LITERATURE SYNTHESIS

ADDRESSING REQUIREMENTS FOR

TEACHER EDUCATION PROGRAMMES

Dr Peter Lind & Deborah Wansbrough

2009

Table of Contents

Literature synthesis addressing requirements for teacher education programmes

1.0   Introduction

The Education Standards Act (2001) requires the New Zealand Teachers Council (the Council) to

    (e)   establish and maintain standards for qualifications that lead to teacher registration:

    (f)   conduct, in conjunction with quality assurance agencies, approvals of teacher education programmes on the basis of the standards referred to in paragraph (e): (Section 139AE Functions of the Teachers Council)

Since 2002, the Council has approved and monitored initial teacher education (ITE) programmes that lead to teacher registration. In the New Zealand context, these programmes are delivered by a variety of providers: universities, colleges of education, polytechnics/institutes of technology, wānanga and a variety of private training establishments (PTEs) and prepare teachers for the early childhood, primary and secondary sectors. In this, the Council works in conjunction with the three other quality assurance agencies:

- the New Zealand Qualifications Authority (NZQA) for programmes from wānanga and PTEs;
- the Institutes of Technology and Polytechnics Quality (ITPQ) for programmes from institutes of technology and polytechnics; and
- the Committee on University Academic Programmes (CUAP) for programmes from the universities.

For the approval, re-approval and monitoring of ITE programmes, the Council has guidelines so that ITE providers can prepare documentation of their proposed programme to submit to the Council and the appropriate quality assurance body. Except for the universities, the quality assurance bodies manage the approval panel and write a report of the approval process alongside the report from the Council representative. In the case of university ITE programmes, the panels are currently managed by the Council. The reports from the panels are processed by the Council's Manager of Teacher Education who presents the panel's recommendations to the Council for the approval or reapproval of the ITE programme.

1.1   Graduating Teacher Standards

In 2007, the Council launched national standards in response to a call from the teaching profession for more certainty in the quality of all graduates from all teacher education programmes. The standards recognise the right and responsibility of teachers to determine who enters and remains in the profession.

From January 2008, teacher education providers have been expected to show that new teaching programmes align with the Graduating Teacher Standards (GTS) if they are to gain approval to run their programmes.

1.2   ITE Guidelines

The Council's written guidelines for the approval of ITE programmes were last reviewed in 2005. In the light of the Council's development of the GTS, the Council has begun a review of these processes with the aim to improve their effectiveness. The first part of this review sought stakeholder feedback and a comparison with other teacher registration authorities and similar national professional bodies. This review was conducted by Healthy Solutions. As part of their review, the authors compared the Council's processes with seven other professional bodies:

- New Zealand Registered Architects Board;
- Nursing Council of New Zealand;
- Institute of Professional Engineers New Zealand (IPENZ);
- Teaching Australia – the Australian Institute for Teaching and School Leadership;
- Queensland College of Teachers;
- Australian Nursing and Midwifery Council Incorporated (ANMC); and
- Australian Nursing and Midwifery Council Incorporated in the Australian Capital Territory (ACT).

Healthy Solutions also benchmarked the Council's processes against the guidelines provided by *The International Network of Quality Assurance Agencies in Higher Education* (INQAAHE), an international body to which a number of New Zealand quality assurance bodies belong. These guidelines operate across bodies involved in approving tertiary level education programmes for graduates who will seek to be registered as professionals, a role similar to that of the Council in its work within the teaching sector in relation to the approval and monitoring of ITE programmes. They concluded that

> All the organisations consulted in this group have broad similarities in their processes. All use self review by the provider, peer review, panels, site visits and approval or accreditation for a certain period. The period of approval or accreditation is usually five years and all of the organisations actively working in the approval and re-approval processes involve at least one member of their staff in the processes. Many have links to ensure employers are involved in the approval/accreditation processes (p. 26)

The second phase of the review is developing requirements for the approval and monitoring of ITE programmes to ensure that the process is fair, transparent, research informed and acceptable to the sector. In considering the Council's current guidelines, the Healthy Solutions (2008) report identified that

many sections of the Guidelines are unclear (the practicum requirements, recognition of prior learning, assessment and research are frequently cited examples); and have no clear rationale or are not evidence based (p. 9).

1.3   ITE Provision

Unlike England, North America and Australia, New Zealand did not adopt fully university-based professional preparation for teachers (Alcorn, 1999). Prior to 1989, six stand-alone colleges of education with close links to schools and kindergartens provided ITE for early childhood and primary school teachers. Secondary teacher education was provided by Auckland and Christchurch Colleges of Education. They were largely under the control of the Department of Education and local Education Boards. Selection into ITE programmes was dictated by the Department on a model of supply and demand which impacted significantly on the ability of the Colleges to plan long term ITE programmes (Openshaw, 1996). For example, in 1979 the national quota for primary student teachers was 1600 and early childhood student teachers was 200. In 1984, the national quota for primary student teachers was more than halved to 650 and the national quota for early childhood student teachers was reduced to 100.

After the Picot Report (1989), the landscape began to change dramatically. Colleges of education became autonomous bodies able to select their own students with no quota system imposed by the Department of Education and universities lost their degree granting monopoly. This period also coincided with a boom in the number of children enrolling in primary schools. There was a shortage of teachers and so the Ministry began a major initiative to recruit teachers from overseas.

A report was commissioned to review teacher education. In 1997, a Green Paper, *Quality Teachers for Quality Learning* was released. According to Alcorn (1999), "one of the most interesting proposals in the paper [Green Paper] is the suggestion that a professional body for teachers be established to review and develop standards of professional competency" (p. 72). It is also interesting to note that this paper included specific reference to knowledge of te reo Māori and tikanga, to functional knowledge in information technology and to knowledge of assessment.

The ITE landscape has changed over the last two decades with the universities and colleges of education being joined by polytechnics and private tertiary institutions in providing a plethora of teaching qualifications, so much so, that the Minister of Education put a moratorium on new teaching qualifications. Despite this, many institutions have sought an exemption to be able to provide updated qualifications to the point where there are now 27 providers of teacher education.

The *Perceptions of Teachers and Teaching* study by Kane and Mallon (2006) reported that ITE in New Zealand was criticised by the respondents in their survey (student teachers, teachers, principals, head teachers and Boards) for having too many providers which had led to a focus on enrolling and graduating student teachers without maintaining rigorous standards. The lack of high quality entry criteria (especially for over 20 year olds), rigorous screening for knowledge and attitudes suitable for teaching and a belief that institutions rarely failed a student was seen to reinforce a low perception of teaching. One of the study's recommendations was that

> Consideration could be given to examining alternative forms of initial teacher education that focus less on recruitment of school-leavers and more on graduate entry programmes with high academic entry standards and extended practicum experiences, which would necessitate at least a two-year post degree programme being explored (Kane & Mallon, 2006, p. 166).

1.4   Mergers of institutions

By 2006, each of the six colleges of education had merged with universities. According to Kane (2006), this has meant that over 90 per cent of primary teaching graduates and 96 per cent of secondary teaching graduates are trained in seven universities.

These mergers have strongly promoted research-led teaching and, as a result, teacher educators have been expected to increase their academic qualifications and, with the pressure of the new funding mechanism of the performance based research fund (PBRF), to also gain a research active rating (Strathdee, 2005). To date, there has been little research examining the impact of these new mergers and the requirements of the PBRF on ITE programmes.

1.5   Terminology used in the synthesis

The terminology used in this synthesis, where possible, is the commonly accepted New Zealand term, such as *associate teacher*, *student teacher* and *visiting lecturer*. Where writers use other terms, the discussion uses the NZ terms except when quoting. Footnotes are used to clarify the equivalent terms.

2.0   Overview of relevant literature about ITE

Teacher education has not had a high profile in international educational research (Goodlad, 2002). Zeichner (1999) argues that teacher education research has a chequered history reflective of 'the marginal status of the activity of teacher education in colleges and universities around the world' (p.7). Not unlike developments in other areas, teacher education research over the past few decades has evolved through a number of research paradigms (Shulman, 2002; Zeichner, 1999). What is noticeable, however, is the extent to which the history of this research reveals lack of clarity and concensus regarding core strategy and purpose of teacher education as the research paradigm employed is associated with shifts in focus and emphasis.

Teacher Attributes

Research in the 1950s and 1960s was dominated by identifying the attributes and qualities of good teachers and prospective teachers (Cochran-Smith, 2006a). Studies sought to identify the personal characteristics of effective teachers which centred on attributes such as, integrity and sensitivity. This liberal humanistic view underpinned the introduction of three-year primary ITE programmes to New Zealand teacher training colleges. The Currie Report (1962) expected that this additional year of training would bring "considerable benefits to the general education and the personal development of college students and recommended that a proportionally greater amount of time should be allocated to academic rather than professional training" (Openshaw, 1996, p. 101).

In New Zealand this played out in a number of ways, but as is in Palmerston North Teachers College, this meant there was a much greater emphasis on selected/optional studies whereby all students could become immersed for an extended period in a particular field, such as music, science, art or physical education. "Through this process they would discover the joy of learning which they as future teachers might subsequently develop in children" (Openshaw, 1996, p. 107).

Positivist Research

In the 1970s, hundreds of studies were reported using a process-product approach that focused on assessing the performance of discrete teaching behaviours and their impact on student learning (Goodlad, 2002). The latter was most often measured by standardised achievement tests, which emphasised the links between distinctive features of teaching and student learning revealed by quantitative research methodologies (Rosenshine & Stevens, 1986; Zeichner, 1999). In their review of 93 empirical research studies on learning to teach, Wideen, Mayer-Smith and Moon (1998) identified this form of research as representative of the positivist tradition.

That is,

> the university provides the theory, skills and knowledge about teaching through coursework; the school provides the field setting where such knowledge is applied and practiced; and the beginning teacher provides the individual effort that integrates it all (p. 133).

The Shift to Pedagogical Content Knowledge

Shulman and colleagues (2002) at the Institute of Research on Teaching (IRT) sought to shift attention from "simple models of stimulus and response to more complex and subtle models involving context, content, and cognition" (p.250). Their research in the early 1980s, focused on the content knowledge of teachers and the way they transformed their knowledge into representations that made sense to their students. Shulman (1986, 1987) and his colleagues described key criteria of teacher knowledge. These were: knowledge of content, pedagogy, curriculum, learners, contexts; pedagogical content knowledge; and knowledge of educational philosophy, goals and objectives. In particular, they focused on the "pedagogical content knowledge" of teachers. Initially this research did not document links between teacher knowledge and student achievement, however, by the early 1990s, there was a shift to a focus on student outcomes.

> This work built directly on the earlier teacher knowledge research…It represented teaching as resting on deep content knowledge as the basis for transforming teacher understanding into pedagogical representation, on the ability to reflect on and learn from one's own teaching experiences, and on the assumption of subject-specific pedagogy (Shulman, 2002, p. 251).

It was argued that teachers needed to demonstrate this pedagogical content knowledge in the context of their own classrooms whenever possible. This resulted in the development of assessment models based on authentic evaluations such as those using classroom-teaching portfolios. The assessment models were always based on the thinking and actions of accomplished teachers and were termed "wisdom-in-practice". A central question remained: what difference do teachers make to the learning of their students? A comprehensive validation study (Bond, Smith, Baker & Hattie, 2000) using independent evaluators demonstrated positive links between the Board assessment of the teachers and their students' academic achievement. As Hattie (2002) reports, teachers accounted for about 30 percent of the variance in student achievement when other effects such as the student's home background, his or her school, peers, and the leadership of the school were considered. Teachers were second only to the attributes the students themselves brought to the learning situation. "It is what teachers know, do, and care about which is very powerful in the learning equation" (Hattie, 2002, p. 6).

Shulman and his colleagues were not the only ones to challenge the behavioural paradigm of the 1970s studies. Lanier and Little (1986) argued that

> The study of social entities such as teacher education is apt to be advanced least by adherence to the classic natural science modes of inquiry. Meaningful isolation and control of variables in complex social affairs is rarely, if ever, possible and is not recognized, therefore, as a particularly fruitful line of contemporary inquiry in teacher education (p. 528).

What student teachers actually experienced in their teacher education programmes and how they interpreted and gave meaning to those experiences remained largely a mystery. New research paradigms were necessary and scholars from sociology and anthropology began to take an interest in teacher education (Doyle, 1990).

Qualitative Research on Teacher Education

From the 1980s, qualitative methodologies have dominated teacher education research (Lee & Yarger, 1996). Corrigan and Haberman (1990) consider the identification of the social, political, cultural, and economic contexts in teacher education as critical and a major task for the researcher. Since the 1980s, teacher education research has looked beyond teacher education programmes and their content to examine changes in the knowledge, skills, and dispositions that result from the interaction of student teachers with a teacher education programme (Carter, 1990; Richardson, 1990). Wideen et al (1998) termed these research studies "social critique".

> This tradition is characterized by a recognition that research must view the traditional structures of learning to teach as problematic and at times dysfunctional (p. 133).

Arising from some ideas addressed within post-modern discourse, narrative inquiry is a recent development in teacher education research. It addresses issues of power and voice. Teachers' stories told to other teachers can inform best practice and build a practical knowledge base. Furthermore, narratives of teaching and teachers can communicate easily with the public (Barone, 1991). These approaches have been fuelled by the concern that teachers rarely locate and translate research-based knowledge to inform their practice (Richardson & Placier, 2001). This may be because teachers seek knowledge in a different form than that produced by educational researchers (Huberman, 1985; Leinhardt, 1990). Hiebert, Gallimore and Stigler (2002) state:

> We recognise the inherent difficulties of translating traditional research knowledge into forms teachers can use to improve their practice, and we recognise the value of teachers' craft knowledge. We now ask whether it is possible to build this personal craft knowledge into a trustworthy knowledge base that can be accessed and shared widely in the profession (p. 3).

A significant step towards achieving this goal has been the development of self-study as a research approach. Self study emerged from the work of Munby and Russell (1994), who began to talk about "the authority of experience":

> We use the term authority of experience because of our concern that students never master learning from experience during pre-service programs in a way that gives them direct access to the nature of the authority of experience. If Schon is correct that there is a knowledge-in-action that cannot be fully expressed in propositions and that learning from experience has its own epistemology, then our concern is that learning from experience is never clearly contrasted with learning that can be expressed and conveyed in propositions (1994, p. 92).

Self-study builds on action-research methodology and involves disciplined, systematic inquiry into one's own teaching practice. This has provided the opportunity for teacher educators to articulate what they believe matters in teacher education (Berry & Loughran, 2002).

Kaupapa Māori theory

By addressing issues of power and voice, qualitative research opened the door for new narratives, in particular, indigenous research methodologies. Graham Hingangaroa Smith (1990) articulated a number of key principles that underpin Kaupapa Māori theory. One of the key principles, termed Ako Māori, acknowledges teaching and learning practices that are inherent and unique to Māori, as well as practices that may not be traditionally derived but are preferred by Māori. These elements and principles have since been expanded by other Kaupapa Māori theorists and incorporated into ITE programmes to prepare graduates to teach in Māori medium early childhood services and kura.

In 2001, Russell Bishop developed and began directing a significant research project, Te Kotahitanga, which aims to investigate how to improve the educational achievement of Māori students in mainstream secondary school classrooms. Bishop's research team built on the theoretical position of Kaupapa Māori research to create a culturally responsive pedagogy of relations. Bishop and his colleagues developed an "Effective Teaching Profile":

> practitioners expressing their professional commitment and responsibility to bringing about change in Māori students' educational achievement by accepting professional responsibility for the learning of their students. These two central understandings are then manifested in these teachers' classrooms where the teachers demonstrate on a daily basis: that they care for the students as culturally located individuals; they have high expectations of the learning for students; they are able to manage their classrooms so as to promote learning; they are able to engage in a range of discursive learning interactions with students or facilitate students to engage with others in these ways; they know a range of strategies that can facilitate learning interactions; they promote, monitor and reflect upon learning outcomes that in turn lead to improvements in Māori student achievement and they share this knowledge with the students (Bishop, Berryman, Cavanagh, & Teddy, 2007, p. 1).

Currently, the challenge for secondary school ITE providers is developing programmes that prepare graduates able to implement culturally appropriate pedagogies, such as Te Kotahitanga.

Outcomes Focus

If previously teacher education has been driven by the question: "what should teachers know and be able to do", the new question is: "how will we know when (and if) teachers know and can do what they ought to know and be able to do?" (Cochran-Smith, 2006a, p. 13).

An outcomes focus is built on the premise that teacher education should ultimately result in student learning. This has been the focus of the Ministry of Education's *Best Evidence Syntheses (BES).* For example, a clear premise of the *Teacher Professional Learning and Development BES* is:

> Quality teaching has a significant influence on a range of student outcomes. While teachers' influence is moderated by a number of other factors such as students' prior learning and family contexts, it is teaching that is the greatest system influence. If teachers are to exercise this influence effectively, then they, like their students, need opportunities to deepen their understandings and refine their skills (Timperley, Wilson, Barrar, & Fung, 2008, p. 1).

The New Zealand Government's Education and Science Committee report, *Inquiry into making the schooling system work for every child*, recommends that:

> **Teachers should be awarded full registration after two years' employment only if they have demonstrated that they are able to raise consistently the achievement of their students** (emphasis in original) (Education and Science Committee, 2008, p. 27).

To date, teacher preparation has focused on process, for example: How do student teachers learn how to teach? How are student teachers' beliefs and attitudes changed over time? What contexts best suit student teachers' learning? What level and type of knowledge and pedagogy do student teachers need to have? And so on. Similarly, assessment of ITE programmes has tended to focus on 'inputs', such as qualifications of faculty, content and structure of courses and related practicum.

Currently in public policy, intervention logic models or theories of change that measure the impact of interventions towards achieving defined outcomes are the preferred method for assessing or evaluating projects. In this paradigm, defining the outcomes of teacher preparation is critical. If a key outcome is to raise student achievement, then this needs to be carefully defined. Hattie (2009b) suggests that

> In accreditation exercises, it could be worthwhile to ask about the evidence that teacher education institutions can provide showing they are having an effect on

their student teachers; such that these student teachers will have an effect on their own students (p. 111).

His experience on the National Council for Accreditation of Teacher Education led him to the view that concern about types of courses, their length, when to have the practicum, or who the staff were, was not useful, but instead requiring the institutions to articulate and provide evidence of how their students met the graduating standards was the preferable model.

Cochran-Smith (2006a) warns against the trap of student achievement outcomes simply being measured by test scores, as has been the United States experience of the *No Child Left Behind* education policy. Rather, achievement needs to be considered in much broader terms and she argues that

> The purpose of education must also be understood as preparing students to engage in satisfying work, function as lifelong learners who can cope with the challenges of a rapidly changing global society, recognize inequities in their everyday contexts, and join with others to challenge them (p. 200).

Cochran-Smith and Zeichner (2005) in their large sweep of the empirical evidence about teacher preparation in the United States also found that the research base on which many claims about effect were made was limited by small samples, qualitative methodologies, and utilising descriptive rather than analytical approaches. Longitudinal studies or those based on national databases are largely absent; however, they note that this is because the field is still, to some extent, in its infancy.

> Our analyses also suggest that some of what are considered serious failings in the research on teacher education are more rightly understood as reflections of the field's relative youth and of its history in terms of research priorities and resource allocation (Cochran-Smith & Zeichner, 2005, p. 4).

Cameron and Baker (2004) have provided a comprehensive overview of ITE research literature for the period 1994 to 2004 in New Zealand and expressed similar concerns about the robustness of the research conducted on ITE commenting that many studies were one-off with a narrow focus limiting the possibility of generalisability.

Hattie (2009), in his synthesis of meta-analyses pertaining to student achievement, lamented the dearth of studies to provide evidence of the effect of ITE particularly as there are many advocates for various models of teacher education.

Loughran, Korthagen and Russell (2008), in describing how they arrived at the principles of practice that constitute effective programmes of ITE, comment that they used

> the notion of naturalistic generalisability (Stake & Trumball, 1982), which means that an aim of our study was to support the transfer of our findings to other contexts, such that they might also contribute to catalytic validity, i.e. the degree to which the research can lead to transformations of practice (p. 408).

3.0   Conceptual framework

Having a clear conceptual framework that includes principles, beliefs and values about teacher education, education, teaching, and learning in the particular sector is an existing expectation of the Council guidelines for ITE programmes. As such it is congruent with some of the literature on teacher education programmes that call for establishing principles to be in place before courses are devised (Hoban, 2005a; Zeichner, 2002).

Hoban (2005a) argues that when developing teacher education programmes more thought needs to be given to developing a conceptual framework that then has links to courses, rather than starting with courses and then fitting in practicum where possible or least disruptive. He rates the conceptual framework as more important than the content of the programme. Hoban argues for a conceptual framework that has conceptual links across the university curriculum; theory practice links between school and university settings; social-cultural links among participants in the programme; and links that shape the identity of participants in the programme.

3.1   Linkage of theory and practice in the programmes

In keeping with the need to have a conceptual framework for the programme of teacher education is the linkage of theory and practice throughout the coursework and practicum. Snook (1992) argues that there are two basic models of teacher education:

> The first sees teaching as a practicum craft centred on classrooms and the meeting of children's needs…the model is limited and is quite inappropriate…The second sees teaching as a learned profession. Its practitioners have a broad grasp of schooling in its social, historical and political context. They are able to provide expert advice on the theory of education and education policy. Their approach to teaching is informed and critical. Their methods are based on the best research available although they know very well the limitations of this research. They are highly educated in the content they teach. They understand the nature of the various disciplines and their limitations (p. 5).

However, as has already been noted, teachers rarely locate and translate research-based knowledge to inform their practice (Richardson & Placier, 2001) and student teachers are quickly socialised into the practice of the school. Zeichner and Tabachnik (1981) reported the socialising impact of classroom teaching on student teachers. They described the "washout effect" of university teacher education while student teachers participated in sustained periods of teaching practicum. Traditionally, student teachers are provided with professional knowledge in their university study. They are then required to integrate the professional knowledge they learn in the university-based coursework and apply that knowledge in practice. This is a deductive approach and the transfer of learning is problematic and complex (Zeichner & Tabachnik, 1981). For a start student teachers need to abstract principles and theories and apply these in the specific teaching context of the practicum. They are required to bridge two different cultures, that of the university

classroom versus that of the school. In the school, teachers focus on knowledge that is concrete and specific to a particular context and group of learners. In contrast, the university emphasises the identification of patterns of behaviour and knowledge that is more generalisable and hence theoretically applicable in different contexts.

Korthagen and Kessels (1999) have argued that 'traditional' approaches to teacher education have been inadequate in their conception. They argue that teaching needs to be viewed through the eyes of the student teacher. Their 'Realistic Teacher Education Program' starts with the

> real problems encountered by student teachers during field experiences. The student teacher would then develop his or her own knowledge in a process of reflection on the practicum situations in which a personal need for learning was created…the emphasis shifts towards inquiry-oriented activities, interaction amongst learners, and the development of reflective skills (p. 7).

Further, they argue that this type of discussion has focused on "the question of whether teacher education should start with theory or practice instead of the more important question of how to integrate the two in such a way that it leads to integration within the teacher" (p. 4). Schon (1983) was the first to highlight the need to examine the link between teachers' knowledge and their actions:

> When we go about the spontaneous, intuitive performance of the actions of everyday life, we show ourselves to be knowledgeable in a special way...Our knowing is ordinarily tacit, implicit in our patterns of action and in our feel for the stuff with which we are dealing. It seems right to say that our knowing is in our action (p. 49).

A growing number of researchers have sought to identify the practical knowledge of teachers (Hiebert, Gallimore, & Stigler, 2002; Meijer 1999, Verloop, Van Driel, & Meijer, 2001). Teachers often express and exchange their knowledge in the narrative mode of anecdotes and stories (Munby, Russell & Martin, 2001). Encouraging teachers to articulate their classroom experiences and the processes by which they make decisions enables their practical knowledge to be examined and shared publicly. This can help to shape approaches in teacher education. In translating this to pre-service teacher education, Korthagen (2001) argues that learning needs to be constructed from practicum experiences faced by student teachers that can be later reconstructed through discussion amongst peers.

The need to ensure that the 'theory' of teaching and learning is not taught in isolation from practice permeates much of the literature and when not done successfully is often referred to as 'frontloading' (Cameron & Baker, 2004; Darling-Hammond, 2006b).

Darling-Hammond (2006b) in a study of exemplary teacher education programmes commented how previously teacher education had been about coursework which sits apart from the practice whereas:

> By contrast, all of these programs require students to spend extensive time in the field as observers and participants in the teaching process throughout the entire program, examining and applying the concepts and strategies they are simultaneously learning about in their courses (p.99).

Darling-Hammond (2006b) and Hoban (2005b) warn of a technicist approach if the programme situates theory in the course work in the institution and the practice with the associate teachers in the practicum. In this way a theory-practice divide is established and leads to a focus on collecting a body of skills or strategies without links to the theory.

Pinnegar and Erickson (2008) state this succinctly:

> As the saying goes, there is nothing more theoretical than a good practice and there is nothing more practical than a good theory. We wonder if a crucial key in supporting preservice teachers is not in trying to transform theory into practice but to support them in exploring their experiences as a lens for examining and using both theory and practice (p. 430).

4.0   The Practicum

The practicum is an important component of a teacher education programme with many student teachers claiming it is the best part of their programme or where they learnt most about teaching (Hoban, 2005b). However, this advocacy is moderated by the implication that the rest of the programme was of little value (Hattie, 2009b). Instead the practicum and its relation to theory and coursework is an area continually under scrutiny.

4.1   Length of practicum

The current Council guidelines specify the length of time student teachers should be placed on practicum. However, there are few studies focused on the actual length of a practicum. But there is general agreement that its placement at the end of a programme, when student teachers are expected to integrate what they have learnt in courses, is ineffective and that practicum should be running alongside and integral to the courses being studied (Darling-Hammond, 2006b; Hoban, 2005b). Russell (2005) expresses concern that increasing the length of the practicum is viewed as the answer to improving ITE programmes. He claims that "structural links between theory and practice are often missing from the practicum experiences on most preservice teacher education programs" (p.135).

LaBoskey (2005) argues for simultaneous fieldwork and coursework describing a programme where students teach in classrooms in the morning while attending courses in the afternoons throughout the year. In this programme, student teachers experience two different settings during the year and through this observe and participate in a full year of teaching. Darling-Hammond (2006a) suggests a total of 30 weeks of supervised practicum for four-year programmes, which includes opportunities for student teachers to teach, are necessary and that these practicum need to be closely related to the content of the courses students have been studying.

Brooker and Millar (1997, cited in Cameron & Baker, 2004) investigated how well prepared New Zealand student teachers were depending on which programme they had taken. Student teachers were enrolled in either a 49-week course with 20 weeks of practicum, or a compressed course of 38 weeks and 15 weeks of practicum. The teacher educators of the students in the compressed course felt time was limited in which to challenge students' preconceptions and there was pressure to meet the course outcomes.

Grudnoff and Tuck (2003) tracked the progress of primary student teachers from their teacher education programme at Auckland College of Education through to their first

years of teaching to evaluate the effectiveness of the programme in preparing them as beginning teachers. The programme had 21 weeks of practicum over three years with the final practicum consisting of seven weeks across two terms to enable student teachers to see the end and beginning of a term. It also included three weeks of 'sole charge' teaching. Student teachers participants perceived that longer supervised teaching experiences were needed and "better use of the time allocated to teaching experience in the practicum. By better, they meant having "real teaching experience" while on practicum" (p.35).

Aberdeen University is trialing an innovative programme known as the Scottish Teachers for a New Era (STNE). In the first two years, the student teachers have 25 days of practicum with this increasing to 24 weeks and 20 days for action research in the third and fourth years. The fifth (probationary) year consists of 70 per cent of time teaching while the sixth year is teaching with extended mentoring. The first four years ensure a broad arts or science degree and along with teacher education ensures a progression of teaching experience and induction into the profession (Pearson, 2008).

Ramsey, (2000, cited in Hoban, 2005a, p.5) in criticising New South Wales teacher education programmes for devaluing time spent in schools, suggested that the practicum should be longer and that in comparison to other professions the time spent on practicum was minimal. He advocated calling the teaching practicum "professional practice" so that it was more in keeping with how other professions conceptualised workplace experience.

4.2   Supervising the practicum

Haigh and Ward (2004) see the need for practicum to be an educative experience that goes beyond the setting as a place to try out teaching skills and strategies. Instead the setting should be a place to critically reflect on teaching and develop creative responses to the context. This requires that all the participants have a shared understanding of the purpose and objectives of the practicum. Lind's (2004) research lends weight to the argument that there needs to be very clear understanding of each person's role in the triadic relationship of the practicum.

Timperley (2001) affirms the different roles of the visiting lecturers and the associate teachers. Through a mentor training programme, the type of feedback the associate teacher was giving to student teachers was strengthened by moving it from a more technically focused discussion to that which drew them to reflect on their theories behind their teaching decisions. This suggests a need for professional development for associate teachers around how to mentor students, how to make explicit their own

teaching decisions, and in particular it calls for closer relationships between practicum sites and ITE institutions.

Associates tend to view their role as being supportive and affirming while also modeling their practice and helping the student with theirs (Cameron & Hawkins, 2000; Lind, 2004). However few associates spend the time to get the student teacher to examine the outcomes of their teaching or use assessment strategies or children's work to reflect on. Ferrier-Kerr (2004) found that the most critical principles emerging from her small study on associate teacher-student teacher relationships concerned personal connectedness and collaboration in order to develop a rich professional relationship.

Zeichner (2002) suggests that in constructing ITE programmes consideration needs to be given as to how practitioner knowledge is positioned in the teacher education programme. Craft and tacit knowledge should be recognised along with the theoretical and pedagogical learning of the institution. There is reciprocity in the relationship between the associate teacher and the student teacher. Benefits for the associate teachers include gaining access to current theory and research, as well as another pair of eyes from which to view what is happening in their classrooms (Beck & Kosnick, 2002; Darling-Hammond, 2006b). Where classroom teachers had the opportunity to work in teacher education they expressed a better understanding of expectations of students on practicum and connection to college programmes, which led to better support for student teachers (Russell & Chapman, 2001).

Proposition number six in *Becoming a Teacher in the 21st Century* (Ministry of Education, 2007) proposes that "the knowledge, skills, and disposition required of associate teachers be specified and formally recognised as the basis for determining a teacher's qualification for the role of mentoring student teachers" (p.7).

4.3   Visiting Lecturer/tutor

Few studies have addressed the role of the visiting lecturer in the practicum. LaBoskey (2005) describes a 'principled' programme where the students were observed every second week by a college supervisor[1]. These supervisors of the practicum would, themselves, have regular weekly meetings on campus and also had a weekly journal exchange with their individual students.

Reports regarding who is visiting students on their practicum and their preparation and knowledge of the overall programme of the ITE provider vary greatly (Hoban, 2005b).

---

[1] A college supervisor is equivalent to the visiting lecturer, the term used commonly in New Zealand for the person from the ITE institution who visits the student teachers during their practicum.

The literature suggests that the visiting lecturer from the teacher education institution is not always fully informed about the expectations of the student teacher on the practicum and may not actually teach in the courses to which students are expected to be making links to their practice (Beck & Kosnick, 2002).

Cameron and Baker (2004) report a 1993 Waikato study that outlined the professional development requirements for supervising student teachers on practicum. Their induction and training included "ways of providing feedback about teaching, curriculum knowledge, evaluation criteria, peer modeling, and supervision" (p.84). Teacher educators are often recruited from the classroom/teaching context and not likely to receive any induction into adult teaching pedagogies yet they are expected to know how to teach adult learners.

Increasingly as teacher education is sited in universities, managing workloads that include increased research requirements means that the time required to be a visiting lecturer of students on their practicum may get pushed down the ladder of priorities (Strathdee, 2005). Sinclair (2007) identified that associate teachers and visiting lecturers tended to have different conceptualisations of their role and "only the university supervisors assisted the student teachers to make links between teaching and theoretical principles" (p. 143). The need for visiting lecturers and associate teachers to make better links to pedagogical decision making and not monopolise discussion around technicist planning decisions is emphasised by Sanders, Dowson and Sinclair (2005).

Lind (2004) noted that while most relationships between the associate teacher and the visiting lecturer in the practicum were cordial their views about the role of the practicum were not shared and "there was little congruence in the supervisory roles adopted by the associate teachers and the visiting lecturers" (p.137).

4.5   Provider competition for practicum placements

Provider proliferation in New Zealand has implications for quality practicum and relationships between the associate teachers and the ITE institution as there is a high demand on schools and early childhood services. Julian (1998) found that some schools were selective in the providers whose students they would take. In others, all teachers were designated as potential associates and therefore it was not necessarily the best practice being modeled to the student teachers. The study recommended collaboration amongst providers to ensure schools are not unduly pressured but concluded it was unlikely in the competitive environment of teacher education. This situation has implications for the practicum experiences of the student teachers. Darling-Hammond (2006a) discusses the need for student teachers to observe the type of teaching they are discussing in the university being modeled in schools. If the teacher educator is not able

to select the associate teachers, they have limited control over what practice is being observed.

Zeichner (2002) acknowledges that finding compatible placements may be easier for small programmes, but it is often unrealistic for large urban teacher education institutions. He advocates looking for teachers who are active learners as the key to good placements.

> Rather than looking for classrooms that model the specific teaching practices advocated in campus courses, we look for classrooms where the school culture encourages inquiry and reflection about teaching among the staff and where teachers are working on their practice to make it better (p.62).

4.6   Online ITE practicum issues

Ensuring quality practicum experiences is a significant issue facing teacher education institutions teaching via the internet which often have students in remote areas (Donaghy & McGee, 2004). In this particular study, to ensure the associate teacher's role was better informed, readings and suggestions for supporting the student teacher were provided. However two thirds of the associates did not feel any need to study the readings to enhance their role. Simply providing readings as a method to enhance professional development was ineffective in this case. Other writers suggest the need for workshops and seminars for associate teachers as well as specially targeted courses to reflect the important skills and knowledge associate teachers need (Timperley et al, 1999).

5.0   Relationships central to teacher education

Relationship building is a theme that permeates much of the literature. Those who champion small cohort groups describe programmes where directors interview almost all the new students and arrange their first placement, and teams of teacher educators that teach a cohort and visit them on practicum (Beck & Kosnik, 2006). However, Beck and Kosnik admit that such models are difficult and the extra work required is "rarely recognised by the university or school of education" (p.50).

Loughran, Berry and Tudball (2005) suggest that as student teachers are not coming to teaching as complete novices but bring a rich resource of beliefs and understanding of what teaching entails, it is important that they are taught in a co-constructive way. This includes teacher educators modeling critiques of practice and, by seeing their lecturers critique each other, students are encouraged to see this as part of being a teacher. Feiman-Nemser (2001) refers to this as having opportunities to develop "the habits of critical colleagueship" (p.1049).

In a similar vein, Grossman (2005) claims that how one teaches is 'the message' and teacher educators need to model appropriate pedagogy. In her review of research related to the types of pedagogy used in teacher education, she focuses on five main approaches for which there are suitable empirical studies: laboratory experiences; case methods; use of video and hypermedia materials; portfolios, and practitioner research. She concludes that teacher education requires a wide range of pedagogical approaches and that

> setting individual pedagogies within a broader framework of research on learning from one's own and others' experiences may provide teacher educators with greater insight into the kinds of experiences most likely to help prospective teachers develop the knowledge, skill, dispositions, integrity, and identities that will inform their future practice (p.452).

This is congruent with the social constructivist approach that Beck and Kosnik (2006) promote where "concern for the larger picture, integrating different components of the program, a close teacher-student relationship, and academic and emotional support for students" (p.52) are important components of a programme.

By grouping student teachers together in a particular school for their practicum, it helps create a community of learning (Darling-Hammond, 2006b). This enabled opportunities to observe each other's practice, and provide feedback and support. Similarly, Aberdeen University's STNE programme also has student teachers grouped on their practicum to encourage colleagueship and critique of practice (Pearson, 2008).

6.0   Curriculum, subject knowledge and pedagogical courses

Cameron and Baker (2004) identified various gaps in the research on teacher education in New Zealand and in particular they claimed that

> more research is needed for example on the contribution of subject knowledge to effective teaching. How much course work, in say, language and literacy and mathematics, is required for graduating student teacher to begin their teaching careers with enough knowledge to teach these learning areas effectively? And what should be the nature of this course work? (p.69)

As has already been outlined, Shulman (2002) is often cited when investigating the subject knowledge and, in particular, pedagogical content knowledge required for effective teaching. In the United Kingdom, reviews of teacher education in the last two decades has led to direct controls of content knowledge, pedagogy, and assessment in the fields of literacy, numeracy, science, and information technology (Furlong, 2002). As these requirements have been imposed without any dialogue with teacher educators, Furlong argues that this de-professionalises teacher education.

Darling-Hammond (2006b), while acknowledging that subject knowledge matters, believes that any ITE content course should also consider whether the pedagogical approaches are appropriate and notes that there are a range of possible strategies for teaching the subject matter to diverse learners. She states:

> all the sites we studied used subject-specific methods courses to engage candidates directly in active learning in the disciplines through participation in hands-on science, manipulative-based mathematics instruction, writing to learn about writing and so on (p.92-3).

7.0   Research-led teacher education programmes

"A quality teacher education programme must be informed by sound research and should promote research as an important component of student teachers' developing professional skills" (NZ Teachers Council, 2005, p.8). Like many teacher educators, Cochran-Smith (2006) acknowledged that teacher education curriculum should be based on research rather than "traditions and professional norms" (p.22).

Teacher educators also need to build the research evidence to support quality ITE programmes. Zeichner (2005a) sees that one of the ways that teacher educators are incorporating research effectively in their programmes is through the self-study approach to research. Similarly, Loughran, Korthagen and Russell (2008) see that self study has the potential to confront the challenges facing teacher education programmes in establishing a pedagogy of teacher education. They also believe that "learning about teaching is enhanced through (student) teacher research" (p.411). In this way student teachers not only learn through their own practices, but also by researching their practices they link theory and practice. More importantly it values the "authority of their own experience" (ibid).

Allied with this are pedagogies that enable student teachers to reflect, make links to theory and consider alternatives. According to Darling-Hammond (2006b) the use of "case methods, close analyses of learning and teaching, performance assessments, and portfolios" (p. 26) ensure that student teachers are involved in considering other ways of teaching than what they have observed in their own schooling.

Putnam and Borko, (1999) also advocate the use of case method claiming that the study of cases allows vicarious experience of a setting that not all student teachers would necessarily have the opportunity to experience. Case method can allow multiple perspectives to be aired as well as experiences to be shared.

All the exemplary programmes that Darling-Hammond (2006b) describes have students engaged in research inquiry whether a small investigation of a specific aspect of practice or larger research projects. In this way, student teachers see teaching as a responsive reflective undertaking that requires a critical perspective and engagement of theory and practice through data gathering, observation and problem posing.

8.0   Reflective teachers

Teacher education programmes are expected to ensure that student teachers do not merely repeat the teaching they received but instead, through identifying their philosophy of teaching and learning and gaining an understanding of how they have been shaped by their background, they come to a stage where they can use this knowledge in assessing their teaching experiences (Hoban, 2005b; Lee & Loughran, 2000; Nolan, 2008; Northwood, 2005; Zeichner, 2006).

Lee and Loughran (2000) focused on combating the lack of time generally available to student teachers to adequately reflect by extending the timeframe of the practicum for a small group of students. They found that it was not just the length of the practicum that was important to establishing reflective practices, but also the support and planning behind it that enabled the student teaches to reconsider and reshape their practice.

Zeichner (1966a) argues that building reflective teachers is important but this must not be in a narrow sense but aimed at a social and political consciousness that sees their practice evaluated alongside current theory, their own theory making and also in relation to the social policies and structures that impact on them. In building reflective teachers the tension exists around models that introduce a technical response where the student teachers apply the theory learned in class in a mechanistic way. The aim is to have student teachers who see their role in knowledge building and theorising so that the relationship between theory and practice is dialogic and not one way.

9.0   Exemplary programmes

In summary, Linda Darling-Hammond (2006b) identified seven common features of exemplary ITE programmes she studied in the United States:

- A common, clear vision of good teaching that permeates all coursework and clinical experiences, creating a coherent set of learning experiences;

- Well-defined standards of professional practice and performance that are used to guide and evaluate coursework and clinical work;

- A strong core curriculum taught in the context of practice and grounded in knowledge of child and adolescent development and learning, an understanding of social and cultural contexts, curriculum, assessment, and subject matter pedagogy;

- Extended clinical experiences – at least 30 weeks of supervised practicum and student teaching opportunities in each program that are carefully chosen to support the ideas presented in simultaneous, closely interwoven coursework;

- Extensive use of case methods, teacher research, performance assessment, and portfolio evaluation that apply learning to real problems of practice;

- Explicit strategies to help students to confront their own deep-seated beliefs and assumptions about learning and students and to learn about the experiences of people different form themselves; and

- Strong relationships, common knowledge, and shared beliefs among school and university-based faculty jointly engaged in transforming teaching, schooling, and teacher education. (p.306).

References

Alcorn, N. (1999). Reviews of teacher education in New Zealand 1950-1998: Continuity, contexts and change. *Waikato Journal of Education,* 5, 63-76.

Barone, T.E. (1991). A narrative of enhanced professionalism: Educational researchers and popular storybooks about school people. *Educational Researcher, 21*(8), 15–24.

Beck, C. & Kosnik, C. (2002a). Associate teachers in pre-service education: clarifying and enhancing their role, *Journal of Education for Teaching, 26*(3), 207-224.

Beck, C. & Kosnik, C. (2002b). Professors and the practicum: Involvement of university faculty in preservice practicum supervision. *Journal of Education for Teaching,* (1) 6-19.

Beck, C. & Kosnik, C. (2006c). *Innovations in teacher education. A social constructivist approach.* New York: State University of New York Press.

Berry, A., & Loughran, J.J. (2002). Developing an Understanding of Learning to Teach in Teacher Education. In John Loughran & Tom Russell (Eds.) *Improving Teacher Education Practices Through Self-study*. London: Routledge.

Bishop, R., Berryman, M., Cavanagh T. & Teddy, L. (2007) *Te Kōtahitanga Phase 3 Whānaungatanga: Establishing a culturally responsive pedagogy of relations in mainstream secondary school classrooms.* Ministry of Education: Wellington

Bond, L., Smith, T., Baker, W., & Hattie, J.A. (2000). *The certification system of the National Board for Professional Teaching Standards: A construct and consequential validity study.* Greensboro, NC: Center for Educational Research and Evaluation.

Brouwer, N. & Korthagen, F. (2005). Can teacher education make a difference? *American Educational Research Journal* 42(1), 153-224.

Cameron, M. & Baker, R. (2004). *Research on initial teacher education in New Zealand: 1993-2004. Literature review and annotated bibliography*. Wellington: Ministry of Education.

Carter, K. (1990). Teachers' knowledge and learning to teach. In W.R. Houston, M. Haberman, & J. Sikula. (Eds.). *Handbook on research on teacher education* (pp.291-310). New York: Macmillan.

Cochran-Smith, M. (2006a). *Policy, practice, and politics in teacher education.* Corwin Press, Sage, California.

Cochran-Smith, M. (2006b). Ten promising trends (and three big worries). *Educational Leadership. March.*

Cochran-Smith, M. & Zeichner, K. M. (2005). Executive summary. In M. Cochran-Smith & K.M. Zeichner. (Eds.). *Studying teacher education. The report of the AERA panel on research and teacher education* (pp. 1-36). Washington, D.C.: AERA/Lawrence Erlbaum Associates.

Corrigan, D.C., & Haberman, M. (1990). The context of teacher education. In W.R. Houston, M. Haberman & J. Sikula (Eds.),

Handbook of research on teacher education (pp. 195 – 211). New York: Macmillan.

Darling-Hammond, L. (2006a). Constructing 21st-century teacher education. *Journal of Teacher Education*, 57(3), 300-314.

Darling-Hammond, L. (2006b). *Powerful teacher education. Lessons from exemplary programs.* San Francisco, California: Jossey-Bass.

Doyle, W. (1990). Themes in teacher education research. In W.R. Houston, M. Haberman, & J. Sikula. (Eds.). *Handbook on research on teacher education* (pp.392-431). New York: Macmillan.

Education, Science Committee. (2008). *Enquiry into making the schooling system work for every child. Report of the Education and Science Committee*. Wellington: NZ House of Representatives.

Education Standards Act (2001).

Feiman-Nemser. S. (2001). From preparation to practice: Designing a continuum to strengthen and sustain teaching. *Teachers College Record* 103(6), 1013-1055.

Ferrier-Kerr, J. (2004). The teaching practicum: Making personal connections. *Teachers and Curriculum* 7, 59-62.

Furlong, J. (2002). Ideology and reform in teacher education in England: Some reflections on Cochran-Smith and Fries. *Educational Researcher*, 31(6), 23-25.

Goodlad, J.I. (2002). Teacher education research: The outside and the inside. *Journal of Teacher Education, 53*(3), 216-221.

Grossman, P. (2005). Research on pedgagogical approaches in teacher education. In M. Cochran-Smith & K.M. Zeichner. (Eds.). *Studying teacher education. The report of the AERA panel on research and teacher education* (pp. 425-476). Washington, D.C.: AERA/Lawrence Erlbaum Associates.

Grudnoff, L. & Tuck, B. (2003). Learning about teaching, learning while teaching, and becoming a teacher. *English Teaching: Practice and Critique*, 2(1), 33-42. Downloaded from http://education.waikato.ac.nz/journal/english_journal/uploads/files/2003v2n1art3.pdf.

Haig, M., & Ward, G. (2004). Problematising practicum relationships: Questioning the "taken for granted". *Australian Journal of Education,* 48(2), 134-148.

Hattie, J.A. (2002). What are the attributes of excellent teachers. *Building Teacher Quality: NZCER Conference Proceedings*, 3-26.

Hattie, J. (2009). *Visible learning. A synthesis of over 800 meta-analyses relating to achievement.* London: Routledge.

Healthy Solutions Report. (2008).

Hiebert, J., Gallimore, J., & Stigler, J.W. (2002) A knowledge base for the teaching profession: What would it look like and how can we get one? *Educational Researcher, 31*, (5), (pp. 3-15).

Hoban, G. F. (2005a). Developing a multi-linked conceptual framework for teacher education design. In G.F. Hoban. (Ed.). *The missing links in teacher education design. Developing a multi-linked conceptual framework* (1-17). Dordrecht, The Netherlands: Springer.

Hoban, G. F. (Ed.). (2005b). *The missing links in teacher education design. Developing a multi-linked conceptual framework*. Dordrecht, The Netherlands: Springer.

Huberman, M. (1985). What knowledge is of most worth to teachers? A knowledge –use perspective. *Teaching and Teacher Education, 1,* 251-262.

Kane, R.G. (2006). *Initial teacher education policy and practice. Final report.* Wellington: Ministry of Education.

Kane, R. G. & Mallon, M. (2006). *Perceptions of teachers and teaching*. Wellington: Ministry of Education.

Korthagen, F.A.J. (2001) *Linking practice and theory: the pedagogy of realistic teacher education*. Lawrence Erlbaum Associates, Mahwah, New Jersey.

Korthagen, F.A.J. (2004). In search of the essence of a good teacher: towards a more holistic approach in teacher education. *Teaching and Teacher Education, 20,* pp. 77-97.

Korthagen, F.A.J, & Kessels, J.P.A. (1999). Linking theory and practice: Changing the pedagogy of teacher education. *Educational Researcher, 28*(4), 4-17.

LaBoskey, V.K. (2005) Principled practice in teacher education. In G.F. Hoban. (Ed.). *The missing links in teacher education design. Developing a multi-linked conceptual framework* (23-36). Dordrecht, The Netherlands: Springer.

Lanier, J.E. & Little, J.W. (1986). Research on teacher education. In M.C.Wittrock (Ed.) *Handbook of research on teaching.* (3rd ed., pp. 527-569). New York: Macmillan

Lee, O., & Yarger, S.J. (1996). Modes of inquiry in research on teacher education. In J. Sikula (Ed.), *Handbook of research on teacher education, second edition* (pp. 14 - 37). New York: Macmillan.

Lee, S.K.F., & Loughran, J. (2000). Facilitating pre-service teachers' reflection through a school-based teaching programme. *Reflective Practice* 1 (1), 69-89.

Leinhardt, G. (1990). Capturing craft knowledge in teaching. *Educational Researcher,* 19(2), 18-25.

Lind, P. (2004). *The perceptions of teacher education in relation to the teaching practicum.* A thesis in fulfillment of the requirements for the degree of Doctor of Philosophy in Education. Massey University.

Loughran, J. Berry, A. & Tudball, E. (2005). Developing a culture of critique in teacher education classes. In G.F. Hoban. (Ed.). *The missing links in teacher education design. Developing a multi-linked conceptual framework* (193-208). Dordrecht, The Netherlands: Springer.

Loughran, J., Korthagen, F., & Russell, T. (2008). Teacher education that makes a difference: Developing foundational principles of practice. In C. J. Craig, L.F. Deretchin. (Eds.). *Imagining a renaissance in teacher education. Teacher Education Yearbook XVI* (pp.405-421). Maryland, US: Rowman & Littlefield Education.

Meijer, P. (1999) *Teachers' practical knowledge: teaching reading comprehension in secondary education.* Unpublished doctoral thesis, Leiden University. The Netherlands.

Ministry of Education. (2007). *Becoming a teacher in the 21st century. A review of initial teacher education policy.* Wellington

Munby, H., & Russell, T. (1994). The authority of experience in learning to teach: Messages from a physics methods class. *Journal of teacher Education, 45*(2), 86-95.

Munby, H., Russell, T., & Martin, A. (2001). Teachers' knowledge and how it develops. In Richardson, V. (Ed.). *Handbook of research on teaching (4th ed.)* (pp.877-904). Washington, DC.: American Educational Research Association.

Nolan, A. (2008) Encouraging the reflection process in undergraduate teachers using guided reflection. *Australian Journal of Early Childhood*, 33 ((1), 31-36.

Openshaw, R. (1996) *Between two worlds. A history of Palmerston North College of Education 1956-1996.* Dunmore Press, Palmerston North, New Zealand

Pearson, M. (2008). Scottish Teachers for a new era: Transforming teacher learning and development. Powerpoint of keynote presentation to Practicum Experience in Professional Education conference, Edinburgh, 23-25 January downloaded 2 March 2009 from: http://www.iriss.ac.uk/pepe2008/files/Keynote_Myra_Pearson.ppt#274,4,Slide1

Pinnegar, S., & Erickson, L.B. (2008). Questioning what we know about teacher education. In C. J. Craig, & L.F. Deretchin. (Eds)*. Imagining a renaissance in teacher education. Teacher Education Yearbook XVI* (pp.422-436). Maryland, US: Rowman & Littlefield Education.

Putnam & Borko, H. (1999). What do new views of knowledge and thinking have to say about research on teacher learning? *Educational Researcher* 29(1), 4-15.

Richardson, V. (1990). Significant and worthwhile change in teacher practice. *Educational Researcher, 19*(7), 10-18.

Richardson, V., & Placier, P. (2001). Teacher change. In Richardson, V. (Ed), *Handbook of Research on Teaching*, (4th ed., pp. 905-947), American Educational Research Association, Washington, D.C.

Rosenshine, B.V., & Stevens, R. (1986). Teaching functions. In M.C. Wittrock (Ed), *Handbook of Research on Teaching*, 3rd ed (pp. 376-391), American Educational Research Association, New York: Macmillan.

Russell, B., & Chapman, J. (2001). Partnerships in education shared understandings: Enhancing the practicum. *Pacific Asian Education*, 13(2), 74-85.

Sanders, M., Dowson, M., & Sinclair, C. (2005). What do master teachers do anyway? A comparison of theoretical conceptualizations and observed practices in the field. *Teachers College Record*, 107(4), 706-738.

Schon, D. (1983). *The reflective practitioner: How professionals think in action.* New York: Basic Books.

Shulman, L. S. (1986). Paradigms and research programs in the study of teaching. In M.C. Wittrock. (Ed.). *Handbook of research on teaching, (3rd ed.)* (pp.3-36).New York: Macmillan.

Shulman, L.S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review, 57*(1), 1-22.

Shulman, L. S. (1996). Just in case: Reflections on learning from experience. In S.M. Wilson (Ed.). *The case for education: Contemporary approaches for using case methods.* (pp. 197-217). Boston: Allyn & Bacon.

Shulman, L. S. (2002). Truth and consequences? Inquiry and policy in research on teacher education. *Journal of Teacher Education, 53*(3), 248-253.

Sinclair, C. (2007). Professional preparation standards for the practicum. In D.M. McInerney, S. Van Etten, & M. Dowson. (Eds). *Standards in education* (pp. 217-272). Charlotte, NC: Information Age Publishing.

Smith, G. H. (1990) 'Research Issues Related to Maori Education', paper presented to NZARE Special Interest Conference, Massey University, reprinted in 1992, The Issue of Research and Maori, Research Unit for Maori Education, The University of Auckland

Snook, I. (1992). Teacher education: A sympathetic appraisal. Keynote address to conference, Teacher education: An investment for new Zealand's future. 18-19 June, Auckland.

Strathdee, R. (2005). A merger too far. *Education Review*. June 23-29.

Timperley, H., Black, J. Rubie, C., Stavert, M., & Taylor-Patel, C. (1999). *What happens in the practicum: The contribution of school-based practitioners to teacher education.* Research affiliate report to the Ministry of Education. Wellington: Ministry of Education.

Timperley, H.S. (2001). Mentoring conversations designed to promote student teacher learning. *Asia-Pacific Journal of Teacher Education*, 29 (2), 111-123.

Timperley, H., Wilson, A., Barrar, H., & Fung, I. (2007). *Teacher professional learning and development: Best evidence synthesis iteration (BES)*. Wellington: Ministry of Education.

Verloop, N., Van Driel, J., Meijer, P. (2001). Teacher knowledge and the knowledge base of teaching. *International Journal of Educational Research, 35*(5), 441-461.

Voltz, D.L., Collins, L., Patterson, J. & Sims, M.J. (2008). Preparing urban educators for the twenty-first century. In C. J. Craig, L.F. Deretchin. (Eds.). *Imagining a renaissance in teacher education. Teacher Education Yearbook XVI* (pp.25-40). Maryland, US: Rowman & Littlefield Education.

Wideen, M.F., Mayer-Smith, J. A. & Moon, B.J. (1998). A critical analysis of the research on learning to teach: Making the case for an ecological perspective on inquiry. *Review of Educational Research,* 68(2), 130-178.

Wylie, C & H.. (Eds.) Towards Successful Schooling**.** London: Falmer Press, pp. 73-88.

Zeichner, K. (1996a). Designing educative practicum experiences for prospective teachers. In K. Zeichner, S. Melnick, & M.L. Gomez (Eds.). *Current reform in preservice teacher education* (pp. 215-234). New York: Teachers College Press.

Zeichner, K. (1996b). Teachers as reflective practitioners and the democratization of school reform. In K. Zeichner, S. Melnick, & M.L. Gomez (Eds.). *Current reform in preservice teacher education* (pp. 199-214). New York: Teachers College Press.

Zeichner, K. (1999). The new scholarship in teacher education. *Educational Researcher, 28*(9), 4-15.

Zeichner, K. (2002) Beyond traditional structures of student teaching *Teacher Education Quarterly,* 29 (2), 59-65.

Zeichner, K.M. & Tabachnik, B.R. (1981). Are the effects of university teacher education "washed out" by school experience? *Journal of Teacher Education 32*(3), 7-11.