason for this interview (open-ended, looking for changes since last year, will not be looking at the grid and pictures this time)

PREAMBLE

Are you still teaching in the same school as last year (same class?)

Teaching role same as last year (permanent/part-time/casual?)

If there are changes, what are they?

MAIN PART

Last year, we discussed the challenges you faced as well as the support you received.

Are the challenges you face now still the same or different?

In what way are they different?

If there are new challenges – what are they? Example

How do you now deal with the challenges (whether old or new)? Example

Why do you think some of the challenges have been overcome?

What did you learn from this experience?

In terms of support

What types of support do you receive?

Eg do you have a mentor this year etc.

Have you been able to have other support mechanisms that perhaps were not available to you last year?

Has this been worse/better? How helpful were they?

What advice would you give a beginning teacher about working with a mentor?

What advice would you give a mentor about working with a beginning teacher?

Please tell us about the successes and joys that you have had in your teaching experience since we last spoke? Example (s)

Again, how have these been different?

Have you been working on the Teacher Accreditation process?

What impact, if any, did this have on your first year of teaching? Example

How did you manage or cope with the process?

Did you find the accreditation process to be beneficial? Example

What kind of help did you receive and how effective was it? Example

What role did the DET and the Teachers' Federation play?

Any other thoughts on the accreditation process?

In summary, how would you describe your teaching experience now? (Positive/Negative/Same etc).

In what way are your experiences different from last year? Why?

Are there any incidents that you can recall which may have contributed to your thoughts?

What advice would you give new teachers, which you may have found useful?

CONCLUSION

Thank you.

INTERVIEW SCHEDULE: DET PARTICIPANTS 2009 (INTERVIEW 3)

For the first two questions, interviewees should have visited the website:

http://www.projects.education.uts.edu.au/Retention_Project/index.html and located themselves on the grid and chosen a metaphor.

INTRODUCTION

My name is ... The project is drawing to a close and this will be the last interview that we ask you to participate in. The information will be put into a report that is being written for the DET and will be most useful in helping the DET to support early career teachers in the best way possible. However, you can remain assured of complete confidentiality as all responses are coded and no names will appear in the final report. The team leader of the project is Associate Professor Sandy Schuck. Please note that the interview will be recorded. Are you prepared to proceed with the interview?

If answered in the affirmative then begin recording and start to ask the questions.

CONTEXT

Tell me about any changes to your context i.e. Are you in the same school? Are you teaching the same subjects? etc

1) Where would you place yourself on the grid supplied at

http://www.projects.education.uts.edu.au/Retention_Project/index.html?

(If necessary, remind the participant of the meaning of the axes.)

When we first interviewed you in 2006 you said that you were located at on the grid? Are you still positioned there?

(If at a different position then ask additional part of question, if not then skip and go to last two parts of this question.)

What has changed that has resulted in your being in a different position?

Were you in other places on the grid in the time between the 2006 interview and this one?

Why do you feel you were in those positions?

2) When you look at the metaphors at http://www.projects.education.uts.edu.au/Retention_Project/index.html which one would you choose now that best represents your experience as a teacher at this point in time?

(If necessary re-explain the purpose of the metaphors.)

In 2006 you chose..... (If a different metaphor chosen then ask following question, if not then skip and go to last parts of question. If same metaphor chosen then find out reasons for this and ask last part of question.)

What is different now?

What characteristics of the image made you choose this one (now)?

How do those characteristics relate to your current experience?

3) Will you be teaching in five years time (i.e. with the DET)? (Depending on participant's answer then go to the next relevant question – Q4 if answer is 'yes', Q5 if answer is 'maybe' and Q6 if answer is 'no'.)

4) (*Those staying in teaching.*) What makes you stay in teaching (i.e. what do you feel positive about, love etc)?

5) (*Those who are doubtful about staying.*) What would need to be different if you were to stay (i.e. how would things have to change)?

6) (*Those who are definitely going.*) What led/is leading to your decision (i.e. to leave teaching with the DET)?

7) (*Choice Survey question.*) We ran a survey with cohorts from 2006-2008 (you may have participated in it). One question was about professional development. I would like to ask you this question: What would you choose as your preferred way of gaining professional development – collegial support, online, attendance at program/workshop/conference or nothing specific?

Why is that?

The results of the survey showed that when looking at professional development, the preference was to attend a workshop or conference rather than engage in online learning or in-school support. Why do you think that was?

8) (*Choice Survey question.*) Another question was about who you would prefer to have professional conversations with: other beginning teachers, supervisor or mentor – which would be your choice?

Why is that?

In the survey, beginning teachers came up as most popular – why do you think that was the case?

9) (*Choice Survey question.*) Last item from the survey that we wish to ask about: People showed a strong preference for getting teaching resources online rather than shared access at the school. What are your thoughts about that?

10) Suppose you had the ear of a senior DET policy maker. What would you want to tell him/her to change that would enhance teaching for an early career teacher?

11) Is there anything you would like to add that may be relevant for our study?

CONCLUSION

That concludes the interview and I would like to thank you for your participation.

DET RETENTION PROJECT- 2007 CONFERENCE PROGRAM

Thursday 8 November

6.30 pm Meeting of DET personnel and UTS project team to go through program

7.00 – 7.30 Complimentary welcome drinks for whole group

7.30 - Dinner – Facilitator Anne.

Welcome and introductions

Funny incidents

Wish list

Friday 9 November

8.30 - 9.00 Introduction to project – Sandy.

9.00 – 10.00 Focus groups for early career teachers – Facilitator John.

DET and Mentor teachers – prepare response to wish list for final session, mentors discuss forthcoming panel session, general discussion about focus questions.

10.00 - 10.30 Mentor teacher panel – Facilitator Anne

10.30 - 11.00 Morning tea

11.00 – 12.30 Sharing our data – Peter A. presentation

Discussion of data – groups, Peter A. Facilitator

12.30 – 1.30 Lunch

1.30 – 2.30 Sharing data on Choice – Paul presentation

Discussion of data – Paul Facilitator

2.30 – 3.00 Support available for ECTs – Peter L., Fiona, Mary, Checka

3.00 – 3.15 Reflections and conclusion – John facilitator.

FULL DETAILS OF BEST-WORST SCALING RESULTS

Best	Worst	B-W	Sq(B/W)	Item Evaluated
226.047	33.931	192.116	2.581	Student Involvement - The extent to which you can engage your students
245.805	38.733	207.072	2.519	Professional Challenge - The extent to which your work is professionally satisfying
164.674	28.894	135.780	2.387	Collegial Support - The level of support offered by other teachers
149.157	47.799	101.358	1.767	Professional Collaboration - The relationships you have with others who are involved in student welfare or learning
197.305	69.021	128.285	1.691	The support you receive during your first year - The orientation that you have to the school and system (e.g. structured supervision; mentoring)
143.296	52.428	90.868	1.653	Executive Support - The type of support that is provided by the School Executive (Principal, Deputy, Head Teacher, Assistant Principal)
145.905	53.872	92.033	1.646	Staff Culture - The interaction and support among staff
151.054	56.068	94.986	1.641	School "Climate" - The "tone" of the school (welcoming atmosphere)
135.912	54.064	81.848	1.586	Pedagogical Support - The quality of support given to you for planning and delivering teaching and learning
174.628	74.352	100.276	1.533	Workload - The time and effort you commit to teach effectively

96.617	55.127	41.490	1.324	Special Needs - Support for your teaching of students with particular learning and/or behavioural challenges
104.616	83.246	21.371	1.121	Student Behaviour - The way students behave at school
90.752	72.677	18.075	1.117	Resources - Things that support you in your job (e.g. ICT, facilities, space, materials)
93.483	78.562	14.921	1.091	Philosophical Fit - The extent to which your beliefs about teaching match those of the school
90.924	90.518	0.406	1.002	School Culture- The way your school does things, whether explicit or unspoken
112.152	113.896	-1.744	0.992	Future Career Opportunities - The options available for future promotion and/or transfer
88.334	96.495	-8.161	0.957	Professional Respect - Opportunities to participate in school decision making
71.029	104.022	-32.993	0.826	Scope of Role - The variety of tasks you have to perform
84.381	123.695	-39.314	0.826	Salaries - The amount of money you get paid
75.779	117.143	-41.364	0.804	Local Conditions - The environmental factors that affect your daily life as a teacher (e.g., geographic, housing, classroom, access to Internet, isolation)
65.325	104.586	-39.261	0.790	School Appreciation - The school community's acknowledgement of your efforts and/or achievements
62.152	141.536	-79.384	0.663	Incentives - This includes both financial incentives such as locality allowance, and non-financial incentives such as leave, etc.

57.308	144.833	-87.525	0.629	Accreditation Requirements - Support provided to assist you to meet the requirements of the Professional Teaching Standards
57.703	155.804	-98.101	0.609	Teacher Preparation - Extent to which your teacher education program prepared you for teaching
39.410	119.867	-80.456	0.573	Class Size - The number of students in your class/es
42.766	148.121	-105.356	0.537	Professional Isolation - Your feelings of working alone
29.238	155.021	-125.783	0.434	Support of Parents - The support of parents in the classroom
35.093	187.435	-152.342	0.433	Administrative Requirements - The daily paperwork required
26.371	172.489	-146.118	0.391	Policies and Procedures - The policies you are required to implement in your teaching
19.327	140.053	-120.726	0.371	Parental Expectations - The parents' expectations of you as a teacher
19.442	181.699	-162.257	0.327	Socialising - Opportunities to participate in social activities

DET TEACHER FULL ONLINE SURVEY

INTRODUCTION

Thank you for participating in this survey. This survey will take about 15 to 20 minutes to complete.

Your answers will remain anonymous. Please take your time in completing this questionnaire thoroughly. For most questions, you will only need to click in a tick box with your mouse.

IMPORTANT: You will not be able to save the survey, quit it and return back to it at a later time. This ensures your responses remain anonymous. We would recommend, therefore, that you commence the survey when you have at least 20-25 minutes to spare to ensure that you will be able to complete it. Thank you.

Please **DO NOT USE** the 'Back' and 'Forward' buttons in the browser. Please use the " >> " button at the bottom of each screen to proceed.

Please click on " >> " button to start.

In the following questions, we would like you to consider your current employment situation and the school that employs you. In each of the items that follow, we would like to match your current situation to the description that fits best.

Please click on " >> " button to continue.

F1: What is the most common form by which teachers in your school are **AFFIRMED** or **INCLUDED** in your school (Choose one only):

Recognition (e.g. via emails; announcements) of personal milestones (e.g. birthdays)

Recognition (e.g. via emails; announcements) of activities/achievements in and outside of class (e.g. excursions; accreditation progress)

Voice in professional activities of school (e.g. at staff meetings; inclusion in committees)

Greeting and enquiries from executive staff about how you're going (interest shown)

F2. What is the main way in which the **TEACHING RESOURCES** are made available in your school (Choose one only).

Pigeon-hole or "common drawer" allowing shared access to other teachers' and/or school resources/materials

Electronic access to teaching resources (including access at home online)

Support for the use of computers in classrooms and in teaching and learning programs

Each teacher keeps school developed resources to themselves (no genuine sharing)

F3: Which is the most appropriate description for how you most often WORK WITH MORE EXPERIENCED TEACHERS?
(Choose one only):

Cooperative planning for teaching and learning (Lesson preparation, design of teaching and assessment tasks)

Co-planning and co-teaching/team teaching a class together

Working together collaboratively with experienced teacher by observing and being observed in classroom

Little collaboration - work in isolation in planning and developing of teaching and learning activities

F4: What is the main way in which you have PLANNED PROFESSIONAL CONVERSATIONS ABOUT TEACHING PRACTICE?
(Choose one only):

With other beginning teachers at my school or at other schools in similar roles, subjects or stages

With my supervisor

With my mentor

Limited professional conversations about teaching practice

F5: How would you describe the ACCESS you have to your MENTOR? (Choose one only):

If available (many people compete for my mentor's time)

If available (at a regular time each week)

On demand (whenever I feel there is a need) but very briefly

On demand (whenever I feel there is a need) for as long as I need

F6: How would you describe the MEDIUM OF INTERACTION that you have with your MENTOR? (Choose one only):

Online

Meet at another school

Through telephone or videoconferencing

Meet at my school

F7: What is the most common TYPE OF MENTORING SUPPORT that you receive (Choose one only):

Support for classroom management

Support in programming and assessment strategies

Support for career planning

Support in managing parents and community

F8. Please tick the description that MOST accurately describes the manner in which you ACCESS DET RESOURCES. (Choose one only):

Hard copy documents

Videoconferencing

Web-based resources

Personal interaction

F9. Please tick the description that MOST accurately describes the key TYPE OF DET RESOURCES that you access. (Choose one only):

Legal requirements (eg employee rights and responsibilities; leave access; pay issues; welfare)

Teaching and learning

Professional development to support accreditation

Curriculum requirements

F10: What is the most common form of PROFESSIONAL DEVELOPMENT support that is available to help you achieve professional teaching standards? (Choose one only):

In-school collegial professional support

On-line on time professional learning

Attendance at program/workshop/conference

No specific professional development to achieve Professional Teaching Standards

CHOICE INTRODUCTION

In this survey we are going to show you pairs of hypothetical teaching positions (A and B) that are equivalent in salary to your current position. Each position is described by ten factors and even though positions look very similar, they are different. By making small changes in each and seeing what you realistically would choose each time, we can see what you believe to be important when evaluating teaching positions.

Your task will involve the following:

Examine the two contexts and compare these with your current position

Examine the two contexts and consider which, if either, you would choose if offered

You will do this a number of times, each time two contexts appear. By repeating this several times, we can obtain more insight into which aspects of the teaching profession are important to early career teachers such as yourselves.

Again, we thank you for your truthfulness and participation.

Please click on " >> " to continue.

Example of choice scenario 1:

Scenario 1		
Features of Position	Position A	Position B
1. Affirmation and inclusion	Greeting and enquiries from executive staff about how you're going (interest shown)	Recognition (eg via emails; announcements) of activities/achievements in and outside of class (eg excursions; accreditation progress)
2. Teaching resources	Support for the use of computers in classrooms and in teaching and learning programs	Pigeon hole or "common drawer" allowing shared access to other teachers' and/or school resources/materials
3. Working with more experienced teachers	Working together collaboratively with experienced teacher by observing and being observed in classroom	Cooperative planning for teaching and learning (Lesson preparation, design of teaching and assessment tasks)
4. Planned professional conversations about teaching practice	With other beginning teachers at my school or at other schools in similar roles, subjects or stages	With my mentor
5. Access to mentor	If available (many people compete for my mentor's time)	On demand (whenever I feel there is a need) but very briefly
6. Mentor (Medium of interaction)	Meet at my school	Meet at another school
7. Mentor (Type of mentoring support)	Support in managing parents and community	Support in programming and assessment strategies
8. Access to DET resources	Hard copy documents	Web-based resources
9. Type of DET resources	Teaching and learning	Curriculum requirements
10. Professional Development to achieve Professional Teaching Standards	On-line on time professional learning	No specific professional development to achieve Professional Teaching Standards

1. Out of the following, which is your most preferred position? (Check only one box)

Position A Position B My current position

2. Out of the following, which is your least preferred position? (Check only one box)

Position A Position B My current position

3. Suppose the two teaching positions A and B were offered to you, which would you choose?

Position A Position B Neither

This is followed by scenarios 2 to 8.

School introduction

The following questions are about your school. If you are currently teaching at several schools, please respond to these questions with reference to the school at which you spend the most time. If you are currently not teaching at all, please respond to these questions with reference to the school at which you last taught.

Please click on " >> " button to continue.

S1. Are you currently working in teaching? (Choose one only):

Yes, I am working full-time

Yes, I am working part-time

No, I left the profession less than 6 months ago

No, I left the profession within the last 6-12 months

No, I left the profession more than 12 months ago

S2. What are your plans in terms of teaching in the next 12 months? (Choose one only):

I am planning to remain in the profession

I am considering leaving the profession due to family reasons (e.g., having a baby; caring for parent)

I am considering leaving the profession due to employment reasons (e.g., stress; income)

Other (Please specify) _____

S4. In what type of school are you currently teaching? (Choose one only):

Government

Non-Government

S5. Where is this school located? (Choose one only):

Within the Sydney Metropolitan basin

In a large metropolitan region other than Sydney

In a large rural city or region

In a small rural region

S6. Which grades does this school educate? (Choose one only):

Primary grades K to Year 3

Primary grades Year 4 to Year 6

All primary grades K to Year 6

All high school grades Year 7 to Year 10

All high school grades Year 7 to Year 12

All grades K to Year 12

Other (Please describe)_____

S7. How many students are enrolled in this school? (Choose one only):

25 or less students

26 to 112 students

113 to 159 students

160 to 240 students

241 to 300 students

301 to 420 students

421 to 450 students

451 to 515 students

516 to 700 students

701 to 1015 students

1016 to 1050 students

More than 1050 students

S9. Do you have any students that you must attend to with considerable learning disabilities? (Choose one only)

Yes, it takes up the majority of my time

Yes, but it is one student among many

No

S10. Which is the main area that you are qualified to teach? (Choose one only)

I am a primary school teacher

English

Mathematics

Science

HSIE

PDHPE

TAS

LOTE

Creative Arts

Other (Please specify)_____

S11. What is the main area that you teach the most? (Choose one only)

I am a primary school teacher

English

Mathematics

Science

HSIE

PDHPE

TAS

LOTE

Creative Arts

Other (Please specify)_____

DEMOGRAPHIC INFORMATION

Questions About You

Following questions are similar to those asked in the Census of Population Survey (Australian Bureau of Statistics). Your answers will be kept confidential, and cannot be used to identify you personally. Your answers will be used ONLY to compare the answers of different people.

Please click on " >> " to continue.

D1. What type of school did you attend when you were studying Years 7 to 12 (Choose the one at which you spent the most time)?

Government

Non-Government

D2. What is your gender?

Male

Female

D3. What is your age?

20-24 years

25-29 years

30-34 years

35-39 years

40-44 years

45-49 years

50-54 years

55 years or over

D4. What is the postcode of your current home address?

Please enter postcode in the box below

D5. What is the highest level of post-school qualification that you have completed?

Doctoral Degree

Masters Degree

Graduate Diploma or equivalent

Bachelor Degree

Other (please specify)_____

D6. What type of Internet connectivity do you have at home?

Mobile Broadband

Broadband

Dial up

Other type of internet connection

No Internet Connection

D8. Are you currently studying?

No, I am doing no additional formal study

Yes, I am doing additional Postgraduate study in Education

Yes, I am doing additional Postgraduate study, but not in Education

Other (Please specify)_____

LAST PART

This is close to the end of survey. We thank you for your time and effort so far. The last few questions are optional and open-ended. You can type in your answers in a blank box provided.

If you do not have any comments relating to the question, please click on " >> " button to continue.

F12. If you could make any comments about the things that make you stay in the teaching profession, please feel free to write about these here.

Please type in the box below.

F13. If you could make any comments about the challenges that you face as a teacher, please feel free to write about these here.

Please type in the box below.

S3. If you left the profession, what would you do?

Please type in the box below.

This concludes the survey.

Thank you very much for your valuable time and feedback. To thank you for your time and effort, as we mentioned in the invitation email, you are entitled to enter a draw to win one of ten iPod Shuffles (valued at approx \$70 each). If you wish to enter this draw, please email us at (retentionproject05@yahoo.com.au) and include the ID number below in the email. In the email, please use the following subject line: survey ipod draw ID: ^CurrentID()^

In the email, please include your contact details and postal address. This draw is handled separately from the survey and your answers to the survey are not able to be matched to your contact details. Survey responses remain completely anonymous.

Please click on " >> " to submit the survey.

TABLATIONS OF ANSWERS TO NON-CHOICE QUESTIONS

S1. Are you currently working in teaching?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes, I am working full-time	5072	94.3	94.3	94.3
Yes, I am working part-time	192	3.6	3.6	97.9
No, I left the profession less than 6 months ago	80	1.5	1.5	99.4
No, I left the profession within the last 6-12 months	16	.3	.3	99.7
No, I left the profession more than 12 months ago	16	.3	.3	100.0
Total	5376	100.0	100.0	

S2. What are your plans in terms of teaching in the next 12 months?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I am planning to remain in the profession	4064	75.6	75.6	75.6
	I am considering leaving the profession due to family reason	208	3.9	3.9	79.5
	I am considering leaving the profession due to employment re	720	13.4	13.4	92.9
	Other	384	7.1	7.1	100.0
	Total	5376	100.0	100.0	

S4. In what type of school are you currently teaching?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Government	5312	98.8	98.8	98.8
	Non-Government	64	1.2	1.2	100.0
	Total	5376	100.0	100.0	

S5. Where is this school located?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Within the Sydney Metropolitan basin	3040	56.5	56.5	56.5
	In a large metropolitan region other than Sydney	416	7.7	7.7	64.3
	In a large rural city or region	944	17.6	17.6	81.8
	In a small rural region	976	18.2	18.2	100.0

S5. Where is this school located?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Within the Sydney Metropolitan basin	3040	56.5	56.5	56.5
In a large metropolitan region other than Sydney	416	7.7	7.7	64.3
In a large rural city or region	944	17.6	17.6	81.8
In a small rural region	976	18.2	18.2	100.0
Total	5376	100.0	100.0	

S6. Which grades does this school educate?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Primary grades K to Year 3	112	2.1	2.1	2.1
Primary grades Year 4 to Year 6	32	.6	.6	2.7

All primary grades K to Year 6	1984	36.9	36.9	39.6
All high school grades Year 7 to Year 10	80	1.5	1.5	41.1
All high school grades Year 7 to Year 12	2608	48.5	48.5	89.6
All grades K to Year 12	272	5.1	5.1	94.6
Other (Please describe)	288	5.4	5.4	100.0
Total	5376	100.0	100.0	

S7. How many students are enrolled in this school?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 25 or less students	32	.6	.6	.6
26 to 112 students	240	4.5	4.5	5.1
113 to 159 students	240	4.5	4.5	9.5
160 to 240 students	352	6.5	6.5	16.1

241 to 300 students	256	4.8	4.8	20.8
301 to 420 students	720	13.4	13.4	34.2
421 to 450 students	96	1.8	1.8	36.0
451 to 515 students	304	5.7	5.7	41.7
516 to 700 students	880	16.4	16.4	58.0
701 to 1015 students	1248	23.2	23.2	81.3
1016 to 1050 students	160	3.0	3.0	84.2
More than 1050 students	848	15.8	15.8	100.0
Total	5376	100.0	100.0	

S9. Do you have any students that you must attend to with considerable learning disabilities?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes, it takes up the majority of my time	1552	28.9	28.9	28.9

Yes, but it is one student among many	2800	52.1	52.1	81.0
No	1024	19.0	19.0	100.0
Total	5376	100.0	100.0	

S10. Which is the main area that you are qualified to teach?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid English	576	10.7	10.7	10.7
Mathematics	400	7.4	7.4	18.2
Science	528	9.8	9.8	28.0
HSIE	512	9.5	9.5	37.5
PDHPE	176	3.3	3.3	40.8
TAS	368	6.8	6.8	47.6
LOTE	16	.3	.3	47.9

Creative Arts	352	6.5	6.5	54.5
Other (Please specify)	320	6.0	6.0	60.4
I am a primary school teacher	2128	39.6	39.6	100.0
Total	5376	100.0	100.0	

S11. What is the main area that you teach the most?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid English	640	11.9	11.9	11.9
Mathematics	416	7.7	7.7	19.6
Science	512	9.5	9.5	29.2
HSIE	448	8.3	8.3	37.5
PDHPE	176	3.3	3.3	40.8
TAS	368	6.8	6.8	47.6

LOTE	32	.6	.6	48.2
Creative Arts	288	5.4	5.4	53.6
Other (Please specify)	464	8.6	8.6	62.2
I am a primary school teacher	2032	37.8	37.8	100.0
Total	5376	100.0	100.0	

D1. What type of school did you attend when you were studying Years 7 to 12?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Government	4080	75.9	75.9	75.9
Non-Government	1296	24.1	24.1	100.0
Total	5376	100.0	100.0	

D2. What is your gender?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	1232	22.9	22.9	22.9
	Female	4144	77.1	77.1	100.0
	Total	5376	100.0	100.0	

D3. What is your age?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-24 years	1472	27.4	27.4	27.4
	25-29 years	1984	36.9	36.9	64.3
	30-34 years	704	13.1	13.1	77.4
	35-39 years	320	6.0	6.0	83.3
	40-44 years	320	6.0	6.0	89.3
	45-49 years	384	7.1	7.1	96.4

50-54 years	128	2.4	2.4	98.8
55 years or over	64	1.2	1.2	100.0
Total	5376	100.0	100.0	

D4. Postcode – Omitted in the interests of space

D5. What is the highest level of post-school qualification that you have completed?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Doctoral Degree	32	.6	.6	.6
Masters Degree	592	11.0	11.0	11.6
Graduate Diploma or equivalent	976	18.2	18.2	29.8
Bachelor Degree	3664	68.2	68.2	97.9
Other (please specify)	112	2.1	2.1	100.0
Total	5376	100.0	100.0	

D6. What type of internet connectivity do you have at home?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Mobile Broadband	1040	19.3	19.3	19.3
	Broadband	3552	66.1	66.1	85.4
	Dial up	304	5.7	5.7	91.1
	Other type of internet connection	144	2.7	2.7	93.8
	No Internet Connection	336	6.3	6.3	100.0
	Total	5376	100.0	100.0	

D8. Are you currently studying?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No, I am doing no additional formal study	4512	83.9	83.9	83.9

Yes, I am doing additional Postgraduate study in Education	432	8.0	8.0	92.0
Yes, I am doing additional Postgraduate study, but not in Ed	224	4.2	4.2	96.1
Other (Please specify)	208	3.9	3.9	100.0
Total	5376	100.0	100.0	

APPENDIX 3.4

AGGREGATE DCE RESULTS – BWS SCORES BY ATTRIBUTE LEVEL

Attribute	Attribute Levels	Best	Worst	B-W	Sqrt(B/W)
AFFIRMATION AND INCLUSION	Voice in professional activities of school (eg at staff meetings; inclusion in committees)	934	712	222	1.15
	Greeting and enquiries from executive staff about how you're going (interest shown)	789	671	118	1.08
	Recognition (eg via emails; announcements) of activities/achievements in and outside of class (eg excursions; accreditation progress)	578	622	-44	0.96
	Recognition (eg via emails; announcements) of personal milestones (eg birthdays)	387	683	-296	0.75
TEACHING RESOURCES	Pigeon hole or "common drawer" allowing shared access to other teachers' and/or school resources/materials	949	582	367	1.28
	Electronic access to teaching resources (including access at home online)	771	508	263	1.23
	Support for the use of computers in classrooms and in teaching and learning programs	605	544	61	1.05
	Each teacher keeps school developed resources to themselves (no genuine sharing)	363	1054	-691	0.59
WORKING WITH MORE EXPERIENCED TEACHERS	Cooperative planning for teaching and learning (Lesson preparation, design of teaching and assessment tasks)	1122	531	591	1.45
	Working together collaboratively with experienced teacher by observing and being observed in classroom	488	522	-34	0.97
	Coplanning and co-teaching/team teaching a class together	463	559	-96	0.91
	Little collaboration - work in isolation in planning and developing of teaching and learning activities	615	1076	-461	0.76
PLANNED PROFESSIONAL CONVERSATIONS ABOUT TEACHING PRACTICE	With my supervisor	864	622	242	1.18
	With other beginning teachers at my school or at other schools in similar roles, subjects or stages	709	599	110	1.09
	With my mentor	615	608	7	1.01
	Limited professional conversations about teaching practice	500	859	-359	0.76
ACCESS TO TEACHER MENTOR	On demand (whenever I feel there is a need) for as long as I need	992	550	442	1.34
	On demand (whenever I feel there is a need) but very briefly	692	736	-44	0.97
	If available (at a regular time each week)	460	595	-135	0.88
	If available (many people compete for my mentor's time)	544	807	-263	0.82
TEACHING MENTOR (Medium of interaction)	Meet at my school	1534	862	672	1.33
	Online	428	608	-180	0.84
	Through telephone or videoconferencing	379	609	-230	0.79
	Meet at another school	347	609	-262	0.75
TEACHING MENTOR (Focus of mentoring support)	Support in programming and assessment strategies	1002	675	327	1.22
	Support for classroom management	813	738	75	1.05
	Support for career planning	454	637	-183	0.84
	Support in managing parents and community	419	638	-219	0.81
ACCESS TO DET-SPONSORED RESOURCES (Medium)	Web-based resources	1381	867	514	1.26
	Hard copy documents	543	636	-93	0.92
	Personal interaction	398	584	-186	0.83
	Videoconferencing	366	601	-235	0.78
FOCUS OF DET BASED RESOURCES	Teaching and learning	1016	734	282	1.18
	Curriculum requirements	718	668	50	1.04
	Professional development to support accreditation	507	609	-102	0.91
	Legal requirements (eg employee rights and responsibilities; leave access; pay issues; welfare)	447	677	-230	0.81

PROFESSIONAL	Attendance at program/workshop/conference	1109	687	422	1.27
DEVELOPMENT	In-school collegial professional support	777	667	110	1.08
DAYS/ACTIVITIES	On-line on time professional learning	388	562	-174	0.83
(additional release)	No specific professional development to achieve Professional Teaching Standards	414	772	-358	0.73

LATENT CLASS DCE ESTIMATES

Model Effects	Class 1			Class 2			1 v 2	
	Est.	z.	Sig	Est.	z.	Sig	z	Sig
Fixed Intercept (current school employment position)	-2.302	-8.792	✗	-4.681	-3.882	✗	-4.91	✗
Random Intercept (for current school employment position)	2.615	12.747	✓	-8.558	-5.139	✗	17.886	✓
7a. AFFIRMATION AND INCLUSION								
Recognition (eg via emails; announcements) of personal milestones (eg birthdays)	-0.176	-2.502	✗	-1.408	-4.457	✗	1.955	
Recognition of activities/achievements in and outside of class (eg excursions; accreditation progress)	0.084	1.225		-0.225	-0.773		1.998	
Voice in professional activities of school (eg at staff meetings; inclusion in committees)	0.069	0.98		1.442	3.706	✓	-2.726	✗
Greeting and enquiries from executive staff about how you're going (interest shown)	0.023	0.332		0.191	0.876		-0.544	
7b. TEACHING RESOURCES								
Pigeon hole or "common drawer" allowing shared access to other teachers' and/or school resources/materials	0.192	2.954	✓	0.452	2.061	✓	0.893	
Electronic access to teaching resources (including access at home online)	0.343	5.126	✓	0.908	3.646	✓	1.48	
Support for the use of computers in classrooms and in teaching and learning programs	0.213	3.005	✓	1.356	3.774	✓	-0.769	
Each teacher keeps school developed resources to themselves (no genuine sharing)	-0.748	-9.472	✗	-2.716	-5.718	✗	-3.754	✗
7c. WORKING WITH MORE EXPERIENCED TEACHERS								
Cooperative planning for teaching and learning (lesson preparation, design of teaching and assessment tasks)	0.198	2.87	✓	1.55	4.435	✓	-1.565	
Coplanning and co-teaching/team teaching a class together	-0.023	-0.31		1.298	4.004	✓	-4.314	✗
Working together collaboratively with experienced teacher by observing and being observed in classroom	0.277	3.742	✓	-0.259	-0.972		4.714	✓
Little collaboration - work in isolation in planning and developing of teaching and learning activities	-0.451	-5.992	✗	-2.589	-5.645	✗	-0.347	
7d. PLANNED PROFESSIONAL CONVERSATIONS ABOUT TEACHING PRACTICE								
With other beginning teachers at my school or at other schools in similar roles, subjects or stages	0.161	2.457	✓	-0.347	-1.467		3.924	✓
With my supervisor	0.149	2.138	✓	0.517	1.722		0.416	
With my mentor	0.109	1.521		0.357	1.487		0.034	
Limited professional conversations about teaching practice	-0.419	-5.877	✗	-0.527	-1.981		-3.896	✗

7e. ACCESS TO TEACHER MENTOR

If available (many people compete for my mentor's time)	-0.057	-0.827		-0.784	-2.796	✘	1.969
If available (at a regular time each week)	0.043	0.624		-0.335	-1.451		2.075 ✓
On demand (whenever I feel there is a need) but very briefly	-0.075	-1.079		0.363	1.569		-2.648 ✘
On demand (whenever I feel there is a need) for as long as I need	0.089	1.238		0.755	2.933	✓	-1.695
7f. TEACHING MENTOR (Medium of interaction)							
Online	-0.205	-2.861	✘	0.56	1.806		-4.667 ✘
Meet at another school	-0.177	-2.434	✘	0.007	0.023		-2.457 ✘
Through telephone or videoconferencing	-0.028	-0.38		-0.034	-0.102		-0.278
Meet at my school	0.41	5.751	✓	-0.533	-2.07	✘	7.821 ✓
7g. TEACHING MENTOR (Focus of mentoring support)							
Support for classroom management	0.181	2.712	✓	0.598	2.57	✓	0.142
Support in programming and assessment strategies	-0.012	-0.17		1.314	4.344	✓	-4.514 ✘
Support for career planning	-0.004	-0.06		-1.323	-3.41	✘	3.35 ✓
Support in managing parents and community	-0.165	-2.284	✘	-0.589	-1.88		-0.404
7h. ACCESS TO DET-SPONSORED RESOURCES (MEDIUM)							
Hard copy documents	0.093	1.414		-0.64	-1.988		3.402 ✓
Videoconferencing	-0.211	-2.967	✘	0.332	1.211		-4.178 ✘
Web-based resources	-0.02	-0.273		1.162	2.83	✓	-3.103 ✘
Personal interaction	0.137	1.844		-0.854	-2.398	✘	4.242 ✓
7i. FOCUS OF DET-BASED RESOURCES							
Legal requirements (eg employee rights and responsibilities; leave access; pay issues; welfare)	-0.216	-3.057	✘	-1.075	-3.574	✘	0.517
Teaching and learning	0.073	1.136		0.647	2.201	✓	-1.065
Professional development to support accreditation	-0.026	-0.373		0.457	1.767		-2.14 ✘
Curriculum requirements	0.169	2.55	✓	-0.029	-0.127		2.677 ✓
7j. PROFESSIONAL DEVELOPMENT DAYS/ACTIVITIES (additional release)							
In-school collegial professional support	-0.065	-0.962		1.028	2.879	✓	-3.841 ✘
On-line on time professional learning	-0.052	-0.689		0.7	1.858		-2.547 ✘
Attendance at program/workshop/conference	0.311	4.54	✓	0.454	1.801		2.739 ✓
No specific professional development to achieve Professional Teaching Standards	-0.194	-2.446	✘	-2.181	-3.099	✘	0.653

SUMMARY OF LIKES AND DISLIKES BY LATENT CLASS

	Class 1 (67% of sample; those more likely to stay in profession)		Class 1 (32% of sample; those more likely to leave profession in next 12 months)	
Attribute	Like	Dislike	Like	Dislike
AFFIRMATION AND INCLUSION	No preference	Recognition (emails; announcements)	Voice in professional activities of school	Recognition (emails; announcements)
TEACHING RESOURCES	Electronic access to teaching resources	Each teacher keeps school developed resources to themselves	Support for using computers in classrooms & teaching	Each teacher keeps school resources to themselves
WORK WITH EXPERIENCED TEACHERS	Work collaboratively w/ experienced teacher	Little collaboration	Cooperative planning - teaching and learning	Little collaboration
PLANNED CONVERSATIONS - TEACHING PRACTICE	With other beginning teachers at my school/other schools	Limited professional conversations about teaching practice	With my supervisor	Limited professional conversations - teaching practice
ACCESS TO TEACHER MENTOR	No preference	No preference	On demand (whenever I feel there is a need)	If available (many compete for mentor's time)
TEACHING MENTOR (Medium of	Meet at my school	Online	Online	Meet at my school

interaction)				
TEACHING MENTOR (mentor support)	Support for classroom management	Support in managing parents and community	Support in programming & assessment strategies	Support for career planning
ACCESS TO DET RESOURCES (medium)	Personal interaction	Videoconferencing	Web-based resources	Personal interaction
FOCUS OF DET RESOURCES	Curriculum requirements	Legal requirements	Curriculum requirements	Legal requirements
PROFESSIONAL DEVELOPMENT DAYS/ACTIVITIES	Attend program, workshop, conference	No specific profess'l development	In-school collegial professional support	No specific profess'l development

APPENDIX 3.7

PREFERENCE DIFFERENCES WITHIN ATTRIBUTE LEVEL (BY TEACHER CHARACTERISTICS)

+ = more likely to choose;

	Characteristics of Teacher												
	Gender		Education			Schooling		Age				Home Internet	
	M	F	Doc/ Mas	Bac	Grd Dip/Othr	Gv	Non- Gov	20- 24	25- 29	30- 34	35 +	No/ slow	Mob./ Broad
Attribute 1. AFFIRMATION AND INCLUSION													
Recognition (eg via emails; announcements) of personal milestones	+	-	+		-								
Recognition of activities/achievements in and outside of class			-		+			-					
Voice in professional activities of school	+	-											
Greeting and enquiries from executive staff								+		-			
Attribute 2. TEACHING RESOURCES													
Pigeon hole or "common drawer" allowing shared access						+	-	+		+	-	-	+
Electronic access to teaching resources (including access at home online)									+	-	+	-	+
Support for the use of computers in teaching and learning								-	-	+		+	-
Each teacher keeps school developed resources to themselves	+	-			-	+	-	-	-	-	+		
Attribute 3 WORKING WITH MORE EXPERIENCED TEACHERS													
Cooperative planning for teaching and learning									-	+	-	-	+
Coplaning and co-teaching/team teaching a class together											-		
Working together collaboratively with experienced teacher	+	-	+	-						-	+		
Little collaboration - work in isolation in planning and developing			-	+						-	+	+	-
Attribute 4. PLANNED PROFESSIONAL CONVERSATIONS													
With other beginning teachers at my school or at other schools			-			+	-	+			-	+	-
With my supervisor	-	+											
With my mentor			+		-	-	+	-					
Limited professional conversations about teaching practice	+	-						-	+	+	+	-	+

Attribute 5. ACCESS TO TEACHER MENTOR	M	F	Doc/ Mas	Bac	Grd Dip/Othr	Gv	Non- Gov	20- 24	25- 29	30- 34	35 +	No/ slow	Mob./ Broad
	If available (many people compete for my mentor's time)	+	-		-					-	+		
If available (at a regular time each week)			+	-									
On demand (whenever I feel there is a need) but very briefly	-	+		+	-	-	+	-	+				
On demand (whenever I feel there is a need) for as long as I need	-	+	-	+		+		-	+			-	+

Attribute 6. TEACHING MENTOR	Gender		Qualification			Education		Age				Home Internet	
	M	F	Doc/ Mas	Bac	Grd Dip/Othr	Gv	Non- Gov	20- 24	25- 29	30- 34	35 +	No/ slow	Mob./ Broad
Online	+	-			+			-		+	-		
Meet at another school											+		
Through telephone or videoconferencing			+			-	+	+		-		+	-
Meet at my school												+	-

Attribute 7. TEACHING MENTOR (Focus of mentoring support)	M	F	Doc/ Mas	Bac	Grd Dip/Othr	Gv	Non- Gov	20- 24	25- 29	30- 34	35 +	No/ slow	Mob./ Broad
	Support for classroom management	-	+			+			+				
Support in programming and assessment strategies													
Support for career planning	+	-										+	-
Support in managing parents and community				+	-	-	+						

Attribute 8. ACCESS TO DET SPONSORED RESOURCES (MEDIUM)	M	F	Doc/ Mas	Bac	Grd Dip/Othr	Gv	Non- Gov	20- 24	25- 29	30- 34	35 +	No/ slow	Mob./ Broad
	Hard copy documents						+	-					+
Videoconferencing													
Web-based resources	-	+				+	-					-	+
Personal interaction	+	-				-	+					+	-

Attribute 9. FOCUS OF DET BASED RESOURCES	M	F	Doc/ Mas	Bac	Grd Dip/Othr	Gv	Non- Gov	20- 24	25- 29	30- 34	35 +	No/ slow	Mob./ Broad
	Legal requirements				+				-	+		-	
Teaching and learning	-	+				+	-					-	+
Professional development to support accreditation				+		-	+	+				+	-
Curriculum requirements	+	-				+	-		-		+	+	-

Attribute 10. PROFESSIONAL DEVELOPMENT DAYS/ACTIVITIES	M	F	Doc/ Mas	Bac	Grd Dip/Othr	Gv	Non- Gov	20- 24	25- 29	30- 34	35 +	No/ slow	Mob./ Broad

In-school collegial professional support		-	+		+	-		
On-line on time professional learning			+		+			
Attendance at program/workshop/conference	-	+					-	+
No specific professional development to achieve Prof Stds	+	-				+		-

APPENDIX 3.8

PREFERENCE DIFFERENCES WITHIN ATTRIBUTE LEVEL (BY CHARACTERISTICS OF SCHOOL)

+ = more likely to choose;

	Characteristics of School or Role										
	School Size				Location			Level		Work with disab.	
	<300	301- 515	516+	1000 +	Sml/ Rurl	Syd	Lrge City	Prim	Hs	Yes	No
Attribute 1. AFFIRMATION AND INCLUSION											
Recognition (eg via emails; announcements) of personal milestones	+		-								
Recognition of activities/achievements in and outside of class	-			+							
Voice in professional activities of school			+	-							
Greeting and enquiries from executive staff											
Attribute 2. TEACHING RESOURCES											
Pigeon hole or "common drawer" allowing shared access		+		-		-	+				
Electronic access to teaching resources (including access at home online)								-	+		
Support for the use of computers in teaching and learning		-		+				+	-		
Each teacher keeps school developed resources to themselves					+		-	-	+	+	-
Attribute 3 WORKING WITH MORE EXPERIENCED TEACHERS											
Cooperative planning for teaching and learning	-	+	+	-				+	-	-	+
Coplanning and co-teaching/team teaching a class together						+	-				
Working together collaboratively with experienced teacher		-		+						+	-
Little collaboration - work in isolation in planning and developing	+	-	-	-	+			-	+	+	-
Attribute 4. PLANNED PROFESSIONAL CONVERSATIONS											
	<300	301- 515	516+	1000 +	Sml/ Rurl	Syd	Lrge City	Prim	Hs	Yes	No

With other beginning teachers at my school or at other schools	-				+		-			+	-
With my supervisor					-			+	-		
With my mentor	+	-	-	-							
Limited professional conversations about teaching practice			+	+			-				
Attribute 5. ACCESS TO TEACHER MENTOR	<300	301-515	516+	1000+	Sml/ Rurl	Syd	Lrge City	Prim	Hs	Yes	No
If available (many people compete for my mentor's time)								-	+	+	-
If available (at a regular time each week)	+	-				+	-	-	+		
On demand (whenever I feel there is a need) but very briefly	-			+	-	-	+				
On demand (whenever I feel there is a need) for as long as I need		+						+	-	-	+

Attribute 6. TEACHING MENTOR	<300	301-515	516+	1000+	Sml/ Rurl	Syd	Lrge City	Prim	Hs	Yes	No
Online					+			-	+		
Meet at another school											
Through telephone or videoconferencing		-						+	-		
Meet at my school		+								-	+
Attribute 7. TEACHING MENTOR (Focus of mentoring support)	<300	301-515	516+	1000+	Sml/ Rurl	Syd	Lrge City	Prim	Hs	Yes	No
Support for classroom management					+	-		-	+		
Support in programming and assessment strategies		+		-				+	-	+	-
Support for career planning		-		+		+		-	+		
Support in managing parents and community								+	-		
Attribute 8. ACCESS TO DET SPONSORED RESOURCES (MEDIUM)	<300	301-515	516+	1000+	Sml/ Rurl	Syd	Lrge City	Prim	Hs	Yes	No
Hard copy documents					-		+				
Videoconferencing								+	-		
Web-based resources							-	-	+	+	-
Personal interaction			+							+	-
Attribute 9. FOCUS OF DET BASED RESOURCES	<300	301-515	516+	1000+	Sml/ Rurl	Syd	Lrge City	Prim	Hs	Yes	No

Legal requirements			-	+	-		+			-	+
Teaching and learning				+				-			
Professional development to support accreditation			-								
Curriculum requirements			+		-					-	+
Attribute 10. PROFESSIONAL DEVELOPMENT DAYS/ACTIVITIES	<300	301- 515	516+	1000 +	Sml/ Rurl	Syd	Lrge City	Prim	Hs	Yes	No
In-school collegial professional support					+		-			-	+
On-line on time professional learning				+							
Attendance at program/workshop/conference	+			-				-	+		
No specific professional development to achieve Professional Standards								+	-		