

Exploring connections between the in-field and on-campus components of a preservice teacher education program: a student perspective

JEANNE MAREE ALLEN,*

Central Queensland University, PO Box 122 CQU PO North Rockhampton, Queensland 4701, Australia

DEBORAH PEACH

Queensland University of Technology, Victoria Park Road Kelvin Grove, Queensland 4059, Australia.

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This paper discusses the preservice teacher education practicum experience from the perspective of preservice teachers at a regional Australian university. It locates the practicum in the broader context of work integrated learning and associated principles of good practice. The paper argues that there are some perceived disconnections between the in-field and on-campus components of the teacher education program as well as an endorsement of some aspects of the practicum experience in closing the theory-practice gap. Our research adds to international debate about the balance between theory and practice and contributes a much needed student perspective on these issues. The paper concludes with suggestions on ways to improve the quality of the practicum experience. (*Asia-Pacific Journal of Cooperative Education*, 2007, 8(1), 23-36).

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One of the major and long standing challenges of preservice teacher education programs has been to strike a balance between the theory and practice of the profession. According to Levine (cited in Hartocollis, 2005, p. 2) a widely-held concern is that "one of the biggest dangers we face is preparing teachers who know theory and know nothing about practice." Others suggest that separating theory from practice creates a false dichotomy and that teaching is a profession in which theory is embedded in and inseparable from practice (Schön, 2003). A study of teacher practicums in Australia, New Zealand, and the United Kingdom (Grainger & Taylor, 2004, p. 163) points to the value of the practicum but also highlights tensions between a techno-rational view of teaching and teacher training and the view that teaching is about "crafting individual solutions in response to the indeterminate and infinitely variable problems of practice."

This paper examines the role of the practicum in helping preservice teachers connect in-field and on-campus components of their teacher education program and reports on efforts at one university to respond to concerns expressed in the literature about significant inadequacies in teacher education programs in enabling students to turn the knowledge of their preservice training into action in the workplace (Bates, 2002; Ethell, 1997; Kalantzis, Cope, & Harvey, 2003; Levine, 2006; Louden et al., 2005; Marshall, 1999; Nelson, 2005; Smith, 2000; Sumara & Luce-Kapler, 1996; Tasmanian Educational Leaders Institute, 2002).

This study adds to international debate in a number of ways. First, it examines the practicum in a framework of principles of effective work integrated learning. Second, it contributes to debate about the balance between theory and practice and in particular the place of the

*Correspondence to Jeanne Allen, email: j.allen@cqu.edu.au

practicum in assisting preservice teachers to close a perceived gap between theory and practice. Third, the study gives voice to preservice teachers and responds to the criticism that “ironically, all over the world, candidates’ voices are rarely used to ascertain whether their teacher education program achieves its goals” (Korthagen, Loughran & Russell, 2006, p. 20).

Our discussion starts by locating the practicum in the broader context of work integrated learning and associated principles of good practice. Work integrated learning is a broad term used in the Australian higher education context to describe “educational programs which combine and integrate learning and its workplace application” (Atchison, Pollock, Reeder & Rizzetti, 2002, p. 3). Feedback from participants in this study is then examined in relation to the following principles of good practice in work integrated learning. That is, feedback is examined to determine how effectively the practicum assists in the development of practical skills and the capacity to deal with unfamiliar problems; the level and type of support provided during practicum; the quality of the practicum assessment; and the perceived authenticity of the experience. The paper concludes with suggestions on ways to improve the quality of the practicum experience.

WORK-INTEGRATED LEARNING

As Australia confronts the realities of a skills shortage there is currently much debate in the higher education sector about the importance of work integrated learning programs, how they align with curriculum, how they should operate, and the terminology best used to describe such experiences. For the purposes of this paper we have adopted the following interpretation of work integrated learning. That is, it is an:

umbrella term used to describe all educational programs which combine and integrate learning and its workplace application, regardless of whether this integration occurs in industry or in the university and whether it is real or simulated. (Atchison et al., 2002, p. 3)

A critical aspect of the debate about work integrated learning is the question of transferability and the blurring of boundaries between knowledge acquired within university settings and knowledge acquired within the workplace (Brennan & Little, 2006). Linked to this aspect is concern that universities must do more than simply prepare students for employment. For example, Langworthy and Turner (2006) agree that work integrated learning programs have potential benefits such as increased graduate employment, academic achievement, progressions and retention, increased starting salaries, improved career progression and the development of generic and professional skills. However, they also caution that work integrated learning must do more. That is, work integrated learning programs demand that universities and industry partners “embrace a wider understanding of engaged scholarship that will enable students to develop skills as lifelong learners and community contributors” (Langworthy & Turner, 2006, p. 10).

At a practical level Orrell (2004) claims that effective work integrated learning programs are contingent on effective “partnerships among diverse groups: employers, students, academic teachers, higher education managers, professional bodies and broker agencies (career offices, external placement groups)” (p. 2). She also argues that quality programs give consideration to program management, teaching and supervision, assessment, legal and ethical matters, and partnerships with host organizations. Groenewald (2004) adds that core to successful programs is an integrated curriculum, learning derived from work experience, cultivation of

a support base, and the logistical organization and coordination of the learning experience. The following list of principles of good practice in the design and management of work-integrated learning programs provides a useful guide for universities and industry partners grappling with these issues (Atchison et al., 2002, p. 6):

1. Work-integrated learning activity is integral to the curriculum
2. Work-integrated learning activity is designed to accommodate the needs of different types of learners
3. Specific learning is targeted and assessed including learning how to learn and how to deal with unfamiliar problems
4. The experience is graded to include increasingly varied and novel tasks and problems
5. High quality supervision and/or mentoring are provided
6. Learning targets are both technical/professional and generic (including career exploration, key competencies and/or graduate attributes)
7. All parties are prepared for the activity and know and understand their roles
8. The experience develops learners' career plans and transition management skills
9. The activity is evaluated, involving all participants
10. The activity has high level support; and
11. The activity helps to build partnerships with enterprises, the industry and/or profession.

In this study we derived survey questions from these principles in order to gain feedback from preservice teachers on the quality of their field experience and perceptions of the connections between the in-field and on-campus components of the program.

In teacher education and in other discipline areas (see Thomas & Goc, 2004; Jones & Linn, 2004; Ferkins & Fleming, 2004), part of the problem in work-integrated learning or practicum experience lies in the transfer of theory to practice and the connections or disconnections between practicum experiences and university studies. Coll and Zegwaard (2006) point out that the changing nature of the world of work and the capacity of universities to prepare adaptable and innovative graduates is a concern to government. They add that there is an urgent need to try and understand the future workplace into which graduates will emerge and the skills that will be required. A radical rethinking and the development of new models that acknowledge the relationships between all the participants is also required. The next section describes the context of this study and the methods used to gather data about a new model of teacher education introduced in an Australian university.

THE PRESERVICE TEACHER PRACTICUM

In 2001, a new model of preservice teacher education was introduced at a regional Australian university in an attempt to challenge the view that theoretical underpinnings, provided through on-campus work, will be automatically translated by student teachers and beginning teachers into actionable sequences in the learning site (Lynch, 2003). This new program attempts to provide a pedagogic scaffold that prepares future teachers with the foundational knowledge, as well as the requisite skills, techniques and pedagogical strategies, necessary to be able to teach effectively, upon graduation. The program relies heavily on partnership arrangements with employers and schools and the shared understanding that teacher education is no longer a university problem but a joint schooling and university responsibility (Smith, 2000).

The practicums are seen as gateways that are situated throughout the program to target a range of standards against which students must demonstrate competence in order to proceed in the program. They are structured in such a way that students must demonstrate their understanding and ability to apply important knowledge, in particular, pedagogical strategies. The program provides 111 days of embedded professional experiences, comprising 100 days' experience in schools (this exceeds the minimum requirements as set down by the state authority). The on-campus component of the practicum (generally a two hour, weekly tutorial) aligns with the principle that effective work-integrated learning is integral to the curriculum and involves targeted and assessed learning.

THIS STUDY

This study used a qualitative case study approach to explore connections between the in-field and on-campus components of the program by asking second-year students about their recently completed practicum experience. Second-year students who had recently completed the second practicum were invited to participate by completing a survey comprising six open-ended questions. We targeted these students because we anticipated that they would have clear memories of their recent field experiences. A verbal invitation to participate was extended during lectures and tutorials. Students were advised of the voluntary nature of the project and assured of anonymity (pseudonyms were used and any identifying details removed from the transcripts).

Of 42 students enrolled in the course 34 agreed to participate - representing a response rate of 81%. Those who agreed to participate were given an information sheet and asked to complete an informed consent form. The survey comprised open-ended questions derived from principles of good practice in work-integrated learning programs (Atchison et al., 2002, p. 6). That is:

1. How did your recent practicum help you to put into practice strategies you had learned in class?
2. In your recent practicum experience how did you deal with unfamiliar problems? Do you feel more confident as a result?
3. Can you identify specific learnings that were targeted and assessed during your practicum experience?
4. What evidence was there that all parties involved in the practicum experience were prepared for the activity and knew and understood their roles?
5. How would you describe the mentoring and support that you were provided during the experience?; and
6. The practicum experience is supposed to be an authentic learning experience. Was it? Why?

What follows is an analysis of student feedback in terms of key themes that emerged. Key themes were the effectiveness of the practicum in helping students to develop practical skills and learn to deal with unfamiliar problems; support of the practicum experience; assessment of the practicum experience; and authentic learning.

PRACTICAL SKILLS

Teacher education studies attest to a disparity between the theory presented in preservice programs and practice in the workplace (Cochran-Smith, 2005; Liston, Whitcomb & Borko,

2006; Neville, Sherman & Cohen, 2005); “‘knowing that’ and ‘knowing how’ can be worlds apart” (McManus, 2002, p. 18). Critics of teacher education are quick to point out deficiencies in program design and delivery when it appears that theoretical knowledge and understandings have been prioritized over learning practical skills (Liston et al., 2006). However, a number of participants in this investigation gave very positive responses when asked how their recent practicum experience had assisted them in putting into practice strategies that they had learned in class.

Of 34 students, 24 commented on how they valued the opportunity to practice strategies in the classroom, as typified in this comment by one participant: “I felt the recent [practicum] I completed allowed me a great opportunity to put into practice the strategies we have been focusing on. I really enjoyed the experience.” Another student wrote that “I enjoyed ‘testing’ strategies throughout my practicum as it allowed me to determine which worked for me.”

Responses also revealed that some participants felt they gained new understandings of the strategies learned on campus once they experienced them in the practical setting. As one student noted,

Several strategies I had learnt in class, e.g., behavior management, I thought I would never get a chance to use. But by being given the opportunity to go and teach in a school and use these things I had learnt in class it only reinforced what I knew and improved my teaching skills.

Likewise, another student remarked that the practicum “allowed me to see the theory in practice. I was able to use the strategies and practices also. It allowed a better understanding. The light bulb went ping!”

This opportunity for experimentation with strategies hitherto confined to campus discussions and assignments was clearly important for many participants. Grainger and Taylor (2004) assert that if teaching is represented in the practicum as a technical-rational occupation, learning from the practicum will be routinized and underpinned by behavior learning theory. They further identify that, if the practicum is a time of creative experimentation and risk taking, then an infinite number of strategies for problem-solving will be developed and tried out. There is evidence in this study that preservice teachers involved in this study developed their capacity to reflect on practice and to make connections between the on-campus and in-field components of their program. Indeed, the issue of reflective practice emerged as an important feature for participants in successfully implementing strategies in the practical setting. One participant wrote that,

Prior knowledge that was learnt in class could be used in practice during [practicum] and the [practicum] booklet provided the framework to reflect on the knowledge we had used in class. I was thinking and developing on what I had learnt in class, I was better equipped for the [practicum].

Pursuing a similar theme, another student expressed his/her appreciation at being given the freedom by the supervising teacher “to use my chosen strategies [so that] I was able to critically reflect on what worked, what did not work, and why.”

The capacity and willingness to reflect on and subsequently adapt and modify practice is documented in the literature as an important attribute in learners. Coll and Zegwaard (2006),

in their study of perceptions of desirable graduate competencies for science and technology graduates, found that despite the emphasis on cognitive and technical skills, the single most desirable skill is the ability and willingness to learn.

Several participants clearly valued the practical experience acquired during the practicum experience over the theoretical component of their training. According to one student, skills taught at university are “just imagined and planned for” while the practicum was “real life practice.” Another commented that “I found that I learnt more from prac than I did at uni” adding that the strategies and frameworks “had more relevance at school than they did in a theoretical assignment.”

Two students however expressed dissatisfaction at the lack of freedom they were accorded by their supervising teacher. One participant in particular expressed grave concerns about this aspect of the practicum:

We have to toe the line in [practicum]; we have to follow that teacher’s routines, teaching style (usually no group work), behavior management strategies, etc. We are just puppets in other teachers’ classrooms. But there is no better solution so we persevere.

The literature is instructive in this regard. Yarrow and Millwater (1997) contend that the professional teacher is one who exercises intellectual autonomy in reaching reasoned, instructional decisions. According to these commentators, the best way to develop this in preservice teachers is to join with them as equal partners, in the study of the many dilemmas of teaching and learning that arise continuously in the real-life work setting of their schools, with a view to arriving at a reasoned set of options for action.

Learning to deal with unfamiliar problems

Respondents in this study gave a variety of answers when asked how they dealt with unfamiliar problems. However, the majority of participants mentioned that they sought advice from their supervising teacher, either as their only means of dealing with problems or as one of several strategies. Generally, they found this to be a positive way of dealing with problems, in that they were able to benefit from the more experienced teacher’s knowledge and proficiency to improve their own practice. Typical responses included:

I did the best I could in each situation and spoke to my teacher on how to improve, as he has much more experience and knew many things about the field I want to enter.

I dealt with unfamiliar problems by discussing with the [supervising teacher] (or other teachers) possible strategies. I offered my ideas and strategies which were usually the backbone to our final solution/strategy.

I dealt with an unfamiliar problem as best as I could, being unfamiliar I usually directed a nearby teacher to the problem. Afterwards I would ask the teacher what they did to diffuse the problem and why they chose to use particular strategies. I would then implement these strategies if a similar problem occurred.

Some participants mentioned the university program and staff when relating ways in which they dealt with unfamiliar problems. Several expressed feelings of dissatisfaction. For example, one participant noted that the supervising teacher was “very easy to talk to unlike

some lecturers.” Another felt that the program had not provided enough preparation for the practicum: “Going into my prac I felt that I had no [behavior management] skills whatsoever and this was evident in the first few lessons I taught.” Other respondents found the on-campus component helpful. One mentioned that problem-solving strategies studied on campus were useful, while another found the material studied during campus tutorials to be helpful when faced with unfamiliar problems.

Almost a third of the participants acknowledged the value of networking and sharing when dealing with unfamiliar problems. This meant generating conversations with members of the school community other than the supervising teacher alone, as captured in this statement: “by having a go – trying, being persistent, then reflecting and networking with other teachers/mentors to become more familiar.” Sharing problems, this participant realized, provided a “solution that you may not have seen if you kept the problems to yourself.”

Respondents gave differing views about how much support should be provided in times of difficulty. While one student teacher commented that “I had one really bad day where my teacher just stood back and watched all unfold,” this respondent later acknowledged that it was a valuable learning experience: “I really learnt the value of evaluating and reflecting about teaching practices and the set up of the day.” Another respondent appreciated the opportunity to deal with problems, stating that “at times my supervising teacher let me go to see how I could handle it, and gave me great examples on how to deal with it.”

Many participants wrote that reflective practice helped them deal with unfamiliar problems. One student noted that there were “times when I had to really stop and consider what the best approach would be.” These comments suggest that despite some problems the practicum experience enabled many students to develop a wider understanding of the profession and the importance of life-long learning.

SUPPORTING THE PRACTICUM EXPERIENCE

According to Britzman (2003), the disconnection between field and on-campus components of preservice programs can result in a devaluing by preservice teachers of aspects of their theoretical learning. However Millwater and Yarrow (2001) found that preservice teachers, supervising teachers and mentors value highly the on-site presence and active involvement in school-based practicum programs of university teachers. The preservice teachers we approached reported a range of experiences in relation to the level and type of support they received from both university and school-based staff.

In relation to university support one participant commented that “many times during my [campus-based] practicum course I can recall the tutor stating that the teacher would understand the situation – which often at times they did not.” Another student reported that both student and school supervisor felt lost and unsure of when a university representative would make contact: “The university representative called the third last day of my prac which we saw as useless because I had already been there for three and a half weeks without contact [from the university].” One participant claimed that both student and classroom teacher were unsure of what was expected and suggested that more time could have been spent at university being “instructed or shown through the prac book more thoroughly.” In

this comment the student's disappointment regarding university support for the practicum experience is evident:

NO support was forthcoming while I was on either prac and no feedback once it finished. All that effort and work for [the prac] folder and uni don't even look at it.

Another concern related to the balance between university and practicum demands on student time: "I did not have any time between handing in assignments, doing pre-prac days and starting with my [placement]. This made it difficult when designing the unit plan and other lessons." This student missed some university classes in order to prepare practicum and suggested that workload requirements be made much clearer "so that everyone has equal work to do."

Most students (27 of 34 respondents) reported that the level of support they received from staff at the practicum site was helpful using terms such as "very supportive," "very accommodating," "extremely helpful," and "very experienced." For example:

I was fortunate enough to have a really great [practicum supervisor] who took the time to mentor me in my teaching skills throughout my whole [prac].

However, another student claimed that the first two weeks of practicum were "hell":

I basically sat in the back of the classroom observing. This was frustrating because it was obvious my [supervising teacher] needed an extra pair of hands occasionally. We had a chat and so she gave me 5 LPs [lesson plans] to do for Monday and then on Monday morning she changed the structure so I started with 2 lessons that I didn't even have plans made up for. She set me up to fail and she loved it.

And for one student the supervising teacher was "often too busy to properly explain things." In another experience the student did not feel that the supervising teacher knew what to do with her/him.

My teacher was very relaxed sometimes it wasn't apparent they knew what to do with me! There were never any set daily activities it was very 'let's see where the day takes us'. This was difficult at first. However, it was also a great insight as to how to fly by the seat of your pants.

Clearly emerging from these data is the importance of the supervising teacher's role in the practicum experience. Yet whilst the contribution of the supervising teacher is extremely powerful in the professional development of the preservice teacher these findings also point to the importance of the role of university staff and the connections between both (Grainger & Taylor, 2004).

ASSESSMENT OF PRACTICUM LEARNING

Any perceived disconnections between the university and the school augurs poorly for effective work-integrated learning practice. Coll and Zegwaard (2006) acknowledge that stakeholders in work-integrated learning programs may hold different views on desirable graduate competencies but they argue that understanding these different views is an essential prerequisite to pedagogical design. Some responses, however, point to a lack of understanding by different stakeholders about desirable graduate competencies.

In many cases, and perhaps inevitably, preservice teachers identified specific learnings as those emphasized by their supervising teacher. As one participant stated succinctly, “my [supervising teacher] called the shots” and another, “not a lot of practical examples are given at uni so I relied a lot on my teacher’s suggestions.” Grainger and Taylor (2004, p. 161) highlight that “it is vital not to underestimate the significance of the classroom teacher’s contribution to the learning outcomes for student teachers or the range of complex issues such as quality control and consistency.”

Hodges, Smith and Jones (2004, p. 62) argue that good assessment in cooperative education (or work-integrated learning) provides tangible benefits to not only students but also employers and educational institutions and that sound assessment practices focus on “what students can do and what they subsequently do with what they learn: “Preservice teachers in this study identified a wide range of specific learnings that were targeted and assessed during their practicum experience. Half of the participants mentioned management skills, such as time management, classroom management and behavior management. The latter featured more than any other skill, with approximately one third of participants commenting upon the behavior management strategies that they had implemented. Indeed, one participant listed managing behavior as his/her primary objective:

My main focus for my most recent practicum was behavior management and keeping learners on task. As I developed a rapport with the learners immediately there were only two learners who would test me. By the end of the practicum I was able to keep them on task. I learnt to do this by constantly reflecting on my behavior management skills and observing the [supervising teacher]. Every other aspect of my teaching I felt confident with.

Interestingly, behavior management is not listed as one of the primary learnings targeted by the university during this particular practicum. It is nonetheless an implicit skill in most teaching tasks. Aligned with this skill is the development of a supportive classroom environment and positive relationships with students, which was identified by some participants as a targeted feature of their practicum experience. One participant wrote that “building positive relationships with the students was something my teacher put a focus on for me,” while another valued the opportunity to build “relationship with students.”

The implications for work-integrated learning is that if assessment is to be authentic, it is important that the employer and university representatives discuss their shared workplace competencies as well as separate or complementary ones to ensure that experiences and assessment from both perspectives are as authentic as possible.

AUTHENTIC LEARNING

The “gap” between the realities of teaching and on-campus courses becomes evident from the first practice teaching session undertaken by preservice teachers (Smith & Moore, 2006). It is little wonder then, as identified by Korthagen et al. (2006), that the evidence suggests that, when making instructional decisions, teachers tend to devalue and, in many cases, rarely draw upon the kind of theory that is presented to them in their preservice training. However, in this study we found that many students actually found their on-campus learning to be useful.

Participants were asked about the authenticity of the on-campus courses and in-field components of the practicum experience. Interestingly, several students explained how they felt the practicum helped to close the gap between theory and practice:

...it helped cement my prior knowledge (theories and strategies learnt in class) through practice. Also I came out of my prac feeling like I had made the right decision regarding my career.

And another noted,

I think that pracs make you see teaching close up and you are able to relate to it in your own way. Also I feel that it has engaged me more with my current subjects as I have a context to relate it to.

Similarly,

The [practicum] for me put everything into perspective. Theories are not just written in books. I was able to put everything into context.

However, for other students the experience appeared to widen the theory practice gap between university studies and the “real world” of teaching:

Sitting in a tute room listening to theories means nothing to me. I need to be involved. I find I learn the bare minimum in class (feels like that when doing assessment) but on site when a lesson is successful you know you did well.

Similarly,

I feel a lot of the theory that we are taught and made to learn is not helpful at all and the time could be used in a course that will help you when you are actually teaching e.g., resources, planning, tips from real teachers.

One student suggested that teacher training should be apprenticeship based:

We need to be in the environment more! It should be an apprenticeship based course. The uni courses are not a realistic approach to the classroom. We have no way to experiment with the knowledge we learn.

Coll and Zegwaard (2006) agree that if students are to develop enthusiasm and be acculturated into the chosen profession then they need to spend more time in communities of practice such as schools. Boud (2001) cautions, however, that whilst spending considerable time in the workplace provides opportunities it also presents considerable challenges for learners. On the surface it is a “seductive option” but the reality is that learners have to deal with the complexities of being both worker and learner and of having increased responsibility in the learning process. Ewing, Grieshaber and McArdle (2006) add that if preservice teachers are to gain deeper levels of engagement in the act of teaching and linking this with theoretical perspectives then beliefs about what counts as learning, where learning occurs, and how it occurs must be challenged.

CONCLUSION

Principles of good practice in work-integrated learning were used to frame this study. The effort required to establish effective work-integrated learning programs cannot be under estimated. In the teacher education program referred to in this paper significant time, effort and commitment have gone into the development of a model that “consciously and directly attempts to bridge the theory-practice gap” (Smith & Moore, 2006, p. 20). With respect to the practicum component of the program, students report both strengths and weaknesses in the way that the in-field and on-campus components connect. Their comments are summarized in Table 1.

Suggestions from participants on ways to improve the practicum experience related to improved on-campus preparation (e.g. more thorough attention to the practicum book) and better in-field organization and communication (e.g. daily overviews and meetings with supervising teachers); regular communication between school, university, and student; organized introductions to school and staff; and timetabling of preservice teachers with school supervisor. The importance of establishing and maintaining connections between university and school staff was a salient feature in the student responses. Findings from the student feedback will be used to support changes in the preservice program that provided the context for this study. Most notably, more attention will be given in university tutorials to preparing students for practicum experiences and a renewed focus will be developed on fostering links between university and school staff.

Clearly evident from the students’ responses is that the preservice program aligns well with some principles of work-integrated learning, but falls short of conforming with some others. For example, respondents were generally satisfied that specific learning had been targeted in their practicum experience and also that the practicum experience helped them learn to deal with unfamiliar problems. Conversely, they were critical of the quality of supervision provided by university staff and believed that the assessment of their experience in schools was hindered by a lack of meaningful communication between the university and school staff. What emerges clearly from the literature and our study is that the issue of the theory-practice gap is neither minor nor benign. This study lends support to a number of other studies that call, first, for more empirical evidence to demonstrate the link between student teachers’ learning and their practices in the classroom and, second, for ways of better preparing and supporting students for and during the practicum experience.

REFERENCES

- Atchison, M., Pollock, S., Reeders, E., & Rizzetti, J. (2002). *Work-integrated learning*. Melbourne, Vic.: RMIT University.
- Bates, R. (2002). Australian teacher education: Some background observations. *Journal of Education for Teaching*, 28(3), 217-220.
- Boud, D. (2001). *New practices for new times*. In D. Boud & N. Solomon (Eds.), *Work-based learning: A new higher education?* Buckingham, UK: The Society for Research into Higher Education & Open University Press.
- Brennan, J. & Little, B. (2006). *Towards a strategy for workplace learning*. Report to HEFCE by CHERI and KPMG. Retrieved June 06, 2006, from http://www.hefce.ac.uk/pubs/rereports/2006/rd09_06
- Britzman, D. P. (2003). *Practice makes practice: A critical study of learning to teach* (rev. ed.). Albany, NY: State University of New York Press.
- Cochran-Smith, M. (2005). Studying teacher education: What we know and need to know. *Journal of Teacher Education*, 56(4), 301-307.
- Coll, R.K., & Zegwaard, K. (2006). Perceptions of desirable graduate competencies for science and technology new graduates. *Research in Science & Technological Education*, 24(1), 29-58.

TABLE 1

Summary of students' responses regarding the connections between in-field and on-campus components of the preservice program

Practical skills	Very positive response Opportunity to “try out,” “test” strategies learned on campus and “to see theory in practice” Gained new understandings of strategies learned on campus Importance of reflective practice emerged Valuing of field experience, “real life practice” over on-campus learning, “just imagined and planned for”
Learning to deal with unfamiliar problems	Generally sought advice from supervising teachers Found this a positive way of dealing with problems and believed their own practice improved accordingly Acknowledged value of networking and sharing; collaborative practice Some dissatisfaction with university program and staff involvement Importance of reflective practice Significant “yes” to whether they had improved in confidence
Supporting the practicum experience	A range of experiences Positive response regarding support from staff in schools; “very supportive”; “extremely helpful” University staff should spend more time acquainting students with practicalities of the practicum, such as the prac book Lack of university support in schools
Assessment of practicum learning	A wide range of learnings Management skills, in particular, behavior management; catering for diversity; pedagogical strategies Concern about lack of connectedness between learning on campus and in the field; what’s the relevance if the schools aren’t using it?
Authentic learning	For some, it helped to close the theory-practice gap; for others the gap between university studies and the “real world” became wider Contextualized learning

- Ethell, R.G. (1997). Reconciling propositional and procedural knowledge: Beginning teachers' knowledge in action. Unpublished doctoral thesis, Griffith University, Brisbane.
- Ewing, B., Grieshaber, S., & McArdle, F. (2006, September). Community engagement: linking preservice education students with teachers through work-integrated learning. Paper presented at Australian Collaborative Education Network Conference, Griffith University: Gold Coast, Qld.
- Ferkins, L., & Fleming, J. (2004). Cooperative Education in sports studies. In R.K. Coll & C. Eames (Eds.), *International handbook for cooperative education: An international perspective of the theory, research and practice of work-integrated learning* (pp.). Boston: World Association for Cooperative Education.
- Grainger, S., & Taylor, N. (2004). Cooperative education in teacher education. In R.K. Coll & C. Eames (Eds.), *International handbook for cooperative education an international perspective of the theory, research and practice of work-integrated learning* (pp.). Boston: World Association for Cooperative Education.
- Groenewald, T. (2004). Towards a definition for cooperative education. In R.K. Coll & C. Eames (Eds.), *International handbook for cooperative education an international perspective of the theory, research and practice of work-integrated learning* (pp. 17-25). Boston: World Association for Cooperative Education.
- Hartocollis, A. (2005). Who needs education schools? What colleges teach. What teachers need to know, and why they're not the same [Electronic Version]. *New York Times Education Supplement* from <http://www.nytimes.com/2005/07/31/education/edlife/hartocollis31.html?ei=5088&en=1dd897f92b3d902b&ex=1280462400&partner=rssnyt&emc=rss&pagewanted=print>.
- Hodges, D., Smith, B., & Jones, P. (2004). The assessment of cooperative education. In R.K. Coll & C. Eames (Eds.), *International handbook for cooperative education: An international perspective of the theory, research and practice of work-integrated learning* (pp. 49-65). Boston: World Association for Cooperative Education.
- Jones, P. & Linn, P.(2004). Cooperative education in liberal arts. In R.K. Coll & C. Eames (Eds.), *International handbook for cooperative education: An international perspective of the theory, research and practice of work-integrated learning* (pp. 123-130). Boston: World Association for Cooperative Education.
- Kalantzis, M., Cope, B., & Harvey, A. (2003). Assessing multiliteracies and the New Basics. *Assessment in Education: Principles, Policy and Practice*, 10(1), 15-26.
- Korthagen, F.A., Loughran, J.J., & Russell, T. (2006). Developing fundamental principles for teacher education programs and practices. *Teaching and Teacher Education*, 22(8), 1020-1041.
- Langworthy, A., & Turner, T. (2006, September). Learning for the workplace and beyond: The challenge for university-community engagement. Paper presented at Australian Collaborative Education Network Conference, Griffith University: Gold Coast, Queensland.
- Levine, A. (2006). Educating school teachers. Washington, DC: The Education Schools Project. Retrieved September 26, 2006, from http://www.edschools.org/pdf/Educating_Teachers_Report.pdf#search=%22%20levine%20%22educating%20school%20teachers%22%22
- Liston, D.P., Whitcomb, J.A., & Borke, H. (2006). Too little or too much: Teacher preparation and the first years of teaching. *Journal of Teacher Education*, 57(4), 351-359.
- Louden, W., Rohl, M., Gore, J.M., Greaves, D., McIntosh, A., Wright, R., Siemon, D., & House, H. (2005). Prepared to teach: An investigation into the preparation of teachers to teach literacy and numeracy. Retrieved July 19, 2006, from http://www.dest.gov.au/sectors/school_education/publications_resources/profiles/prepared_to_teach.htm.
- Lynch, D.E. (2003). So you want to make a real difference: An introduction to learning management for the teacher in training. Monograph, Central Queensland University.
- Marshall, C.S. (1999). Constructing knowledge about teaching and learning in early childhood teacher education because of a partnership. *Education*, 119(3), 400-405.
- McManus, C. (2002). *Right hand, left hand: The origins of asymmetry in brains, bodies, atoms and cultures*. Cambridge, MA: Harvard University Press.
- Millwater, J., & Yarrow, A. (2001). School and university partnership: Professional development schools. ATEA Conference Proceedings, *Teacher Education: Change of heart, mind and action*.
- Nelson, B. (2005, 28 February). Vision of nation working as one. *The Australian*, p. 12.
- Neville, K., S., Sherman, R., H., & Cohen, C., E. (2005). Preparing and training professionals: Comparing education to six other fields. Retrieved November 02, 2005, from <http://scholar.google.com/scholar?q=Preparing+and+training+professionals%3A+Comparing+education+to+six+other+fields&ie=UTF-8&oe=UTF-8&hl=en&btnG=Search>
- Orrell, J. (2004). Work integrated learning programmes: Management and educational quality. An Australian University Quality Audit (AUQA) Occasional Publication. Retrieved September 23, 2006, from <http://www.auqa.edu.au/auqf/2004/program/day2.htm>
- Schön, D.A. (2003). *The reflective practitioner: How professionals think in action*. Aldershot, UK: Ashgate.
- Smith, R. (2000). The future of teacher education: Principles and prospects. *Asia-Pacific Journal of Teacher Education*, 28(1), 7-28.
- Smith, R., & Moore, T. (2006). The learning management concept. In R. Smith & D. E. Lynch (Eds.), *The rise of the learning manager: Changing teacher education*. Frenchs Forest, NSW: Pearson SprintPrint.

- Sumara, D.J., & Luce-Kapler, R. (1996). (Un)Becoming a teacher: Negotiating identities while learning to teach. *Canadian Journal of Education*, 21(1), 65-83.
- Tasmanian Educational Leaders Institute. (2002). An ethic of care: Effective programmes for beginning teachers. Retrieved July 11, 2006, from http://www.dest.gov.au/sectors/school_education/publications_resources/profiles/ethic_of_care.htm.
- Thomas, R., & Goc, N. (2004). Cooperative education in journalism studies. In R.K. Coll & C. Eames (Eds.), *International handbook for cooperative education: An international perspective of the theory, research and practice of work-integrated learning* (pp. 151-158). Boston: World Association for Cooperative Education.
- Yarrow, A., & Millwater, J. (1997). Evaluating the effectiveness of a professional development course in supervision and mentoring. *British Journal of In-Service Education*, 23(3), 349-361. .

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The Asia-Pacific Journal of Cooperative education (APJCE) arose from a desire to produce an international forum for discussion of cooperative education issues for practitioners in the Asia-Pacific region and is intended to provide a mechanism for the dissemination of research, best practice and innovation in work-integrated learning. The journal maintains close links to the biennial Asia-Pacific regional conferences conducted by the World Association for Cooperative Education. In recognition of international trends in information technology, APJCE is produced solely in electronic form. Published papers are available as PDF files from the website, and manuscript submission, reviewing and publication is electronically based.

Cooperative education in the journal is taken to be work-based learning in which the time spent in the workplace forms an integrated part of an academic program of study. Essentially, cooperative education is a partnership between education and work, in which enhancement of student learning is a key outcome. More specifically, cooperative education can be described as a strategy of applied learning which is a structured program, developed and supervised either by an educational institution in collaboration with an employer or industry grouping, or by an employer or industry grouping in collaboration with an educational institution. An essential feature is that relevant, productive work is conducted as an integral part of a student's regular program, and the final assessment contains a work-based component. Cooperative education programs are commonly highly structured and possess formal (academic and employer) supervision and assessment. The work is productive, in that the student undertakes meaningful work that has economic value or definable benefit to the employer. The work should have clear linkages with, or add to, the knowledge and skill base of the academic program.

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The editorial board welcomes contributions from authors with an interest in cooperative education. Manuscripts should comprise reports of relevant research, or essays that discuss innovative programs, reviews of literature, or other matters of interest to researchers or practitioners. Manuscripts should be written in a formal, scholarly manner and avoid the use of sexist or other terminology that reinforces stereotypes. The excessive use of abbreviations and acronyms should be avoided. All manuscripts are reviewed by two members of the editorial board. APJCE is produced in web-only form and published articles are available as PDF files accessible from the website <http://www.apjce.org>.

Research reports should contain; an introduction that describes relevant literature and sets the context of the inquiry, a description and justification for the methodology employed, a description of the research findings-tabulated as appropriate, a discussion of the importance of the findings including their significance for practitioners, and a conclusion preferably incorporating suggestions for further research. Essays should contain a clear statement of the topic or issue under discussion, reference to, and discussion of, relevant literature, and a discussion of the importance of the topic for other researchers and practitioners. The final manuscript for both research reports and essay articles should include an abstract (word limit 300 words), and a list of keywords, one of which should be the national context for the study.

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