

Supporting Primary and Secondary Beginning Teachers Online: Key findings of the Education Alumni Support Project

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Abstract: During 2005, the Education Alumni Support Project (EdASP) (Maxwell, Smith, Baxter, Boyd, Harrington, Jenkins, Sargeant & Tamatea 2006) provided online support for University of New England (UNE) graduand, and later, graduate, teachers as they commenced their careers. The project was based on research which reported that many beginning teachers did not get the support they needed as permanent or contract workers, or, as casual, relief or support teachers, and that small scale trials had shown that online support could be effective. One third of beginning teachers who were alumni of UNE in 2004, reported they did not receive adequate or any mentoring. UNE web-based technologies provided the teachers and mentors with online environments for professional and social interaction, and resource sharing. We found that support was especially sought by the project participants in their first school term, and there were differences in the levels of online support sought by secondary and primary beginning teachers. The project raises implications for on-going systemic support for beginning teachers, the issue of transition from students to teachers, as well as questions about teacher education students' preparation. This paper provides the key findings of the project. Detailed description of the project structure, data collection and data analysis are available in Maxwell et al. (2006).

Introduction

A large number of beginning teachers grapple with the demands of their teaching roles in the first year of professional practice (National Enquiry into Teacher Education, 1980, para. 5.26; Committee to examine Teacher Education in New South Wales, 1980; Harrington, Maxwell & Smith, 2005) yet, to-date in New South Wales (NSW), they have not been well supported (Brock, 2000; Meyenn, 1999:26). The

support mechanisms of the NSW Department of Education and Training (DET), the major NSW employer, include a two-day induction for beginning teachers traditionally held in February; in-house Teacher Mentor Program in schools (from 2003); and an online induction web site. These mechanisms are intended, in part, to address teacher supply and retention problems (Tebutt 2007), issues that have been major Australian problems for some time (see for example, Dow 2003: 87).

Beginning teachers are prepared for professional practice using a mix of academic work and practica/internships over a period of four to five years (or equivalent). The teacher education models completed by beginning teachers in this study varied considerably including primary teacher degrees — Bachelor of Education (internal) and Bachelor of General Studies/Bachelor of Teaching (external) — and secondary teacher combined degrees e.g. Bachelor of Science/Bachelor of Teaching or Graduate Diploma of Education following a first degree, all offered internally and externally. All degrees include substantive practica of up to 60 days plus a ten week internship for the Bachelor of Education students.

While these courses provide sound theoretical and practical preparation, they are not the same as total responsibility demanded of beginning teachers who are on their own in the classroom. Moreover, Faculties and Schools of Education have previously shown little interest in students after graduation during their transition from student to teacher.

The Importance of Transition

Transition can be seen as the move from pre- to in-service education on a professional learning continuum (Adey, 1998; Brock, 2000; Dow, 2003). From the student's perspective, making the transition from student to beginning teacher represents a definite benchmark in their career. During this transition beginning teachers can experience professional and even personal vulnerability (McConaghy & Bloomfield, 2004:11). Such vulnerability comes to the fore when beginning teachers find themselves in situations where their knowledge and experience are not sufficient to cope with the multiple concurrent demands of class and curriculum. This is often exemplified by concerns in managing student behaviour and classroom environment. Some may suffer culture shock resulting from personal and interpersonal isolation, professional isolation, and loss of personal and social identity (Roberts, 2005; McConaghy & Bloomfield, 2004; Illingworth, 2004; Herrington & Herrington, 2001; Yarrow, Ballantyne, Hansford, Herschell & Millwater, 1999; Maxwell & Bennett, 1998).

Employer induction on its own cannot overcome the demands that individual beginning teachers invariably face in the day-to-day realities of teaching. Facilitating entry into the work force has largely been considered the domain of employers, whilst universities have tended to be much less concerned about the successful transition their students make into the workforce. However, universities are increasingly becoming more concerned about their students' employability in the competitive environment. The EdASP project was designed to support and ease the transition of beginning teachers from university to employment by providing online support.

Support structures for beginning teachers

The complexity of classroom interaction, often associated with management and behavioural issues, makes the early years of teaching particularly demanding. Instant decision-making is needed in this complex environment. Most beginning teachers need some form of support structure to assist them to learn the 'what', 'when', 'how' and 'why' such decisions are made.

The Batten, Griffen and Ainley (1993) study, of almost 3000 Australian teachers, identified a reduced teaching load, a mentor or buddy arrangement, opportunity for observation of other teachers and support from the Year Level Co-ordinator as forms of support that were the most effective in addressing the challenges these teachers experienced. However, Batten et al. (1993) reported that these four supports were actually received by less than half the teachers in their study. An Organisation for Economic Co-operation and Development (OECD) (2005) study, entitled *Teachers Matter: Attracting Developing and Retaining Effective Teachers*, produced largely the same kind of findings as Batten et al. Brock (2000) and Roberts (2005) also both highlight the importance of induction and advocate a reduction in first year teaching load. These initiatives, with the exception of mentoring, are either systemic- or school-based, therefore, not a support type that could be offered by universities.

Mentoring is seen as a useful formal and informal mechanism to support beginning teachers and has been used in various forms for many years. This is illustrated by the NSW DET (2000) policy of school-based support for beginning teachers. However, mentoring undertaken by the NSW DET has been critiqued by Williams (2001), Connors (2007) and Lipscombe (2007). With the advent of Web 2 and Social Computing tools attention has shifted to the potential of the Internet as a structure to support beginning teachers in Australia.

The potential of online support for beginning teachers

Roberts (2005:41) pointed out the potential of online communication in overcoming the sense of isolation reported by beginning teachers. Research by Schuck, Brady and Griffin (2005) and Buchanan (2006) into beginning teachers' early experiences in the field, Herrington & Herrington's (2004) use of e-portfolios to support beginning teachers, and Brady & Schuck's (2005) investigation into the sustainability of online networks have all shed light on how the quality of beginning teachers' first years of professional practice could be better supported. There have been a number of studies that consider the advantages of online learning as they apply to a profession such as teaching (De Wert, Babinsky & Jones, 2003; Herrington, Rowland, Herrington & Hearne, 2006; Schuck, Buchanan & Prescott, 2006). These studies demonstrated the potential of online support for beginning teachers, but the studies were all limited by an almost one-to-one ratio of academic and teacher mentors to beginning teacher participants. The De Wert et al. (2003) study, while demonstrating the effectiveness of online support, also showed the need for a different approach when providing online support for a large numbers of beginning teachers.

The EdASP project was designed to expand upon these approaches especially in regard to providing a viable online support environment for large numbers of beginning teachers. In constructing the project we were aware that beginning teachers might reasonably expect the online support to provide immediate answers to

problems. However, to provide for large numbers of participants facilitated by a small number of mentors, the project opted to create an environment of professional collaboration and peer support. That is, the beginning teacher participants, who are experiencing similar situations, supported each other with academic mentors mentoring as well as taking a facilitative role. Ideally online support should be seen as a supplement to, not as a replacement for, mentoring in situ that provides the immediacy required by beginning teachers. Online support has many benefits for a learner in the profession. Christopher, Thomas and Tallent-Runnels (2004) summarise that online learning:

- is convenient because learning is asynchronous and students can choose a time and place for learning;
- provides opportunities to develop more in-depth relationships than in a set time and place situation;
- may promote an exchange of personal information, sustained reflection on course offerings and other learners' writings, learning from a combination of practical experiences and theoretical insights;
- may enable learners to apply knowledge to new contexts and make connections between diverse ideas and information;
- allows for an exchange of ideas and an increased sensitivity to other learners' comments; and,
- provides more time for learners to process information and format responses than in face-to-face situations.

These points appear applicable to online support for beginning teachers who are making the transition to full time or casual teaching positions. These are teachers who are developing their teaching techniques and classroom skills in practice and may be finding particular situations difficult to manage. The online environment can provide mutual support and a forum for sharing of ideas and resources.

The Education Alumni Support Project

The EdASP project was available for education alumni from both primary and secondary pre-service teacher programs at UNE - potentially 380 beginning teachers in 2005. Separate online environments were created for primary and secondary teachers on the basis that the training and demands for these two groups were quite different. Primary teachers in NSW generally teach *all* subjects and secondary teachers typically teach in one or two subject areas. The differences between primary and secondary settings had ramifications for the critical area of behaviour management. Beginning primary teachers normally having one class of approximately 30 students, whereas beginning secondary teachers will have a number of different classes. Student development levels for the two groups of students are different resulting in different experiences for the beginning teachers. Finally, the beginning teachers from each group knew many of their peers through their studies at UNE.

Within the separate Primary and Secondary online environments seven discussion fora were created to facilitate teacher access to the discussion topics: Behaviour Management support; Teaching and Learning support; Curriculum Area support; Contexts in Education; Coffee Lounge (social interaction); Contributed Resources (academic and peer shared resources or links to resources); and Feedback and Suggestions. The first five fora were chosen to reflect the broad conceptualisations around which UNE pre-service teacher education was structured.

The process of online interaction was seen as being supportive. It was hoped that EdASP would provide an “empirical warrant for mentoring” (Martinez, 2004:106) in an online context for beginning teachers. We argued (Maxwell & Smith 2007) that writing is inherently reflective so (1) student teachers who post messages will think about what they write and (2) peers and mentors, who read and respond to messages, are careful about what they write. We found the practice supportive, not only of learning, but of the affective response to the new world of teaching. Some beginning teachers clearly used posting as a process to come to understand what was happening to them, i.e., they could “see” through their writing. Their writings were often laced with affective terms. Responses to posts online can also be timely and there were beginning teachers who took advantage of this. The posting records and survey responses indicated that many had experiences that they simply *had* to write about and posted on the night of an incident, and that some went through the writing process but did not post.

This paper reports on the key findings arising from the two overarching research questions that guided the EdASP project:

1. In what areas do beginning teachers seek support¹ over a teaching year in an online environment?; and,
2. What mentoring processes are demonstrated as online support is provided to beginning teachers by academics and beginning teachers themselves?

Different types of data were collected from the project:

- i) Participant tracking statistics collected by the *WebCT* programme,
- ii) Electronic text from the postings, and
- iii) Text from an evaluation questionnaire to all 2005 beginning teachers.

The questionnaire was developed for the project and was trialled with colleagues prior to being mailed out. All 2005 beginning teachers were invited to complete it with one section relevant only for those who actively participated in EdASP. The first section requested biographic information such as “Has the majority of your teaching work been casual, contract, or permanent?” The second section contained items to explore the participant’s understanding of how effective the EdASP program was for them. Other issues such as participant anonymity and its effect upon posting were also included in the questionnaire.

Descriptive statistics were developed using the SPSS (2005) statistical package. The nVivo qualitative program (QSR International Limited, 2002) was used to assist in the analysis of the electronic text. The text postings were analysed for their content, i.e., what was posted. A thematic analysis of questionnaire open-ended comments was completed using nVivo.

The final conceptualisation of the project data is presented below in Figure 1 that highlights *what* was posted — the content — and *how* the postings were made — the process. The content of online support mostly conformed to the online fora topic though additional separate analysis of posts across content categories was undertaken as some posts covered multiple issues.

¹ ‘Support’ means the provision of psychological, professional and/or material resources (see 1-7 in this section) that may assist beginning teachers to deal with situations they found difficult.

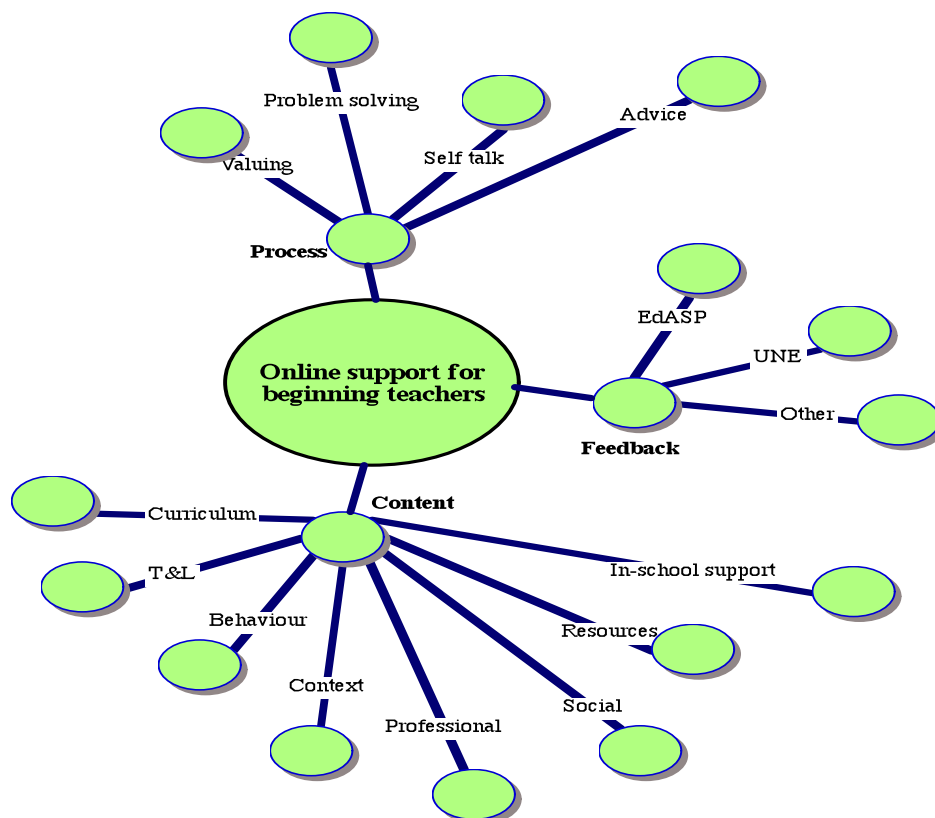


Figure 1: Conceptual Framework for the Education Alumni Support Project

The Nature and Timing of Postings

Not all beginning teachers visited the EdASP site as participation was on an if needed basis and some alumni did not receive notification of the project because their mailing address had not been updated. Inspection of online tracking data showed that a total of 125 teachers logged on, reading and/or posting messages, in both secondary and primary support environments (Table 1). This represents 32.7% of possible participants. A higher percentage of primary beginning teachers logged on (34.97%) compared to the secondary teacher cohort (31.05%).

Sector	Teachers (N ₁)	Teachers Logged on (N ₂ , % of N ₁)	Teacher Contributors (N ₃ , % of N ₂)	Total messages (N ₄ , %)	Teacher Messages (N, % of N ₄)	message per Teacher contributor	Mentor Messages (N, % of N ₄)
Secondary	219	68 (31.05)	26 (38.24)	424 (100)	256 (60.38)	9.85	168 (39.62)
Primary	163	57 (34.97)	20 (35.09)	125 (100)	98 (78.4)	4.9	27 (21.6)
Totals	382	125	46	549	354	7.6	195

Table 1: EdASP Secondary and Primary Teachers Online Tracking Data

Analysis of the evaluative data (Maxwell & Smith 2006) showed further differences in responses to the online environment. There were a number of respondents (N=11) who indicated that they had read but did not post messages. However, some overcame this hesitancy: "Hello all, this is my first posting though I must confess to a bit of sneaky lurking ... reading other people's contributions". Such reluctance may be understandable as learning style and personality vary considerably from one to another. Interestingly twenty per cent (N=5) said that they had written but not sent posts indicating the value of writing for unloading and reflecting also that a some would prefer fora where unloading could be done anonymously. In fact 64% of those who provided evaluative data (N=16) indicated that they would prefer the option of posting anonymously.

Table 1 also shows a difference in the total number of postings (N₄) recorded for the secondary and primary environments. A little over one third of those who logged on posted messages. Specifically 35.09% of primary and 38.24% of secondary participants posted. Approximately two thirds read messages without contributing a message themselves. That the non-posting participants returned to the fora, and data from the questionnaire responses supports this, indicate that they benefited from reading others' posts. As one said: "It was wonderful to read about others' experiences and realise I wasn't alone". This high proportion of non-posters can be understood since posting about one's difficulties in the classroom to peers without being anonymous may be threatening. Also, submitting postings takes more time, whereas reading posts can be quickly achieved.

There are more than twice the number of postings per person in the secondary area overall, than in the primary area. Several reasons could contribute to this including; greater stimulation by mentors (final column, Table 1), the nature of the secondary school experience of beginning teachers and many secondary teachers completed their study by distance education and so have more experience of online discussion. Furthermore, the 60% secondary and 78% primary beginning teacher postings, of all postings, over the year indicate that the objective of encouraging peer support was achieved, and that mentors did not dominate the discussions.

Tracking allowed compilation of posting numbers by the different fora as reported in Table 2 below. Posts were more diverse in the secondary environment with most posts in Curriculum (27%), Behaviour Management (25%), Teaching and Learning (24%) and Coffee Lounge (20%) fora. In comparison participants in the primary sector posted more often in Behaviour Management (45%), Coffee Lounge (32%) and Resources (15%).

A difference between the two sectors was the greater use of the Resources forum by primary teachers as compared to secondary teachers. We understand this to result from primary teachers teaching a range of subjects to the same group of digital generation children producing greater demands for variety and 'fresh' activity ideas. By comparison, secondary teachers have their teacher education tailored around the major and minor subject areas and so should have more specialised knowledge of those subjects. Coffee Lounge discussion was dominated by concerns about securing employment with the Department of Education and Training but also included a variety of social and professional interaction.

Discussion Fora	Secondary	Primary	Total messages
Curriculum	69 (27)	6 (6)	75 (21)
Behaviour Management	64 (25)	44 (45)	108 (31)
Teaching & Learning	61 (24)	1 (1)	62 (18)
Education Contexts	5 (2)	0 (0)	5 (1)
Resources	4 (2)	15 (15)	19 (5)
Coffee Lounge	50 (20)	31 (32)	81 (23)
Feedback	3 (1)	1 (1)	4 (1)
Total	256 (101)	98 (100)	354 (100)

Table 2: Primary and Secondary Beginning Teacher Posts by Fora N(%)

Participant use of the site was tracked on a monthly basis. Figure 2 below presents the secondary beginning teachers' access data or computer requests for files which for this learning management system equated to pages downloaded. Secondary beginning teachers' online tracking data showed that the participation of beginning teachers built quickly to its highest level during the first term of the school year easing at the end of the term and then building again in term 2 but only to about half of the previous term. Participation fell away with a little variation in terms 3 and 4 (Figure 2).

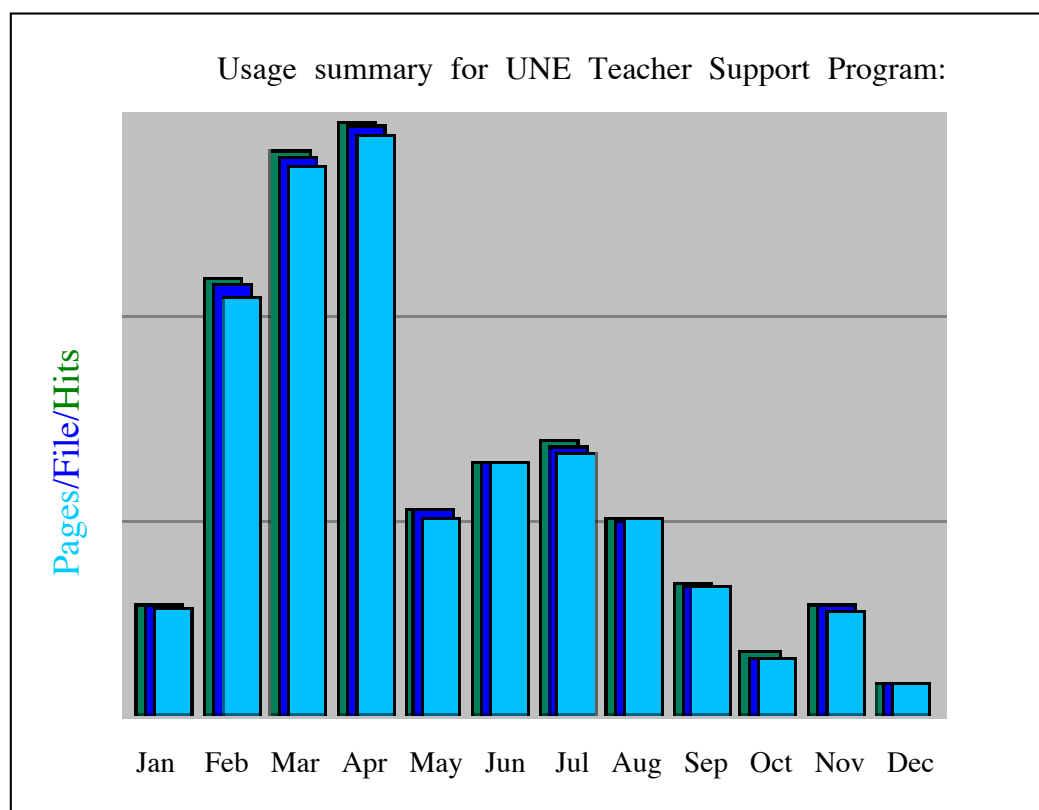


Figure 2: EdASP Secondary Post data over the 2005 school year

Figure 3 below shows the corresponding primary beginning teachers' access data. Once again, the participation of this group of beginning teachers was at its highest during the first term of the school year. Postings halved in the second term with varying amounts of activity through out the remaining terms.

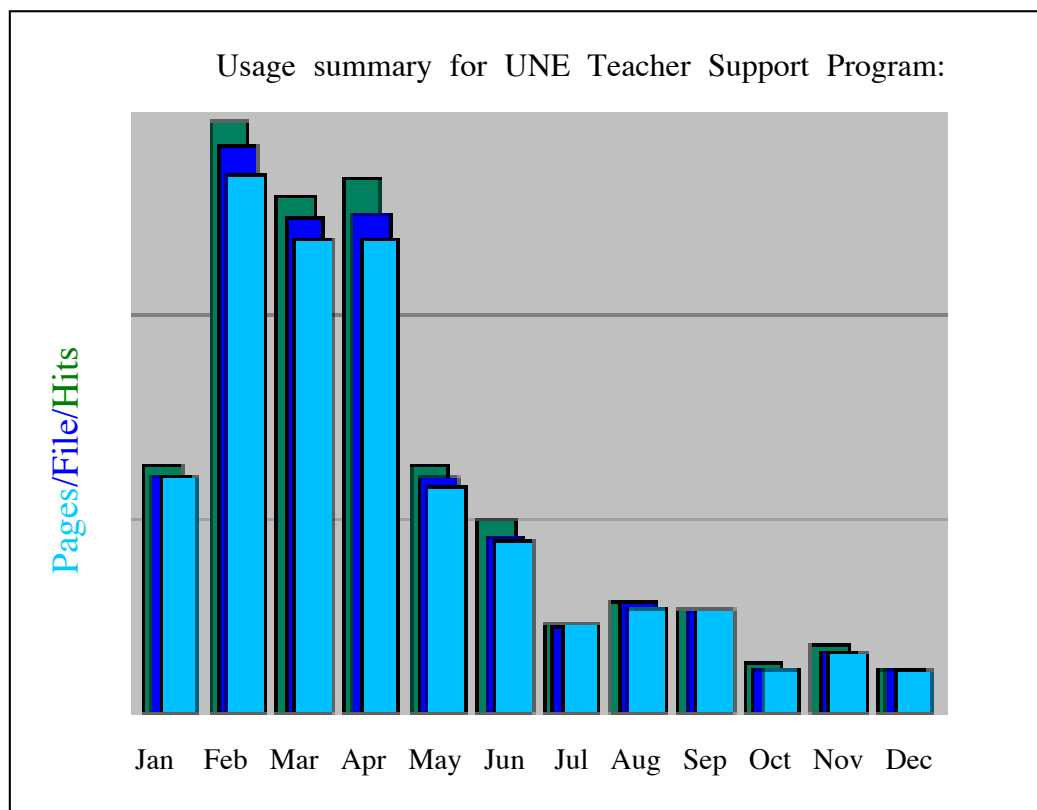


Figure 3: EdASP Primary Post data over the 2005 school year

These data show that term 1 was the busiest time when both secondary and primary beginning teachers posted indicating that the first term of in-service teaching is the time when support is most needed. Their significance goes beyond indicating when support is most required by beginning teachers and point to the process of concentrated professional learning that occurs in the first term of classroom teaching.

The Intensity of Postings

Both primary and secondary beginning teachers posted experiences of challenging behaviours, and reactions to these, that could be described as 'intense'. These data, together with a number of posting examples that follow, may suggest a deficiency in the models of initial training of these participants.

I got to the end of the day and felt a total wipe out and failure;

Yesterday I went to a very tough school and for the first time drove home in tears;

I have a very difficult Year 9 class who are posing a major problem and threat to my sanity;

I have an awful class for Years 8, 9 & 10. A lot in Years 8 & 9 have behaviour and learning difficulties and are very much testing me; and,

However, my difficulty is that I find being a new teacher is quite an isolating experience and there are those moments when I wonder if I'm going well or if I'm just delusional.

As the year progressed, the nature of the earlier posts changed from predominantly behaviour/classroom management issues, to discussions of teaching and learning issues. This change would be consistent with the view that classroom routines and teacher/student relationships take time to be established. Beginning teachers begin to develop relationships, even mentoring relationships, after several months.

These posts reflect the degree of angst and stress some beginning teachers experienced. What are the reasons for these levels of stress? To answer this question the following four reasons summarise stated or implied stressors as expressed in beginning teachers' comments over and above the demands of beginning a new career:

- i) Some were placed in schools that presented cultural and environmental challenges they were not able to manage, for example, they had no specific knowledge of the particular school and/or community cultures;
- ii) Others found that their teaching practices and philosophies were inconsistent with those of the schools in which they were employed;
- iii) A small number were considerably challenged professionally and personally by their role as a teacher. Indeed some were placed in situations that even experienced teachers found difficult;

I seem to have Kindy to Year 2 under some sort of control, but Years 3/4 forget it. What do you do with a class whose male teacher seems to have trouble getting them controlled, so what chance do I have coming in as a female casual? I don't want to turn into a screaming harpy! So far I have resisted the urge to raise my voice, which has surprised a couple of the kids who asked me why I didn't scream like everyone else (*Primary beginning teacher posting*).

and

How does one even mark a roll or issue a basic few sentences to begin a lesson in a room where 30-50[%] of the students are yelling, pushing, shoving, eating, telling each other to 'f... off', spitting out the window on passers by, throwing lollies, broken pencils, cut up rubbers, paper, balls etc. The noise level is barely tolerable let alone at a level able to be heard above!! (*Secondary beginning teacher posting*).

In this case one must question the extent to which any learning can take place in such a hostile environment. One must also wonder how a teacher new to the profession would be asked to take such a class. Responses by mentors to support a person making such a post needed to be very carefully constructed indeed. More generally, these quotations are illustrative of the extremes but, on balance, entry into secondary teaching for this group of beginning teachers appeared more challenging than entry into the primary sector; and

- iv) A number of secondary teachers were teaching subjects external to their areas of expertise and training.

A review of issues raised in the primary sector indicated that the posts tended to focus on multi-grade or difficult classrooms, groups of children, or individual behavioural issues. Issues arising in the secondary environment were associated with more regular classroom management concerns e.g. maintaining classroom control and appropriate noise levels. However, the general classroom concern about how to

successfully integrate teaching and learning strategies in the classroom was common to both environments.

Securing a position

The presumption of student teachers was that they would get a teaching job upon graduation yet the reality showed that only about two thirds do (University of New England, 2006). Around 40% (n=35) of our beginning teacher respondents reported they were in full time work and another 20% (n=16) reported securing contract² work. About 35% (n=29) indicated that they had undertaken casual work, whereas 5% (n=4) reported they had not worked as teachers at all in their first year after graduating. For many beginning teachers a major preoccupation discussed in the 'coffee lounge' forum was communicating effectively with the DET in an effort to secure teaching employment. Generally speaking, the overall theme about securing work was that many teachers played an anxious waiting game. Consequently, many beginning teachers experienced feelings of disappointment and frustration as they continued to seek employment in their first year with limited or no success. Many took the opportunity of casual work in schools whilst others drifted into other employment areas external to teaching. And it is this group that is easily lost to the profession (see Jenkins, Smith & Maxwell, 2009).

Associated with this difficulty was the trend that primary trained people were less able to find permanent employment as easily as secondary teachers. Analysis of the data showed a number of primary beginning teachers experienced a series of employment set backs because of the lack of employment opportunities in their geographical area. Supply and demand realities meant that secondary beginning teachers experienced less delay in securing employment. By way of illustration, a secondary beginning teacher stated:

I finished my Bachelor of Teaching last year and received a job offer one week after I finished my prac [in] business and computing. So it was a fairly easy start to the year as I knew everyone and the program content
(Secondary beginning teacher posting).

However, not all secondary teachers experienced such an easy transition to teaching. When you consider the experiences of beginning teachers and those teachers in full time positions who leave the profession within the first five years of practice, teacher supply remains a serious issue for schools especially in rural areas and some of the harder to staff city schools.

EdASP Support

The tracking and posting data indicated that an online environment impacted differently on individual participants. The online nature of the EdASP project clearly appealed to those who were confident in accessing online environments. The following data relates to the 20% (N=25) of survey respondents who actively participated in the EdASP (see Table 1) and has been integrated with their evaluative

² "Contract": ongoing employment at one school for a set period of time. "Casual": day-by-day employment often notified by a phone call the morning of the work offered.

feedback received online. These participants identified the following issues as most important for them as a beginning teacher: EdASP support; Isolation; and Posting Status.

From those who went online, 76% (n=19) thought that EdASP was effective in providing a support environment for beginning teachers. When asked why, one beginning teacher commented: “We all need support and to know we are not alone”. Another viewed the program as a “way to share ideas, experiences and different teaching techniques.” One person summarised: “EdASP was very beneficial as it allowed me to air my concerns, get feedback, support and some great ideas”, and “I am finding this discussion forum really good and have been part of it from the start. It's a great initiative!! I'm glad more people are participating and hope that it grows and becomes very active”. A small number of beginning teachers reported that EdASP was their *only* induction and/or mentoring program: “EdASP was my beginning teacher mentoring program”.

Isolation

Overcoming professional isolation provided a rationale for EdASP. The beginning teachers were asked whether the EdASP environments had assisted in decreasing different forms of isolation. Table 3³ below reports the teachers’ perceptions of perceived decreases in professional, social and/or geographical isolation.

Form of Isolation	‘Yes’ N (%)	‘No’ N (%)	Total N (%)*
Professional	22(88)	2(8)	24 (96)
Social	8(32)	16(64)	24 (96)
Geographical	2(8)	22(88)	24 (96)

Table 3: Perceptions of decrease in forms of isolation N (%)

* Note: One respondent did not answer each item.

These results indicate that the EdASP online environments were useful for reducing professional isolation, such as “I am at a school where the staff are much older and have been in the profession for a long time, i.e. 2-5 years from retirement. EdASP allowed me to realise that others were experiencing the same”. The online support environment was not effective in reducing geographical isolation but being in contact with peers in similar situations was to some extent useful in decreasing social isolation.

As a result of data from the evaluative questionnaire and the unsolicited comments on the discussion fora, we conclude that for many of those who were actively involved, and for some lurkers, EdASP was an effective support tool sought by the beginning teachers. The program promoted its participants to empower, share and support each other in their first year of professional teaching practice, but could be more effective with the opportunity for anonymous postings (see Maxwell & Smith, 2006).

³ The specific item was: “Was the UNE EdASP useful in decreasing your perceived:

professional isolation, social isolation, (apparent) geographical isolation?

(You may tick more than one box).”

Discussion

In addition to the content of postings and their implications, the model and processes of online support were important outcomes for EdASP. There was some ambivalence in the literature (Brady & Schuck, 2005; DeWert et al., 2003; Schuck, 2003) about the ability of online environments to support large numbers of teachers. This research shows that an online environment can provide support to large numbers of beginning teachers using a peer support model but also that online communication does not suit everyone. The EdASP project also showed that that online support was a means of reducing professional, and to a lesser extent social, isolation. 'Professional' means the full range of demands that professionals face such as curriculum content, teaching-learning cycles and behaviour and classroom management.

Student behaviour and classroom management were important areas requiring support. Behaviour and classroom management has always been the major concern of beginning teachers and begs the question of the efficacy of behaviour management and classroom management courses that these students had received. Additionally we may ask: How can beginning teachers be placed in known, extremely demanding situations where experienced teachers have trouble maintaining control?

The EdASP experience indicated that beginning teachers, who were striving for some or greater control of their professional situations, posted more often in the early weeks and months. Situational understanding of the teaching-learning cycle, subject knowledge required, learning and teaching techniques, and resources were significant to beginning teachers. These findings have clear implications for teacher education programs and beginning teacher induction/support. Specific implications for teacher educators are:

1. Schools and Faculties of Education can be proactive in the transition from university to work. The EdASP online work illustrates one method by which that might take place. Schools and Faculties of Education can re-invigorate the lifelong learning model with an explicit, continuing emphasis that pre-service education is part of a continuum; and,
2. Teacher education cannot prepare beginning teachers for every teaching situation though some models achieve this better than others. The EdASP data indicated categories where support was most sought. In the everyday classroom situation, split-second decisions demand specific, situational knowledge(s) and the ability to know which piece(s) of knowledge to act upon.

Situated learning in the professional context of teaching demands extra attention. For example, at UNE we assume that a range of experience across a sector is beneficial. Might it be that practica repeated at the same school, perhaps even with the same class, may build the kinds of situational knowledge (broadly conceived) that the pre-service teacher can take into an internship or beginning teacher position? Schools could be chosen for the strength of the in-school support available. Further to this, active consideration needs to be given to the 3+1 model as sufficient preparation for the demands of secondary teaching. Further research needs to be done on the relative effectiveness of the different models of teacher education in terms of their preparation for the first year of teaching and more especially the first term of teaching.

Many teachers start their careers with casual teaching positions but appeared to fall outside systemic support provision. Other small groups of beginning teachers, such as one-teacher departments, were identified as cases where they would benefit greatly from particular kinds of mentoring or support. Some younger teachers had

difficulty in establishing a productive professional relationship where teacher peers were considerably older. These groups of beginning teachers appear to need specialised support and more work needs to be done in this regard.

An examination of the placement of some beginning teachers provides some clues as to why their experiences are particularly challenging. Although the numbers of beginning teachers across the State is quite small, online context descriptions from beginning teachers indicated that they were found disproportionately in 'hard-to-staff' schools. In these schools, there are often teacher shortages and absences. Furthermore, it appeared that some schools gave beginning teachers classes that other teachers preferred not to teach. This may be viewed as a difficult and unfair introduction for any beginning teacher to the profession.

Implications for employers concerning the support of beginning teachers (see Maxwell, Smith, Baxter, Boyd, Harrington, Jenkins, Sargeant & Tamatea 2007), that have major implications for educational system policy, can be identified:

1. Online mentoring can assist in fulfilling beginning teacher needs to reduce professional isolation and facilitate resource sharing;
2. Induction needs to be distinguished from support. Induction necessarily prepares for the general context; this is our school and policies, etc. Support results from experiences in/of a specific situation;
3. Education systems and schools may best concentrate general support efforts in the first term of beginning teachers' practice, but still retain access to support over the school year. It may be possible for particular beginning teachers to be identified whose discourses and practices are incongruent with those of classes in which they are teaching. These teachers may need more fundamental and longer term support;
4. Other support mechanisms including relief from some face-to-face teaching for beginning teachers, as previously suggested by Brock (2000) and Dow (2003), particularly in the first term, appear to be important to supplement on-going professional and personal support. Relief is intended to be implemented in NSW DET schools from 2008 (Kelly, personal communication, 2 July, 2007);
5. Beginning teachers need in school mentors with whom they can relate on a professional level as suggested by others (Mullen, 2005);
6. Education employers or professional associations could construct online environments to support beginning teachers who otherwise are unable to access support in schools. Support for rural and remote teachers as well as particular specialist groups such as one teacher departments and librarians would appear viable in the online mode and additionally would support the development of networks; and
7. The placement of casual teachers in front of a class that more experienced teachers find difficult needs to be reviewed. There also appeared to be a lack of in-school support for casual teachers.

All seven implications have relevance to teacher employers and the retention of beginning teachers in the profession. Education systems that take the lead in this regard are most likely to benefit in an environment where it is predicted teachers will be in short supply and likely to remain so. Support for beginning teachers is a NSW DET policy that relies upon the Principal's discretion, yet the EdASP research findings reported here indicate that induction and mentoring were not always provided and rarely for beginning teachers in casual placement.

Conclusions

School- and university-based teacher educators know that beginning teachers migrating to the classroom may be subject to professional and/or personal vulnerabilities. The quality and quantity of the EdASP postings showed that the online support was accessed by those who wanted or needed support over an extended period of time and who sought reassurance that others were having similar experiences.

Historically, support structures for beginning teachers in Australia have not been well developed. However, various advice and recommendations, including the addition of online support mechanisms provided in reports (eg, Brock 2000), have, in the last five years, received considerably more attention in NSW but need further development at school level.

For a small number, the online support from the EdASP project was the only mentoring program available. Online mentoring can achieve support for larger numbers of beginning teachers particularly where peer support has a recognised role. The first term of teaching was the time of greatest support need for beginning teachers. Discussions of particular behaviour, classroom management, related teaching and learning strategies and their resourcing, were the most useful according to beginning teachers.

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