

Standards for Teaching

Theoretical Underpinnings and Applications

Elizabeth Kleinhenz and
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New Zealand
Teachers Council

Te Pouherenga Kaiako o Aotearoa

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Foreword

In 2005, the New Zealand Teachers Council began a process of preparation for reviewing the Teachers Council's registration standards, the *Satisfactory Teacher Dimensions* (1996). The Professional Leadership Committee of the Teachers Council was charged with developing a strategy paper on the role of teaching standards in determining entry to the profession and maintaining a practising certificate. As part of this development process, the Teachers Council commissioned a research report: *Standards for Teaching: Theoretical Underpinnings and Applications*. The Request for Proposals asked the researchers to conduct a critical review of the literature on the application of professional standards to teachers' practice and to consider:

- Where, in the complex mix of factors that can support teachers' professional capacity, do professional standards sit?
- How can standards support teacher learning?
- What are the benefits, costs and harms?
- Which models enhance and which detract from teachers' professional learning and the professions' overall capacity?
- Can the documented strengths of working with professional standards be gained in other ways?

The researchers were asked to canvass the international and New Zealand literature and to consider the issues in the context of teaching in early childhood and school, including kaupapa Māori settings in New Zealand. They were asked to take into account the different curricula for these settings, and to be mindful of the findings of the Best Evidence Synthesis reports being developed by the Ministry of Education and other notable New Zealand research such as Te Kotahitanga.

The contract for this proposal was won by the Australian Council for Educational Research. The two lead researchers, Elizabeth Kleinhenz and Lawrence Ingvarson, had already published extensively in this area and were very familiar with the international literature. A reference group was established including representatives from the New Zealand Post Primary Teachers Association, New Zealand Educational Institute Te Riu Roa, Te Tari Puna Ora o Aotearoa, the Ministry of Education and the Teachers Council's early childhood and Māori medium advisory groups. We thank them for the considerable time and thought they gave in helping to guide the research and in considering draft reports.

The Teachers Council is pleased to make this report available to the wider education community. The findings have been helpful in the development of the Teachers Council's understanding of and strategic thinking about the role of standards for the teaching profession in New Zealand. At the same time, the views in the report are those of the authors and do not necessarily reflect any views or positions held by the Teachers Council. The Teachers Council has used many sources to inform strategic thinking around these important issues.

Dr Peter Lind
Director
June 2007

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Executive summary

The primary purpose of this report was to conduct a critical review of the literature on the application of professional standards to teachers' practice. The New Zealand Teachers Council provided the following questions in the Request for Proposals to guide the review:

- Where, in the complex mix of factors that can support teachers' professional capacity, do professional standards sit?
- How can standards support teacher learning?
- What are the benefits, costs and harms?
- Which models enhance and which detract from teachers' professional learning and the profession's overall capacity?
- Can the documented strengths of working with professional standards be gained in other ways?

Chapter 2 of the report examines definitions of standards as (a) 'flags' or 'banners' that describe what is considered most desirable to achieve in teaching knowledge and practice; and (b) as 'measures' of performance. To be useful, a complete set of standards needs both aspects, including specifications for how the standards will be applied in determining levels of performance. Well written teaching standards focus mainly on what students are doing as a result of teaching. They do not 'standardise' teaching methods. Standards should provide useful tools for making judgements about the effects of teaching in a context of shared understandings about what is valued.

The ability to define and apply standards is the main avenue by which professions demonstrate their credentials as a profession. Through standards, teachers can gain more influence over decisions affecting teacher quality, such as:

- who gains entry to teacher preparation courses
- who trains new teachers – and how
- who gains registration and enters the teaching profession
- who defines what new teachers should know and what experienced teachers should 'get better at'
- who sets standards for good teaching
- who assesses and gives recognition to teachers who attain high standards.

Teachers' organisations and employing authorities internationally are increasingly recognising that they have a shared responsibility for the quality of learning opportunities for students. Attracting, developing, and retaining effective teachers is now the central policy focus for any educational system that is serious about improving student learning outcomes. Teacher

organisations have an important leadership role to play in the main quality assurance mechanisms for any profession: accreditation, registration, and advanced certification.

Valid teaching standards and methods for assessing performance are essential for career structures that reward improvements in the quality of teaching and retain effective teachers. Writing standards provides an opportunity for the profession to build stronger bridges between research and practice. Standards support the development of a professional community in educational settings. They give teachers something about which to be collegial. Standards provide clearer, long-term goals for professional development. They indicate what the professional community thinks its members should 'get better at'. Profession-wide standards provide a more valid basis for teacher accountability than performance management schemes and standardised tests of student outcomes.

Chapter 2 also examines the relationship between teaching and learning and conceptual issues involved in making judgements about quality in teaching. It also reviews the implications of research on teaching for writing teaching standards. This research indicates the domain-specific nature of teacher expertise and the importance of professional judgement. Valid standards articulate knowledge about content and students that teachers need to promote quality opportunities for learning. Valid standards also identify what teachers need to 'get better at' over the long term. They provide a framework to guide teachers' professional learning.

Conceptual issues are raised relating to the role of performance assessment in standards-based professional learning systems for teachers. Just as assessment for students is now regarded as a vehicle for learning, new methods of performance assessment for teachers respect the complexity of teaching and engage teachers in effective forms of professional learning.

The contribution of research to the development and application of teaching standards is discussed in some depth, noting that the task of defining standards requires investigation and analysis of research findings by experienced, reflective teachers who bring their own 'wisdom of practice' to the complex tasks of writing and applying standards.

Chapter 3 of the report presents examples of teaching standards and their applications in Australia, New Zealand, the United Kingdom, Scotland, Denmark, and the United States. The examples are arranged in four categories that broadly correspond to teacher career stages: 'graduation', 'full registration', 'experienced', and 'accomplished practice'. The various models are discussed in terms of their purpose, structure, assessment arrangements, and the incentives they provide for teachers to undertake the professional learning required for their achievement.

Essential differences between 'generic' and subject/year level/specialist standards are pointed out, and the observation is made that while generic standards may have value as statements of overall principles about what is valued, they are limited in their capacity to 'capture' what good teachers know and do. The value of 'core' standards such as those developed in the United States by the Interstate New Teacher Assessment and Support Consortium (INTASC) and the National Board for Professional Teaching Standards (NBPTS) is that they provide an underpinning for the

development of standards that are specific to subjects and/or particular years and kinds of schooling. Such standards ‘drill down’ into the many complex areas of teachers’ knowledge and skills. When they are integrated into complete systems of professional learning and assessment they provide an exceptionally powerful form of teacher professional development.

Chapter 4 of the report offers three suggestions for further research and parameters for research linked to the core functions of the New Zealand Teachers Council:

1. It is important that standards for the accreditation of teacher education programmes are consistent with research on the characteristics of effective teacher education programmes. A research programme is suggested to investigate factors affecting the effect of teacher education programmes on teacher preparedness during their early years of teaching. Such a programme could play a valuable role in the development of accreditation standards that improve the quality of teacher education.
2. The Teachers Council might explore the value of a research project to develop methods for assessing teacher performance that promote development toward registration standards for entry to the profession. Registration increasingly means gaining a qualification *and* successfully completing a period of support and induction that is integrated with the normal work of a beginning teacher and provides evidence of attainment of performance standards.
3. The Teachers Council might investigate the feasibility of a pilot programme to develop a professional learning and certification system for recognising teachers who attain ‘advanced’ or ‘accomplished’ standards of practice. This would give stronger recognition to teachers who provide evidence of their professional learning over time. The report identified two broad approaches to providing recognition, one from the NBPTS in the United States and the other from the General Teaching Council in Scotland. If the New Zealand Teachers Council were to consider the introduction of a system to provide certification to teachers who attain advanced standards in teaching, it would be useful for the Teachers Council to investigate the relative validity, benefits, and costs of these two systems.

1. Introduction

The brief for this report was to conduct a critical review of literature that examines the theoretical underpinning and application of standards to the professional practice of teaching.

The review focuses in the main on standards developed for profession-wide purposes such as entry into teaching (registration), accreditation of teacher education programmes, and recognition of ongoing professional learning (professional certification). In most professions, these quality assurance purposes or functions are delegated to statutory agencies and professional bodies, in the service of the public. The review does not focus on procedures used in performance management systems, which are properly the responsibility of particular employing authorities. These two quality assurance purposes for standards are seen as different but complementary.

To demonstrate their credentials as a profession, teachers and their associations in several countries are undertaking the responsibility to develop professional standards. The National Council of Teachers of Mathematics (NCTM) in the 1980s in the United States was one of the first to develop teaching standards. Other professional associations have followed, in the United States and in Australia. There are several reasons for this trend.

One of the most important reasons is to protect and enhance the quality of teaching and learning. The NCTM, for example, was concerned about the deleterious effects of trends in mathematics textbooks and testing in the 1980 on the quality of mathematics teaching. The idea for the National Board for Professional Teaching Standards emerged in the late 1980s from a coalition of teacher unions and other stakeholders concerned about the crisis in supply and retention of able teachers.

The newly established National Institute for Quality Teaching and Professional Leadership in Australia emerged in part as a result of concerted pressure from teacher and principal associations to play a stronger role in the professional development of their members and in the provision of recognition to those who attained high professional standards. There is no doubt that teacher associations are taken more seriously now in policy arenas in Australia as a result of the pioneer work on standards conducted by English, mathematics, and science subject associations. Other associations are following their lead.

Without a demonstrated capacity to define and apply standards, a profession is defenceless against policies that may run counter to quality practice and conditions that enable practitioners to do their best. Teaching standards give the profession an opportunity to play a stronger part in key decisions about quality in teacher education and continuing professional learning, on behalf of the public. These are decisions about who joins the teaching profession, who trains teachers and how, and what the profession's members should get better at with experience. No one can doubt that it

is in the interests of governments and employers to have a teaching profession that has a strong sense of ownership for the standards that are used in making these decisions. When given the responsibility for developing standards for entry and advancement, the United States and Australian experience has been that teachers set standards that are higher than governments and employers have dared to set.

Overview

The discussion in this report is divided into three parts. The first, in Chapter 2, examines definitions of standards and reviews how these definitions are applied to professional standards for teaching. Discussion follows on a range of conceptual issues related to the application of teaching standards to professional learning and the assessment of quality in teaching.

Chapter 3 presents models of professional teaching standards and their implementation in a number of countries, and weighs the relative merits of the various approaches, especially when used for assessment.

Discussion of the models identifies:

- the research on which the models of standards and professional recognition was based (where applicable)
- the extent to which the developers captured professional knowledge about effective teaching practices
- the ways in which standards were used (e.g. to assess teachers for full registration or to award certification at a highly accomplished level and/or to provide opportunities for professional learning).

The review also provides information in relation to evaluations of the various models, and commentary on their implementation.

Drawing upon information from the preceding chapters of the report, Chapter 4 offers the New Zealand Teachers Council several recommendations for a research agenda in teacher education. Given the time limitations of the project, it was not possible to investigate and discuss all the identified models to the extent that the review team members would have liked. Deeper investigation and further discussion of standards models that have high potential to inform present and future projects of the Teachers Council may well be part of this research agenda.

The following questions guided the review. They are not research questions, but were used to support the discussion at relevant points:

- Where, in the complex mix of factors that can support teachers' professional capacity, do professional standards sit?
- How can and do they support teacher learning?
- What are the benefits, costs, and harms?

- Which models enhance and which detract from teachers' professional learning and the profession's overall capacity?
- Can the documented strengths of working with professional standards be gained in other ways?

Methodology

A search of websites of teachers councils, professional organisations, and various accrediting, licensing and regulatory bodies and agencies in New Zealand, Australia, and internationally was made to discover information relevant to the review. A search of the academic literature on professional teaching standards and their application was also carried out and the information was gathered and sorted into relevant categories in line with the main research questions and purposes of the review. Colleagues and professional networks in a number of countries, especially the United States, England, and Scotland, were consulted for information and advice.

An initial brief scoping report was prepared that set out a possible structure for the review. This report made the point that since there are now so many examples of teaching standards, some of which are of doubtful use or relevance, the review would concentrate on those standards that have been, or are being, used for specific purposes. These included standards for teacher registration and the accreditation of teacher education programmes, and standards to support and provide recognition to teachers' professional learning during their careers.

The scoping report was followed by an interim report that was submitted to the Teachers Council. The review then proceeded in line with feedback and suggestions provided by the reference group.

2. Definition of ‘standard’ and related issues

The *Shorter Oxford Dictionary* gives two meanings of the word ‘standard’, both of which are relevant to the subject of this report:

1. n. Distinctive flag (often fig. of principle to which allegiance is given or asked; the royal &c-raise the – of revolt; free trade, &c)
2. Specimen or specification by which the qualities required of something may be tested, required degree of some quality, levels reached by average specimens (attrib.) serving as test, corresponding to the – of recognised authority or prevalence.

Professional standards for the teaching profession contain elements of both rallying and measurement. In the *first* sense, they aim to describe a consensus model of what is most worthy, and most desirable to achieve, in teaching knowledge and practice. By rallying to the standards, groups of teachers come to discover and understand the most distinctive features and aspirations of their profession. In the *second* sense, standards are used as measures that provide specifications about levels of achievement. Teaching standards can thus be used to describe a vision of teaching practice, based on a consensus of professional values and beliefs. They can also be used as measurement tools for making professional judgements.

Standards as professional values

In line with the first definition, a standard may be understood as a call to higher achievement, a rallying point for a cause or ideal. Standards, understood in this sense, unite people around shared ideas and values. They encourage the reconciliation of divergent views. By this definition, standards are also statements about what is valued in the profession. Their developers are guided by conceptions of significant elements in the exchanges that occur between teachers and learners.

It is often said of standards (understood in the flag or banner sense), that they are exemplars of ‘good’ or ‘quality’ teaching practice. As such, they ultimately rest on a professional consensus about what counts as quality learning and what that implies for what teachers should know, believe, and be able to do. Reaching such a consensus is a necessary part of all processes of standards development. It means that teachers as standards developers must reach agreement on the basic principles, the scope, and the content of their work.

The National Board for Professional Teaching Standards’ *What Teachers Should Know and Be Able to Do*, developed by teachers in the United States, provides a good example of professional standards as values. The principles include:

1. Teachers are committed to students and their learning.
2. Teachers know the subjects they teach and how to teach those subjects to students.
3. Teachers are responsible for managing and monitoring student learning.
4. Teachers think systematically about their practice and learn from experience.
5. Teachers are members of learning communities.

These are core propositions, or values, setting out in general terms what United States teachers think accomplished teachers should know and be able to do, regardless of the level or specialist field in which they taught. The five propositions provide the philosophical basis for the development and elaboration of standards for specific fields and levels of teaching (such as primary teaching, or high school science teaching).

Standards as measures

To be useful for purposes such as professional learning and recognition, standards must also be understood in the second sense of the dictionary definition, as measures. One of the hallmarks of a profession is its demonstrated capacity to define and measure quality performance. If teachers are to use standards as fair and valid measures of professional performance, for purposes such as professional recognition and certification, there are three essential steps in their development. These are:

1. defining what is to be measured (what is good teaching?). These are called content standards
2. deciding how teaching will be measured (i.e. how will relevant evidence about teaching be gathered?)
3. identifying what counts as meeting the standard, or how good is good enough (this leads to performance standards).

Sykes and Plastrik (1993) point out that the word 'standard' used in this second sense of measurement carries different usages and nuances. One of these is the idea of a standard as a legally recognised unit, such as that of Greenwich Mean Time, or the Gold Standard, or the Standard Metre for length. Another is the notion of a standard as 'an authoritative or recognised exemplar of perfection', such as the sacred books of a religious organisation. Yet another usage refers to 'a definite level of excellence, attainment, wealth or the like' such as 'standard of living' or a particular level of proficiency (Sykes & Plastrik, 1993, p. 4).

Content standards (defining good teaching)

Standards that describe the scope and content of teachers' work are usually referred to as 'content' standards. As in educational measurement generally, content standards set out the domain of what is to be assessed. They set out the main areas of a teacher's responsibilities and provide elaborations on what the standards mean in terms of a teacher's knowledge and practice. In recent years, teachers have shown that they can develop standards that reflect the complexity and

sophistication of what it takes to teach well far better than the checklists of competencies used on them in the past.

To be valid, content standards need to be based on evidence about conditions that foster purposeful and worthwhile student learning. This means they also need to be sensitive to differences in what teachers are expected to know and be able to do in different subjects and at different levels. The same applies to people who are assessing teachers' performance based on content standards.

Generic standards are useful in delineating the main areas and important aspects of teachers' work, but their limitations become apparent when standards writers attempt to go deeper and articulate what teachers need to know and be able to do to support learning in specific areas of the curriculum, or for students at specific levels of schooling. For example, standards that describe what an effective early childhood teacher needs to know and be able to do to teach reading will be different from those that a high school teacher of social studies needs to know to initiate and sustain productive discussion of a controversial issue. Reverse the settings for these teachers and each will readily feel de-skilled. Expertise in teaching, as in other professions, is domain-specific not generic. This means that accomplished early childhood and primary school teachers are as much specialists in their teaching fields as secondary and university teachers.

Gathering evidence to indicate achievement of professional standards

Well written standards indicate how teachers may develop and improve their performance over time. They point to the kinds of evidence teachers might gather to show that they have developed professionally and are more effective in providing quality opportunities for students to learn. Well written standards also indicate what counts as meeting the standard and how decisions will be made about whether the standards have been met. As with the development of content standards, the methods chosen by the profession to measure the extent to which a standard has been met – evaluation against the (content) standards – will express values and conceptions about teachers' work.

In the past, teachers rightly rejected invalid and unreliable methods of gathering evidence; for example, administrators using observation checklists during brief classroom visits. Teachers and their professional associations have become more involved and creative in developing new methods for assessing their performance. The National Board for Professional Teaching Standards in the United States provides one example. Subject associations in English, science, and mathematics in Australia have been moving down the same path.

New methods for gathering evidence about teacher performance may require teachers to undertake several authentic teaching tasks, each providing evidence relevant to several standards. One of the guiding rules for authentic tasks is to ensure they provide evidence of what students are doing as a result of the conditions for learning established by the teacher. Examples of tasks

include portfolio entries, based on videotapes and student work samples over time, together with teacher commentaries. Such tasks are based on the natural harvest of evidence surrounding teaching.

Specification of required evidence – spelling out what evidence teachers need to provide as evidence and how to present it – needs to be precise for an evaluation to be valid and feasible. Vague or imprecise requirements often result in teachers presenting an oversupply of evidence that bears little or no relation to the relevant standards, so that making accurate judgements becomes difficult or impossible. (Validity, in this instance means that the evaluation provides an accurate measure of what it sets out to measure.)

Assessing the evidence and setting performance standards

Content standards define the scope of teachers' work, but of themselves they do not tell us *how good* a teacher's performance needs to be in relation to the standards. Or, put another way, content standards alone do not tell us what a satisfactory level of performance is on the assessment tasks. The key question to be answered by teachers in setting performance standards is how good is good enough? Setting standards and training teachers to use them in assessing evidence of teaching can be just as complex as identifying the content standards. The evidence is that teachers can do this very well. The process involves developing scales and scoring rubrics, weighting different tasks and sources of evidence, identifying benchmark performances, and training assessors. Recent experience indicates that teachers can reach high levels of reliability assessing evidence in relation to the standards.

Towards a full definition of standard

Sykes and Plastrik (1993) provide a definition of a standard (as a measure) that usefully summarises the foregoing discussion:

A standard is a *tool* for rendering appropriately precise the making of judgements and decisions in a context of *shared meanings and values*.

This definition is a useful reminder that a complete definition of standards needs all three components above. That is, content standards (what are we measuring?), rules for gathering evidence (how will we measure it?), and performance standards (how good is good enough and how will we judge the evidence?).

Some people have opposed the idea of standards for teaching because of concerns that they could be used against teachers, especially when they fail to express fully the nature of teachers' work. Such standards, it has been claimed, could de-skill teachers and intensify their work. To avoid a situation where 'professionalism under the guise of standards becomes a tool for employers

demanding more of teachers' (Sachs, 2001, p. 5), stakeholders argue strongly that standards should be 'owned' by the teaching profession, and not by employers.

While standards aim to provide a consensus about good teaching practice, they need not prescribe or 'standardise' the means by which the standards are brought to life in practice. Teachers who have widely varying teaching 'styles' and who exhibit quite different behaviours in the classroom can achieve the same set of standards. Well written standards place emphasis on what students would be doing and learning, *as a result* of the conditions for learning that a teacher has established in their classrooms. They do not prescribe one way of teaching.

Standards: What are the benefits for the teaching profession?

As mentioned in the introduction, teaching standards open up a range of opportunities for the profession to have a stronger and more credible voice in decisions that affect the quality of teaching and learning.

Well-developed standards, as described above, provide a basis for the profession to enhance the contribution it makes to the quality of teacher education and continuing professional learning. Standards-guided teacher education systems, such as the Bachelor of Learning Management in Queensland described below, are rated highly by graduate teachers.

Standards for accomplished teachers provide a basis for the profession to build its own professional learning system with the following components:

- *teaching standards* that articulate what teachers should get better at and provide direction for professional development over the long term
- a voluntary system of *professional certification* to give recognition to teachers who attain the standards based on rigorous peer assessment
- an *infrastructure for professional learning* that enables teachers to gain the knowledge and skill embodied in the teaching standards.

Such a professional learning system can support the development of improved career paths for teachers with a stronger capacity to provide incentives for sustained professional learning. By providing a basis for career paths based on evidence of professional learning, standards lift the status given to teaching and justify better pay for teachers.

Professional standards provide a basis for developing more valid systems for teacher accountability and performance. Standards also highlight conditions, such as opportunities for collegial interaction, that need to be in place for teachers to teach effectively.

Standards as vehicles for professional learning

Many researchers have argued that professional standards can serve as a powerful vehicle for teachers' learning. Sergiovanni and Starrat (2002) suggested that professional standards can provide a useful framework for teachers to reflect on their practice and talk to each other about their work. There is abundant research evidence that the assessments used by the National Board for Professional Teaching Standards in the United States are a powerful avenue of teacher professional development. Ingvarson (1999, 2002) describes how the process of preparing portfolio entries for National Board certification necessarily engages teachers in the kind of practice-based professional learning that is consistent with research about the conditions for effective professional learning (Hawley & Valli, 1999). Darling-Hammond (2001), Pyke and Lynch (2005), and Danielson and McGreal (2000) have all found that the formative purposes of standards-based teacher evaluation systems lead to enhanced professional learning because they allow teachers to play an active role in self-directed enquiry.

Elmore (1996) makes the point that, for teachers to learn effectively, they need to look beyond their immediate experience to measure themselves against 'challenging conceptions' that have found expression in external 'norms' about what constitutes good practice across the whole profession:

The existence of external norms is important because it institutionalises the idea that professionals are responsible for looking outward at challenging conceptions of practice in addition to looking inward at their values and competencies ... Without some kind of external normative structure, teachers have no incentive to think of their practice as anything other than a bunch of traits. The existence of strong external norms also has the effect of legitimating the proportion of teachers in any system who draw their ideas about teaching from a professional community and who compare themselves against a standard external to their school or community. External norms give visibility and status to those who exemplify them. (Elmore, 1996)

Standards and research on teaching

Well written standards can provide a bridge between research and practice. They aim to articulate, where possible, what the research implies teachers should know and be able to do. The task of defining standards is, in part, an attempt to summarise the implications of research. Research on teaching and learning has much to offer for developers of professional teaching standards, particularly research in specific content areas such as literacy or science. It has told us, for example, that effective teachers are people who communicate well and are able to think and plan systematically. Achievement levels are higher for students of teachers who perform well on tests of verbal ability and literacy (Rice, 2003). Teachers' levels of education and preparation in the subjects they teach (Wilson et al., 2001) have also been shown to correlate positively with higher levels of student achievement.

Studies by Lingard et al. (2002) and Ayres et al. (2000) identified the following competencies that impinge on teacher effectiveness:

- sound subject knowledge
- communication skills
- ability to relate to individual students
- self-management skills
- problem-solving skills
- organisational skills
- classroom management skills
- a repertoire of teaching methods
- teamwork skills
- research skills

There is broad agreement, however, that the qualities that distinguish effective teachers are hard to identify. Easily measured attributes account for only a small part of why some teachers appear to be more effective than others.

Research is valuable to standards developers because it informs and illuminates understandings about teaching. But the products of research are not like the solutions to sums at the back of old-fashioned arithmetic textbooks. They do not, of themselves, provide the ‘right’ answers. As Hiebert (1999), in reply to a question about the relationship between research and the curriculum standards of the National Council of Teachers of Mathematics (NCTM), said:

How nice it would be if one could look at the research evidence and decide whether the Standards are right or wrong. This would make decisions simple and bring to an end the debates about the direction of mathematics education in the United States. Is this impossible? After all, can’t those in other professions make such clear connections? Actually they can’t. (p. 4)

Clearly, processes of developing teaching standards need to be conceived of as multi-dimensional, broadly based, and conceptually challenging. On this principle, Shulman (1992) identified five areas for the development of professional knowledge and expertise in teaching:

- behaviour – effectiveness is evidenced by teacher behaviour and student learning outcomes
- cognition – teachers are intelligent, thoughtful people whose actions are characterised by wise intentions, strategies, decisions, and reflections
- content – teachers have good knowledge of the subjects they teach
- character – teachers are ‘moral agents’ and teaching is a moral undertaking
- cultural and social awareness – teachers are sensitive to the cultural, social, and political contexts and the environments in which they teach.

Standards and the ‘wisdom of practice’

Many sets of standards for teaching have now been developed in countries across the world. Effective processes of standards development in which we have been involved (see Chapter 3 of this report) have consisted of groups combining experienced and highly regarded teachers with academics who have strong research backgrounds in the relevant field of teaching. It is important that these standards development working parties or committees represent the diversity of informed and reasonable opinion in relation to the field of teaching in question. Consensus about what constitutes good teaching practice is often reached on the basis of heated discussions and reminiscences about what has ‘worked’ for them.

Teachers’ ‘knowledge’ has been criticised on the grounds that it is overly subjective, pragmatic, and individualistic (Lortie, 1975; McAninch, 1993). However, Shulman (1986, 1987), Fenstermacher (1994), and many other writers and researchers have drawn attention to its value. Shulman (1987) called this knowledge ‘the wisdom of practice’. Using research-derived theoretical knowledge effectively, he maintained, would require that teachers develop sound powers of reasoning about their teaching practice, as well as being skilful in performance.

Acknowledging the validity of teachers’ practical knowledge, and its relationship to research-derived knowledge about teaching, has implications for processes of standards development. Among other things, it strongly suggests that these processes need to be carried out by practitioners who are able to articulate, reflect on, and share their knowledge and experiences of teaching. However, this is not to say that the wheel must be reinvented every time a group of people develops a set of standards. Many examples of standards now serve as excellent models, and new research continues to provide new insights and inform practice.

Standards form a bridge between research and practice. The task of defining standards requires investigation and analysis of research findings by experienced, reflective teachers who bring their own ‘wisdom of practice’ to the task of writing standards statements.

Relationships between teachers’ professional knowledge and skills, and student learning outcomes

One widely although not universally held assumption is that ‘good’ teaching will result in higher student achievement. A great deal of research is predicated on this assumption and it is now common for teacher ‘quality’ to be judged on the basis of student learning outcomes. An increasing expectation of standards developers in the 21st century context of ‘outcomes’ and ‘accountability’ is that their standards should reflect the notion that teaching gets results – that is, that ‘good’ teachers improve their students’ learning. When their performance is being evaluated against the standards – so this argument goes – teachers should be required to produce evidence of having caused their students to learn something.

The concept of quality in teaching is notoriously slippery, especially for standards developers, who will always need to exercise caution when attempting to decide what is to be ‘counted’ as essential components of what teachers know and do. As McAninch (2003) points out in relation to standards for accrediting teacher education courses:

Accreditation standards built on faulty concepts, or which posit relationships between concepts which are not logically tenable, are – at best – unlikely to advance the field. At worst, they squander precious resources and undermine the very purposes of accreditation. (p. 1)

The idea that it is conceptually sound to infer a causal relationship between what a teacher does and what a student may or may not learn has not gone unchallenged in the literature. This issue is of particular relevance for those with an interest in professional standards. McAninch (2003) questions the assumption of a causal relationship between teaching and student achievement. She singles out, as an example, Standard 1 of the United States National Council for the Accreditation of Teacher Education (NCATE), which states:

Candidates preparing to work in schools as teachers ... know and demonstrate the content, pedagogical, and professional knowledge, skills and dispositions necessary to help all students learn. (NCATE, 2001, p. 10)

and its supporting statement:

Candidates for all professional education roles are expected to demonstrate positive effects on student learning. (NCATE, 2001, p. 19)

By exploring the ‘causal nexus’ (or lack of it) between teaching and learning, which is made explicit in this standard, McAninch (2003, p.2), using some ideas of Scriven (1996), examines whether this standard rests on ‘solid conceptual foundations’ or ‘conceptual sand’. Using arguments that draw upon Ryle’s (1949) distinction between task verbs and achievement verbs, she argues, in common with Green (1971), that teaching and learning are independent types of activities. One does not necessarily imply the other as in a 1:1 causal relationship, or as in terms such as ‘competing’ and ‘winning’. She goes on to argue that attempts to make teachers and developers of teacher education courses accountable, on the basis of a causal connection between teaching and learning, are conceptually invalid.

The positing of a causal relationship between teaching and learning in the NCATE standards, she continues, reflects a categorically mistaken view of teaching as a production process, as outlined by Green (1971):

If we could find it, we could convert teaching into a kind of engineering problem, the formula for which, if we could discover it, would produce learning in each case. But the impact of the task achievement analysis is to point out that such a search is based on false hope. To suppose that learning is the effect of which teaching is the cause, that learning is produced by teaching or caused by teaching is to commit a category mistake. (p. 141)

McAninch expresses concern that any further structures or processes that are built upon this particular standard, such as measures to hold teachers or teacher education programmes accountable on the basis of their students' achievement, will be unstable because the standard itself reflects a 'category mistake' (that is, the standard is being placed into a 'production process' category rather than one of education). To others, however, it seems reasonable to expect to find effects of teaching on student learning, without expecting a perfect relationship in every case.

'Quality' teaching, 'good' teaching, and 'successful' teaching

This issue is taken up by Fenstermacher and Richardson, in 'On making determinations of quality teaching', published in the *Teachers College Record* in 2005. Their arguments present a fresh analysis of the relationship between teaching and learning which allows for a degree of causality between teaching and learning.

The authors set out to define 'quality' teaching and ways in which it may be recognised:

What constitutes the keen insight and quality judgement needed to pick out instances of quality teaching? Can we 'unpack' the conceptual subtleties and nuances of quality teaching so that we can proceed in consistent and systematic ways to identify and foster it, or are we required instead to acknowledge its elusive nature and depend on some sort of cultivated intuition to reveal quality teaching? (pp. 186–187)

Like McAninch, these writers apply Ryle's (1949) 'task and achievement' distinction to the verbs 'teaching' and 'learning' and agree that teaching (the task verb) does not necessarily entail learning (the achievement verb).

When considering task and achievement verbs, Fenstermacher and Richardson caution against sliding into the conceptual fallacy that teaching per se could only be said to be occurring when students were learning, and suggest that *quality teaching* might entail *successful teaching*; that is, teaching that had caused learning to occur.

Quality teaching could be understood as teaching that produces learning. In other words, there can indeed be a task sense of teaching, but any assertion that such teaching is *quality* teaching depends on students learning what the teacher is teaching. To keep these ideas clearly sorted, we label this sense of teaching *successful* teaching. Successful teaching is teaching understood exclusively in its achievement sense. This said, the question is whether successful teaching is what we mean by quality teaching. (p. 189)

When making a judgement about quality, describing an act of teaching as 'successful' is clearly insufficient as an assessment of 'quality'. Children could be taught to kill successfully, to lie, to cheat, but no one would describe such teaching as 'quality'. And even if the content were acceptable, such as teaching the causes of World War II or how to calculate the mass of an electron, the teacher might beat the children, or drug them to learn. Such teaching would never attract the adjective 'quality'.

Fenstermacher and Richardson (2005) argue that 'quality' teaching must include considerations not only of what is taught, but how it is taught. Such teaching may be called 'good teaching':

Quality teaching, it appears, is about more than whether something is taught. It is also about how it is taught. Not only must the content be appropriate, proper, and aimed at some worthy purpose, the methods employed have to be morally defensible and grounded in shared conceptions of reasonableness. To sharpen the contrast with successful teaching, we will call teaching that accords with high standards for subject matter content and methods of practice 'good teaching'. *Good teaching is teaching that comports with morally defensible and rationally sound principles of instructional practice. Successful teaching is teaching that yields the intended learning.* (p. 189) (emphasis added)

Teaching may thus be seen as capable of being good without being successful, or successful without being good: 'Good teaching is grounded in the task sense of the term, while successful teaching is grounded in the achievement sense of the term' (Fenstermacher & Richardson, 2005, p. 189). These distinctions matter when it comes to the writing of standards to be used in the assessment of teaching performance. Should standards and assessments focus on evidence of student learning outcomes, or the quality of the conditions for learning that the teacher has established?

Conditions for learning

It would be tempting at this point, say Fenstermacher and Richardson (p.190), to conclude that 'quality teaching' is some kind of simple combination of 'good' and 'successful' teaching. But that argument is 'fraught with complexities'. For a student to succeed in learning four conditions need to be in place:

- willingness and effort by the learner
- a social surround supportive of teaching and learning
- opportunity to teach and learn
- good teaching.

If these conditions are valid, they continue, then good teaching is but *one* of the factors that relate to the achievement verb 'learning'. 'Successful' teaching, which posits a relationship between teaching and learning, thus depends upon more than 'good' teaching; it requires the presence of at least three conditions that are outside the control of the teacher. For this reason, they argue, policy related to teaching standards and teacher evaluation that presumes a simple relationship between learning and teaching is misguided:

There is currently a considerable focus on quality teaching, much of it rooted in the presumption that the improvement of teaching is a key element in improving student learning. We believe that this policy focus rests on a naïve conception of the relationship between teaching and learning. This conception treats the relationship as a straightforward causal connection, such that if it could be perfected, it could then

be sustained under almost any conditions, including poverty, vast linguistic, racial or cultural differences, and massive differences in the opportunity factors of time, facilities, and resources. Our analysis suggests that this presumption of simple causality is more than naïve; it is wrong. (p. 191)

Fenstermacher and Richardson's analysis of quality teaching in three research programmes

After making the further observation that 'good teaching' is learner sensitive while 'successful teaching' is learner dependent, Fenstermacher and Richardson (2005) describe three approaches to teaching in ways that make evident the differing conceptions of quality teaching. They also show the extent to which student achievement plays a role in perceptions of quality. The three programmes are:

- teaching as transmission
- teaching as cognition
- teaching as facilitation.

Teaching as transmission – the process–product approach

The process–product approach to research on teaching, which reached its height in the United States in the mid-1970s, aimed to identify the generic features of effective teaching. Researchers studied the relationships between classroom processes and student outcomes. The research designs used in this tradition were correlational, not causal, in the main – they could only identify those behaviours of teachers that were associated with higher achieving classes of students. For this reason, they need to be treated with some caution if used in high stakes teacher evaluation.

Fenstermacher and Richardson point out that the process–product approach uses successful teaching as the first identifier (that is, student achievement is used to identify the more effective teachers within a sample). The process–product approach brings task and achievement aspects together as it seeks to discover the teacher behaviours that resulted in success. Although the limitations of this approach are now well recognised, it has left a 'legacy' in the continuing search for causal connections between teaching and learning (see also Scriven, 1994, p. 200).

A possible danger with process–product research, as a foundation for teaching standards, is that of privileging certain teaching behaviours or styles (for example, wait-time, group work, or advance organisers) that are not *necessarily* related to successful learning. This danger materialised in the 1980s and 1990s where some jurisdictions translated process–product research findings into checklists for classroom observation that were used in teacher appraisal. Scriven (1994) provides a damning critique of the use of process–product research as a basis for teacher evaluation.

Teaching as cognition – cognitive science

A major shift in approach to research on teaching took place during the 1980s – from a focus on classroom behaviour, as in the process–product tradition, to a greater interest in how teachers'

knowledge and thinking shapes their planning and actions in the classroom. In this research programme, which Fenstermacher and Richardson label ‘teaching as cognition – cognitive science’, there is little emphasis on successful teaching as outcomes. It is assumed that teaching which pays attention to how students think and learn will lead to better learning. Good teaching, in this approach, is consistent with the notion of expertise, which, as Berliner (1994) demonstrated, is not necessarily the result of experience. Much attention is paid, in this research programme, to identifying the nature and levels of teacher expertise. Many of the teachers who participated in this research were selected on the basis of their students’ achievements (Carter et al., 1988), but student learning was a less critical factor in this research programme than it was in the earlier process–product work (Scriven, 1994, p. 203).

Lee Shulman (1987) has been a major influence in this research tradition. He helped to turn researcher attention from seeking to identify the generic behaviours of effective teachers to understanding what lies behind their behaviour. He refers to ‘the missing paradigm’ in research on teaching – the lack of attention researchers had given to subject matter as a context for studying teaching. Shulman’s initiative led to many studies of the ways in which teachers understand subject matter and the way that understanding shapes every aspect of their pedagogy, including planning, learning goals, classroom interaction, assessment, and evaluation.

Teachers became more actively involved in this type of research, unlike process–product research. It turned out that teachers’ knowledge and beliefs about what is involved in teaching and learning the subject had a highly significant influence on the quality of their pedagogy. Brophy’s *Teachers’ Knowledge of Subject Matter as it Related to Their Teaching Practice* (1991) contains a wide range of studies in this vein.

The implications of this research approach for the development of teaching standards were clear. Generic teaching standards under-represented the professional knowledge that underpinned good teaching of subject matter and skills. They did not spell out what effective teachers know. Shulman coined the term ‘pedagogical content knowledge’ to capture the kind of additional knowledge that expert teachers acquired that enabled them to help students learn the relevant content, whether early years literacy, numeracy, or university-level economics.

Around the late 1980s, teachers in the United States started to become more involved in the development of their own teaching standards, through their professional associations (for example, the National Council of Teachers of Mathematics (NCTM), *Professional Standards for the Teaching of Mathematics*, 1991) and through the establishment of the National Board for Professional Teaching Standards. Teachers involved in these developments were determined to produce something better than the lists of generic behaviours used by administrators to evaluate teaching, which they disdained and distrusted. They wanted, instead, to begin the standards conversation with a clear vision of quality learning in their field of teaching, then work through what that vision implied for what teachers needed to know and be able to do to make that vision a reality.

This, for example, was part of the vision that NCTM teachers wrote:

Central to the *Curriculum and Evaluation Standards* (for students) is the development of mathematical power for all students. Mathematical power includes the ability to explore, conjecture, and reason logically; to solve non-routine problems; to communicate about and through mathematics; and to connect ideas within mathematics and between mathematics and other intellectual activity. Mathematical power also involves the development of personal self-confidence and a disposition to seek, evaluate, and use quantitative and spatial information in solving problems and in making decisions. Students' flexibility, perseverance, interest, curiosity, and inventiveness also affect the realisation of mathematical power. (National Council of Teachers of Mathematics, 1991, p. 1)

Mathematics teachers involved in developing teaching standards took this vision of quality learning and worked through its implications for what teachers needed to know, believe and be able to do, based, where possible, on research. It was clear that standards would need to reflect the importance of teachers' knowledge of mathematics, their knowledge of how students learn mathematics, their knowledge of how to identify difficulties in learning mathematical concepts and much more, if they were to be a valid reflection of the professional knowledge of good mathematics teachers.

Teaching as facilitation – constructivist teaching

For the third research programme, teaching as 'facilitation – constructivist teaching', Fenstermacher and Richardson describe how, in constructivist classrooms, students are expected to be actively involved with their peers in the construction of meaning, as they make use of opportunities provided by the teacher. Fenstermacher and Richardson had not come across any research studies in this tradition that sought to identify 'effective' or 'less effective' constructivist teaching. As with the cognitive science approach, they point out, constructivists assume that deep learning will occur as a result of teaching that is consistent with constructivist principles, but while constructivists saw constructivist teaching as highly learner sensitive, they would not predicate its effectiveness on 'successful' student performances.

Conclusions reached by Fenstermacher and Richardson

The main conclusions reached by Fenstermacher and Richardson were:

- Quality teaching can be defined as teaching that is both good and successful.
- A good teacher would find it exceedingly difficult to be a successful teacher without the other three conditions (learner effort, a supportive surround, and opportunity to learn) being in place. For this reason, a good teacher would be unlikely to be judged a quality teacher if those three conditions were not present.
- Practices that may supply evidence of good teaching may not be 'actionable' in certain 'deficient' contexts. Where learner effort, supportive surround, or opportunity to learn are absent or deficient it may not always be possible for a teacher to display elements of good teaching.
- A teacher may be a good teacher in one context and a mediocre one in another.

- A teacher does not have to be a hero:
 - An appraisal of good teaching could be undertaken in two ways: the first would be an appraisal independent of student learning outcomes, in which the assessment was made according to standards about good teaching. The assessment in this case would be sensitive to student learning, but not dependent on learning taking place. The second approach would attend to both good and successful teaching. Because successful teaching is learner dependent, this approach would have to take student achievement into consideration.
- Both approaches would need to be multi-dimensional and grounded in the four conditions for learning (student effort and willingness, a supportive surround, opportunity to learn, and good teaching).
- Appraisal of quality is strongly interpretative and requires high levels of discernment on the part of the appraisers.

Fenstermacher and Richardson close with a final suggestion for policy makers. Their framework for quality teaching, they say, opens up the possibility that teaching could be improved by attending, not only to the knowledge and behaviours of teachers, but also to factors like surround and opportunity upon which quality teaching depends. The framework:

... indicates that there are policy alternatives for improving teaching, and that attending specifically to the practices of classroom teachers is not the sole approach to obtaining quality teaching. There are perhaps far more occasions than we realize where a significant improvement in teaching could be realized by altering the contextual variables for that teaching. (p. 208)

We recommend this paper to the New Zealand Teachers Council, as we believe it clarifies some important foundational issues that need to be taken into consideration by developers and implementers of professional teaching standards.

‘Successful’ teaching and the concept of ‘quality’ in teaching

Fenstermacher and Richardson’s identification of ‘successful’ teaching as a component of ‘quality’ teaching leaves the way open for continuing study of the work of teachers and ‘quality teaching’ as a major influence on students’ learning and achievement. John Hattie (2003), for example, is one of many researchers who argue that policy emphasis should continue to be placed on developing teacher excellence, provided that ‘excellence’ is conceived of in the broadest terms:

Although there have been many lists of what makes an effective teacher, too few have been based on evidence from classrooms, particularly considering the effects on student learning: the learning of affective outcomes, respect and caring and quality of achievement. Too often, the lists have been based on simple analysis of single variables, on small numbers of teachers, and on teachers that have not already been identified as expert based on a rigorous and extensive assessment process. (p. 15)

Hattie's research took student achievement as the starting point for a discussion of excellence among teachers. It made sense, he argued, to discover where the major sources of variance in students' achievement were to be found, and to 'concentrate on enhancing these sources of variance to truly make the difference' (p. 1).

Hattie noted that many studies have been conducted in recent years that sought to identify sources of variance, most of which have used hierarchical linear modelling to 'decompose' the many influences that impinge on learning. The major sources of variance, ignoring the often minor interactions effects shown, were:

- **Students: 50 percent**

Student characteristics account for about 50 percent of the variance of achievement. There are high correlations between ability and achievement, so it is not surprising, says Hattie, that the learning trajectories of brighter students are steeper than those of less bright students. He also notes that PIRLS (Progress in International Reading Literacy Study) and TIMSS (Trends in International Maths and Science Study) studies have shown that the New Zealand trajectory for the less bright students is one of the flattest in OECD (Organisation for Economic Cooperation and Development) countries.

- **Home: 5–10 percent**

Home influences account for about 5 to 10 percent of the variance. These are related to the effects of expectations and achievement. They certainly do not reflect, says Hattie the involvement of parents or care givers in the management of schools.

- **Schools: 5–10 percent**

Schools also account for about 5 to 10 percent of the variance. Given that schools in New Zealand are comparatively well resourced, says Hattie, and that there is more uniformity in the minimum standards than in most countries, it would not be surprising if the school effects were even lower.

- **Principals: 5–10 percent**

Hattie suggests that principals who create positive school climates for learning have a 'trickle' down, rather than 'direct' effect on student learning.

- **Peer effects: 5–10 percent**

Hattie regrets the current emphasis on negative influences of peer relationships, such as bullying, and uses the findings of a study by his colleague, Ian Wilkinson, as evidence of the potentially positive influence of healthy peer relationships in the classroom.

- **Teachers: 30 percent**

Hattie suggests that since variation in teachers accounts for such a high percentage of the variance in student achievement, 'interventions' should focus at this level:

I therefore suggest that we should focus on the greatest source of variance that can make the difference – the teacher. We need to ensure that this greatest influence is optimised to have positive and sensationally positive effects on the learner. Teachers can and do have positive effects, but they need to have exceptional effects. (p. 3)

Of his synthesis of more than 500,000 international studies of the effects of these influences on student achievement, Hattie said that he found ‘nearly everything we do’ influences student learning, but that certain things have a ‘marked and meaningful effect’ on student learning (p. 4). His quest then became to identify what those things seen as ‘attributes’ of excellence in teaching were.

On the basis of a literature review and Hattie’s synthesis, a model was identified that included the following five ‘major dimensions’ of excellent/expert teachers. Expert teachers can:

1. identify essential representations of their subject
2. guide learning through classroom interactions
3. monitor learning and provide feedback
4. attend to affective attributes
5. influence student outcomes.

Sixteen ‘attributes’ were added to these dimensions so that they formed a ‘profile’ of an expert teacher. Hattie was careful to stipulate that the model was a profile rather than a checklist:

Our claim, from a review of literature and a synthesis of over 500,000 studies, is that expert teachers can be distinguished by these five dimensions, or 16 attributes. This is not aimed to be a checklist, but a profile. We see these attributes as 16 facets of the gem-stone, we see there is no one necessary facet, nor the equal presence of all, but the overlapping of many facets into the whole. (p. 10)

Hattie reported that he and his colleagues had evaluated the profile in a study that was undertaken in more than 300 classrooms in the United States. Part of the focus of the study was a sub-sample of teachers who had passed or failed to pass the National Board for Professional Teaching Standards assessments for teachers of advanced practice. The results of this study are taken up in a later section of the present report.

The Best Evidence Syntheses (New Zealand Ministry of Education)

The New Zealand Ministry of Education has made a significant contribution to the international discussion about quality in teaching by commissioning a series of papers that synthesise national and international research in particular areas. This series of Best Evidence Synthesis (BES) reports now provides a comprehensive evidence base for policy and practice, bringing together examples of selected New Zealand and international research on quality teaching that are relevant to school and early childhood education in New Zealand. These reports are an invaluable resource for establishing the New Zealand context for professional teaching standards. They help to make

research in many areas of teaching and learning accessible to a variety of education stakeholders, including those involved in the development of professional teaching standards.

Four BES projects are discussed below. Two other BES projects are under way: one, by Helen Timperley, is on continuing professional learning and the other, led by Viviane Robinson and Michael Minstrom, is on leadership.

BES 1: Quality Teaching for Diverse Students in Schooling, by Adrienne Alton-Lee (2003)

Quality Teaching for Diverse Students in Schooling identifies quality teaching as ‘the key system influence on high quality outcomes for diverse students’ (Alton-Lee, 2003, p. 89). It presents evidence about quality teaching and what ‘works’ for diverse students. Ten characteristics of ‘quality’ teaching, derived from a synthesis of research findings of evidence linked to student learning outcomes are identified.

1. Quality teaching is focused on raising student achievement (including social outcomes) and facilitates high standards of student outcomes for diverse learners.

The research cited shows that teachers’ expectations of students can be influenced by considerations of gender, ethnicity, and dis/ability. These expectations are also influenced by the ‘learning styles’ approach, which can result in negative learning outcomes for some students, especially minority Māori and Pasifika students, who may become inappropriately stereotyped as ‘kinaesthetic’ learners. Some of the research quoted in this section of the BES also identified a teacher tendency to under-estimate the achievement of minority students. Teachers need to know and use appropriate research on learning for diverse groups of students and to have high expectations about the learning of all:

New Zealand educators need to break a pattern of inappropriately low expectations for some students, particularly Māori and Pasifika learners, low achievers and some students with special needs. External benchmarks, assessment, and, in particular, effective diagnostic and formative assessment can play a key, and necessary, but not sufficient role in supporting high achievement for diverse learners. (Alton-Lee, 2003, p. 21)

2. Pedagogical practices enable classes and other learning groupings to work as caring, inclusive, and cohesive learning communities.

The synthesis of research evidence in this section is about the positive impact of strong learning communities on student learning and social development, and the interdependence of the two:

There is strong evidence of the positive impact of teacher and student development of effective learning communities, not just for some learners, but across the range of diverse learners, and for heterogeneous groups of learners. (Alton-Lee, 2003, p. 31)

3. Effective links are created between school cultural contexts and other cultural contexts in which students are socialised to facilitate learning.

The extensive research cited in this section shows the connections between school cultures and the cultural contexts that are familiar to the students away from school. One of the strongest findings in research on teaching concerns the connections students are encouraged to make and to build among various aspects of their existing knowledge and experience. This has implications for home–school partnerships:

A key research finding is that school-home partnerships are critically dependent upon the agency of educator, their ability to avoid deficit or stereotypical characterisations of parents and caregivers, and their ability to initiate links, respond to, and recognise strengths within the diverse families of their students. Partnerships that align school and home practices and enable parents to actively support their children’s in-school learning have shown some of the strongest impacts on student outcomes, especially in literacy and health and physical education. (Alton-Lee, 2003, p. 44)

4. Quality teaching is responsive to student learning processes.

In addition to a strong body of research in support of this principle, Thomas and Ward’s (2001) evaluation of the *Count Me in Too* professional development programme with 563 New Zealand teachers is quoted here at some length for its key findings about the importance of educators' knowledge in supporting effective teaching:

Teachers’ subject matter and pedagogical knowledge are critical factors in the teaching of mathematics for understanding. The effective teacher of mathematics has a thorough and deep understanding of the subject matter to be taught, how students are likely to learning it, and the difficulties and misunderstandings they are likely to encounter. (Thomas & Ward, 2001, p. 51, as cited in Alton-Lee, 2003, p. 46)

5. Opportunity to learn is effective and sufficient.

The evidence cited in this section suggests that teachers need to maximise students’ opportunities to learn by using classroom practices that support learning, rather than those which result in ‘busy work’ and ‘quiet engagement. Learning, not ‘engagement’ needs to be the prime focus of the learning opportunities experienced by children.

Nuthall (2001) points out that there is a problem in practice and in the research literature in the ‘enshrinement in the literature of the busy active classroom as the model of effective teaching’ (p. 225). He notes that classroom management procedures, learning activities and performance assessment of teachers are sometimes based on this model, but it is an invalid index of quality teaching if ‘quality teaching’ is defined in relation to student outcomes. (Alton-Lee, 2003, p. 54)

Teachers should also use classroom management practices that facilitate learning (rather than those that emphasise behaviour or control). Evidence cited in support of this characteristic agrees with Brophy’s (2001) finding that:

Research indicates that teachers who approach management as a process of establishing an effective learning environment tend to be more successful than teachers who emphasize their roles as disciplinarians. Effective teachers do not need

to spend much time responding to behaviour problems because they use management techniques that elicit student co-operation and engagement in activities and thus minimise the frequency of such problems. (Brophy, 2001, p. 7, as cited in Alton-Lee, 2003, p. 53)

6. Multiple task contexts support student learning cycles.

The evidence cited in support of this characteristic of quality teaching shows that children are most likely to learn effectively in a variety of groupings and task contexts, including tasks that enable co-operative small group and pair learning as well as whole class activities. This results in a strong peer learning culture and minimises the dangers and risks of ethnic stereotyping.

Alton-Lee found that evidence supports the proposition that range, sequences, and interdependencies of task contexts can positively influence student achievement:

A skilled teacher optimises task sequences not only to directly facilitate the different stages of learning cycles for individual students, but also to build up a peer learning culture that can intensify the challenges and supports for learning. (p. 66)

7. Curriculum goals, resources including ICT usage, task design, and teaching are effectively aligned.

Research findings that support this characteristic show that quality teaching is optimised when teaching programmes and practices are aligned across the whole school. This ensures that the focus on student achievement is maintained and opportunities for all students to learn are enhanced. Teachers and school leaders have key roles to play in ensuring coherence and alignment across whole school policies to create unified learning environments.

Alton-Lee discusses several studies that demonstrate how the effective use of ICT is becoming increasingly important in helping students to achieve across the curriculum:

The U.K. BECTA analyses show a direct link to achievement within specific curricular areas, and even stronger impact when ICT-rich environments are used across the curriculum. It appears that the effect of ICT-rich environments is becoming more pronounced on student learning as technological inefficiencies and student access barriers are overcome (p. 69).

8. Pedagogy scaffolds and provides appropriate feedback on students' task engagement.

Scaffolding is the process by which teachers provide structured assistance for students to move ahead with their learning. Students internalise their learning through having experiences that are scaffolded by others. The evidence in this section strongly supports the effectiveness of scaffolding practices, of which effective feedback is one of the most important.

9. Pedagogy promotes learning orientations, student self-regulation, metacognitive strategies, and thoughtful student discourse.

Evidence quoted by Alton-Lee in support of this characteristic shows that students learn best when teachers provide the conditions that allow students to take responsibility for their own learning. This does not mean that the teacher abandons the students to ‘discover’ learning by themselves. It does mean the use of pedagogies that ‘foster students’ abilities to define their own learning goals, ask questions, anticipate the structure of curriculum experiences, use metacognitive strategies when engaging with curriculum, and self-monitor’ (p. 92).

10. Teachers and students engage constructively in goal-oriented assessment.

The evidence quoted by Alton-Lee in support of this final characteristic shows that formative assessment is one of the most powerful influences on student learning. It can work for good or ill: poor formative assessment practices are potentially disastrous. For example, two studies (Black & Wiliam, 1998 and Doyle, 1983) found that:

When the classroom culture sends a message to students that the goal is to get the ‘right answer’ rather than to develop genuine understanding, then they can learn to circumvent intellectual engagement with tasks and find short cuts to manage classroom demand. In other words, inappropriate assessment practices can ‘teach’ students to circumvent sustained thoughtfulness. (Alton-Lee, 2003, p. 87)

Alton-Lee quotes New Zealand research that found positive feedback frequencies to vary markedly between Māori-medium and English-medium settings for Māori students, with the frequency of negative evaluations for Māori boys in mainstream English-medium classes relatively high. Such negative experiences of assessment can be greatly detrimental to students’ learning. Effective teachers include assessment strategies that ‘actively involve students in their own learning and assessment, make learning outcomes transparent to students, offer specific, constructive and regular feedback, and ensure that assessment practice impact positively on students’ motivation’ (p. 92).

BES 2: *Quality Teaching Early Foundations*, by Sarah-Eve Farquhar (2003)

This synthesis, *Quality Teaching Early Foundations*, addresses the question of what works in early childhood teaching for maximising children’s learning outcomes and reducing disparities amongst diverse children.

It identifies seven research-based characteristics that are linked to successful learning outcomes for children in the early childhood years. Derived from an analysis of the best evidence found through national and international literature searches within the time frame of the project, these characteristics are:

1. Effective pedagogy involves working with children as emergent learners.
2. Pedagogy is informed by contextual knowledge of children’s learning.
3. Effective teachers use content knowledge confidently to support and extend children’s learning in interactive and play-based situations.

4. Pedagogy scaffolds, co-constructs, promotes metacognitive strategies and also facilitates children's learning in the context of adult/older child activities.
5. The social setting is organised in ways that support learning and maximises outcomes.
6. The physical setting is organised in ways that support learning and maximises outcomes.
7. Teaching is responsive to children's physical and emotional well-being.

The synthesis brings together a substantial body of research findings on the relationships between teaching and learning, including considerations of culture and diversity, the heterogeneity of children in New Zealand, learner age, and how teachers think critically about their teaching. The main body of the synthesis draws on examples of New Zealand and overseas research that illustrate and explain the research-based features of the seven characteristics of quality teaching derived from the best evidence.

BES 3: Characteristics of Professional Development Linked to Enhanced Pedagogy and Children's Learning in Early Childhood Settings, by Linda Mitchell and Pam Cubey (2003)

This BES, *Characteristics of Professional Development Linked to Enhanced Pedagogy and Children's Learning in Early Childhood Settings*, addresses the question of what constitutes quality professional development as it relates to learning opportunities, experiences and outcomes for children within diverse early childhood provisions.

The BES summarises the findings of studies on professional development and linkages to pedagogy and student outcomes in early childhood settings. (In New Zealand, early childhood is defined as the period of education from birth to approximately five or six years of age.) The findings have been summarised in three categories: enhancing pedagogy; contributing to children's learning; and building linkages between early childhood education settings and other settings.

1. Enhancing pedagogy

In this area, the synthesis found evidence that professional development could challenge teachers' 'deficit assumptions' associated with ethnicity, socio-economic status and child's age, and alert them to the need to change their practice by acknowledging and building on the diverse skills of children and families. Conditions that would support such a shift in focus included collection and analysis of data from within the participant's own setting; exposure to different viewpoints in the data analysis; and information about alternative practices.

2. Contributing to child outcomes

Evidence was found of various types of outcomes for children as a result of their teachers' participation in particular professional development activities. This included two programmes which were able to demonstrate evidence of linkages with Te Whāriki outcomes for children, and change in child involvement. Other studies examined professional development linked to outcomes in literacy, mathematical understanding, and scientific understanding.

Effective professional development identified and worked on improving teachers understanding and beliefs. Content knowledge and pedagogical knowledge were intertwined. Data collection and analysis was a core feature and the professional development encouraged teachers to establish an environment that supported learning.

Outcomes for children were found to be related to the focus of the professional development. Some studies found that professional development programmes that focused on literacy had positive outcomes for students' literacy. Similar evidence was found for mathematics professional development programmes.

3. Building linkages between early childhood settings and other settings

Evidence was found of linkages between early childhood settings and children's home/cultural experiences. Effective professional development helped teachers to understand and appreciate the need to integrate the education setting with children's other experiences. Professional development aimed at changing teachers' perceptions about the value of parents' knowledge and skills, and building linkages between home and school, was shown to improve children's learning.

Evidence was also found of benefits in joint professional development for early childhood and primary teachers.

Eight characteristics of effective professional development

From the evidence of professional development linked to effective pedagogy and improved student learning outcomes, eight characteristics of effective professional development were identified:

1. The professional development incorporates participants' own aspirations, skills, knowledge, and understanding into the learning context.
2. The professional development provides theoretical and content knowledge, and information about alternative practices.
3. Participants are involved in investigating pedagogy within their own early childhood settings.
4. Participants analyse data from their own settings. Revelation of discrepant data is a mechanism to invoke revised understanding.
5. Critical reflection enabling participants to investigate and challenge assumptions and extend their thinking is a core aspect.
6. The professional development supports educational practice that is inclusive of diverse children, families, and whānau.
7. The professional development helps participants to change educational practice, beliefs, understanding, and/or attitudes.
8. The professional development helps participants to gain awareness of their own thinking, action, and influence.

This BES identified several areas where evidence was meagre and where further research would be valuable. These areas included:

- professional development linked to outcomes for children within the principles, strands, and goals of Te Whāriki
- longitudinal research to provide evidence of the longer term sustainability, for teachers and children, of professional development programmes
- expansion of the knowledge base about Pasifika pedagogy and content knowledge to inform professional development approaches in the Pasifika sector
- strengthening partnerships between home, including extended family members, and educational settings
- professional development aimed at strengthening partnerships between primary and early childhood teachers, including ways to build primary teachers' understanding of Te Whāriki
- professional development aimed at strengthening linkages with community organisations
- professional development processes that work well for participants from service where there is a mix of qualified and unqualified teachers
- professional development programmes for teachers/educators in kōhanga reo, home-based education and care, and Pasifika services, and also for teachers/educators working with toddlers and babies, and children with special needs.

Mitchell and Cubey also point out that:

Practitioners need to have access to useful research evidence and information on workable approaches to building investigation and analysis into their pedagogical practice, and working in partnership with researchers and professional development advisers. Establishment of a central clearing house for people engaged in action research in early childhood settings would help disseminate ideas and approaches. (p. xvi)

BES 4: The Complexity of Community and Family Influences on Children's Achievement In New Zealand, by Fred Biddulph, Jeanne Biddulph, and Chris Biddulph (2003)

This BES, *The Complexity of Community and Family Influences on Children's Achievement in New Zealand*, relates to the influence of community and families on the development and achievement of children in New Zealand. It was based on a wide range of data obtained mostly from New Zealand, but includes the findings of some overseas studies.

The BES produced findings that are summarised in four categories: family attributes; family processes; community factors; and centre/school, family, and community partnerships.

Within each category, the synthesis identified factors that influence student achievement. These are summarised below.

- Family attributes
 - Ethnicity and culture are linked to students' achievement.

- Children of low socioeconomic status (SES) have significantly lower levels of achievement than middle and high SES children.
- Human and material resources within families are linked to student achievement.
- Home language is linked to student achievement. (Overall children whose home language is English do better.)
- Frequent mobility may be detrimental to child outcomes.
- Lower SES children are more likely to experience health problems and lower levels of general well-being.
- Family processes
 - Children from families where there are high levels of expectation perform better at school.
 - Dysfunctional family behaviours can affect children’s achievement.
 - Rich home learning environments are associated with higher levels of achievement.
 - Children aged 5 to 15 years who watch television for less than 3 to 4 hours daily have significantly higher achievement levels.
- Community factors
 - Social networks (e.g. Pasifika, church connections, Māori cultural connections) provide important opportunities for further learning.
 - Peer groups can profoundly influence children’s achievement.
 - When parents and children can access local community institutions, children’s achievement can be enhanced.
 - The evidence is inconclusive about the effects of viewing episodes of television violence, but the ‘shared scripts’ of popular culture can have a unifying influence across the different social and cultural groups.
 - Community messages about gender can have positive or negative effects.
- Centre, school, family, and community partnerships
 - Integrated or comprehensive programmes that address the real needs of parents and children, especially in children’s early years, can significantly improve children’s achievement.
 - Incorporating school-like activities, through providing parents with access to both additional pedagogical knowledge and information about finding and using local resources, can have dramatic and positive effects on children’s achievements.
 - Genuine home–school collaboration can lift children’s achievement significantly.
 - Provision of additional resources (e.g. children’s books) to families is associated with higher achievement.
 - The success of programmes depends upon families being treated with respect, programmes adding to family practices rather than undermining them, on structured rather than general advice, and on supportive group and one-to-one contact, especially informal contact.

This BES describes some factors that are unique to New Zealand, and many of its findings are based on data obtained in New Zealand. However, many of the factors found to influence

children's education are now observable in developed countries around the world, as previously monocultural societies become increasingly diverse, and greater attention is paid to the special needs of indigenous groups. For teachers in New Zealand, as in most developed multicultural countries and countries that are concerned with maximising educational opportunities for indigenous children, building the knowledge, skills, and dispositions necessary for teachers to understand diversity and the cultural heritage of all their students is essential. This fact needs to be strongly reflected in standards of professional practice. For standards developers in New Zealand, the Biddulph BES will clearly be an indispensable point of reference in this regard.

Relevance of the BES to the development of professional teaching standards

Our general observation, from sighting many sets of professional teaching standards from a number of countries, is that standards developers of all kinds, whether they are groups of practising teachers, members of committees set up by employers, or other groups of 'specialists', give high priority to issues such as those identified in the four BES discussed above, particularly those related to diversity and inclusiveness. Standards developers with whom we have worked, without exception, have regarded teachers' knowledge of individual students and their home and cultural backgrounds as highly significant and essential elements of content standards. We believe that quality teaching, as reflected in the best sets of teaching standards, is impossible to conceive in the absence of proper explication and consideration of these issues. This is one reason why sets of standards that include clear and lucid prose commentaries and descriptions of teachers' work in all of its complexity are much more reflective of good practice than those that rely on brief bullet points.

Most standards development processes involve consultation. The BES findings point to the importance of broad consultation across all groups, including groups other than 'professionals'.

The BES that bring together research findings in the area of early childhood (Mitchell & Cubey, 2003; and Farquhar, 2003) provide a particularly valuable resource for developers of standards, especially in view of the fact that the international literature tends to be silent on early childhood issues. The two sets of standards for early childhood teachers that are identified later in this report (Education Department, Western Australia, and National Board for Professional Teaching Standards) have been developed for a slightly older group of learners than those in the New Zealand context, where early childhood education covers the range of birth to five years.

Consideration of the BES also raises the issue of field-specific versus generic standards, which is also discussed later in this report. Close reading of the BES that relate to early childhood suggests that it would be difficult, if not impossible, to write a set of generic content standards that would describe the work of early childhood teachers in sufficient depth and detail for them to make a significant contribution to professional learning, an important function of standards for early childhood teachers.

The BES also refer to research that identifies the importance of teachers' knowledge in specific curriculum areas. This research suggests, for example, that teachers who deepen their

understanding of how conceptual development takes place in certain learning areas such as literacy or mathematics, and gain skills in how to trace that growth in their students, become more effective teachers in that curriculum area. This kind of knowledge is not likely to find its way into generic sets of teaching standards.

3. The development and application of professional teaching standards in countries around the world

The preceding chapter has described some of the complexities and challenges that researchers in the field of standards development encounter. This chapter describes models that show how various sets of standards in education systems across the world have been developed and applied.

Standards and assessments at different points of teachers' careers

The three-legged stool

Darling-Hammond describes the three ways in which professions generally set and enforce standards as a 'three-legged stool' (Darling-Hammond, 2001, p. 752). Broadly, she says, professional standards are of three different kinds (different legs of the stool). They have three separate purposes and apply to teachers' work at three separate career points:

1. accreditation standards for teacher preparation programmes
2. standards for state licensing purposes
3. standards for certification and recognition of advanced performance.

In the United States, as Darling-Hammond points out, there is enormous variation in the ways different states use standards at different stages of teachers' careers. The three-legged stool, she says (Darling-Hammond, 2001, p. 752), was 'quite wobbly in teaching, a profession in which each of the quality assurance functions is still underdeveloped'. She described as a 'morass' the 'enormous variability' of standards currently being used in the United States (Darling-Hammond, 2001, p. 754), where different states have different arrangements and standards for approving teacher preparation programmes and for licensing teachers, and where, before 1986 when the National Board for Professional Teaching Standards was established, there was no national professional certifying body for the recognition of teachers who attained high standards.

Teacher evaluation in New Zealand

Originally, when planning this report, we had intended to order the discussion of standards models under the heading of 'the three-legged stool.' However useful feedback from the New Zealand Teachers Council pointed out that in New Zealand there are several career points at which teachers may experience some form of evaluation on the basis of corresponding standards. These stages are:

- initial teacher education:
 - criteria for selection
 - criteria for accreditation of courses
 - graduating standards for teacher education
 - qualifications that lead to provisional registration
- registration/practising certificate:
 - provisional registration for induction period
 - full registration – based on the ‘standards’ or ‘criteria’ called the Satisfactory Teacher Dimensions
- experienced teacher and principal standards:
 - Satisfactory Teacher Dimensions (have to be attested every three years for renewal of practising certificate)
 - performance management standards (Ministry of Education), called in the industrial agreements the ‘Professional Standards’ – attested in line management processes for ongoing competence in order to progress up the salary scale and receive pay increases
 - the Ministry of Education ‘Professional Standards’ are themselves formulated in levels – and there are different standards for teachers in kindergartens, primary, and secondary schools, and for principals.

Standards and teacher evaluation in Australia

In Australia, many groups at state and national level are working on developing and implementing standards for the teaching profession. These include professional associations, established and emerging teacher registration authorities (all states and territories, with the single exception of the Australian Capital Territory now have such bodies), and employers. The standards and standards frameworks that were developed as part of these initiatives informed the development of the National Framework for Professional Standards for Teaching (the National Framework), which guides and supports this ongoing work.

The National Framework was developed following a lengthy consultation process. It was considered at the July meeting of the Ministerial Council of Education, Employment Training and Youth Affairs (MCEETYA) in 2003, following which it received Federal, State, and Territory Education Ministers’ endorsement. The National Framework supplies an architecture within which generic or subject/year level/specialist professional standards could be developed. It provides an organising structure which establishes, at a national level, agreed foundational dimensions and elements of ‘good teaching’ under the headings of ‘professional knowledge’, ‘professional practice’, ‘professional values’, and ‘professional relationships’. These serve as organising categories within which the content of standards can be developed.

The National Framework proposed four stages of career progression for teachers:

1. graduation – beginning teachers who have undertaken endorsed programmes of teacher preparation and who are about to begin their teaching careers

2. competence – teachers who have demonstrated successful teaching experience
3. accomplishment – teachers who are recognised by their peers as highly proficient and successful practitioners
4. leadership – teachers with a record of outstanding performance who apply their professionalism in ways that are transformative for other teachers, students, and the community.

Examples of standards developed in Australia include:

- the Professional Teaching Standards Framework (New South Wales Institute of Teachers)
- the Professional Standards for Teachers (Education Department Queensland)
- the School Excellence Initiative standards (Department of Education Australian Capital Territory)
- the Professional Standards for Teachers (The Department of Education and Training Victoria)
- the Standards of Professional Practice for Full Registration (Victorian Institute of Teaching)
- the Western Australian Competency Framework for Teachers (Department of Education Western Australia)
- competencies (aligned with the Competency Framework) for the Level 3 classroom teacher status (Department of Education Western Australia)
- criteria for the Advanced Skills Teacher Tasmania
- criteria for the Advanced Skills Teacher South Australia
- standards for Teacher of Exemplary Practice Northern Territory
- the Standards for Teachers of English Language and Literacy in Australia (English and literacy teachers' subject associations)
- Standards for Excellence in Teaching Mathematics in Australian Schools (Australian Association of Mathematics Teachers)
- The national Professional Standards for Highly Accomplished Teachers of Science (Australian Science Teachers Association).

Standards and teacher evaluation in other countries

As in New Zealand and Australia, teachers in education systems around the world may experience assessments against various sets of standards throughout their careers. Often the assessments occur:

1. as part of a teacher preparation course, periodically, and with some form of final summative assessment at the end. In some countries, this is all that is required for a person to be legally 'qualified' to teach. (Standards or criteria for assessment are developed by the institution. In some countries, institutions are required to meet the 'accreditation standards' of an outside regulatory body)
2. as part of an initial and/or continuing certification or registration process that gives a professional licence to teach
3. as part of continuing performance management processes in schools

4. for certification as ‘advanced’ or ‘accomplished’ practitioners of teaching.

In view of this, and in light of the feedback from the New Zealand Teachers Council, it was decided that, rather than grouping standards models under the heading of the ‘three-legged stool’, useful as this concept is, we would arrange the various standards models under the following headings:

- graduating standards (noting the relationship with standards for accrediting courses) and initial teacher licensing arrangements
- standards for full registration
- standards for experienced teachers
- standards for teachers of advanced practice.

Graduating standards and teacher registration

Graduation usually refers to successful completion of a university course leading to the award of a university qualification, such as a Bachelor of Arts. Graduation requirements, or standards, are usually set by universities. In this sense, ‘graduating standards’ are the standards a teacher education institution sets for its graduates. The term ‘graduating standards’ is also used to describe a set of standards developed and used by a body such as a teachers council or registration board to guide processes for provisionally registering graduates from approved teacher education courses.

Registration and course accreditation often go hand in glove. Accreditation has traditionally been based on an assessment of courses and resources; that is, quality of *provision*. Increasingly, accreditation is based on the quality of *outcomes*, especially graduate knowledge and skills. Graduating standards set by registration bodies may be used to assess graduates of teacher education programmes independently of assessments conducted internally by universities or other teacher preparation institutions. One variation of this is that when courses are being accredited, part of the evidence they need to provide relates to the number of graduates who have met the graduating standards of the accrediting body.

OECD countries

In about half of the 25 countries that participated in the OECD project *Attracting, Developing and Retaining Effective Teachers*, the completion of a teacher education course was not sufficient to gain a licence to teach (OECD, 2005, Table 4.1, p. 106). In France, Germany, Greece, Italy, Korea, Mexico (some states), and Spain, teachers had to also pass competitive entry examinations. Examinations could include tests of subject matter knowledge, observation of the candidate’s teaching, in-depth interviews or consideration of portfolios with records of experience and achievement. Italy and Spain require one year of mandatory teaching work experience. Mandatory work experience (between one and three years) is also a requirement in England, Ireland, Israel (for primary and lower secondary education), Scotland, Turkey, New Zealand, Northern Ireland, some states of the United States, and Wales (OECD, 2005, p. 114).

Following are some examples of standards and their applications for graduating teachers in several countries. In some instances, the reference also includes examples of standards used to accredit teacher education courses. This is because the same standards are used as a basis for assessing beginning teachers. Accreditation of courses may depend upon the number of graduates of those courses who are able to satisfy the standards for graduation.

New Zealand

The New Zealand Teachers Council has now developed graduating teacher standards which will come into effect in 2008.

People who seek registration as teachers in New Zealand schools are not currently required to undertake any assessments that are independent of those already completed as part of their teacher preparation programmes.

New Zealand operates a dual accreditation and approval process for all tertiary qualifications. The New Zealand Qualifications Authority has the overarching mandate for the approval of all courses and the accreditation of institutions to provide them. In the New Zealand setting, these institutions include universities, colleges of education, institutes of technology and polytechnics, wānanga, and private training establishments. In practice, some of these accreditations are delegated to other quality assurance bodies linked to the university, college of education, or institute of technology sector.

New Zealand is unusual in that, for its population, it has a large number of providers of teacher education programmes across the range of institution types and a large number of programmes that lead to registration as a teacher.

Under the legislation, any teacher education programme which may lead to registration as a teacher must also be approved by the New Zealand Teachers Council. This applies to those teaching in the early childhood, primary and secondary sectors, and to programmes delivered by each type of institution. Memoranda of understanding have been developed between the Teachers Council and the three quality assurance agencies to streamline this process and standardise expectations. These memoranda recognise that the Teachers Council does not have an accreditation role but that, as the professional body for teachers in New Zealand, it has a role in ensuring that all teacher education programmes graduate teachers who have demonstrated developing competence in teaching, are of good character and are 'fit to be a teacher'.

The Teachers Council and the appropriate quality assurance agency work cooperatively to form expert panels who visit the institution, evaluate its teacher education programmes, and recommend them for approval or re-approval. This takes place for newly developed programmes and then on a regular cycle. Teacher education programmes are also monitored on an annual basis by an external monitor appointed by the quality assurance agency with the agreement of the institution and the Teachers Council. The Teachers Council works with the three quality assurance agencies to ensure that this occurs.

Graduating from an approved teacher education programme entitles a beginning teacher to provisional registration and to access an advice and guidance programme leading to full registration. The guidelines for the advice and guidance programme, *Towards Full Registration: A Support Kit*, are produced and updated jointly by the Ministry of Education and the Teachers Council, and published by Learning Media.

England

The Training and Development Agency for Schools (TDA) is a statutory authority, whose principal aim is ‘to secure and effective school workforce that improves children’s life chances’ (Training and Development Agency for Schools, 2006a, p. 3).

The standards and requirements for Qualified Teacher Status (QTS) set out:

- the Secretary of State’s standards, which must be met by trainee teachers before they can be awarded QTS
- the requirements for training providers and those who make recommendations for the award of QTS.

The standards for the award of QTS are outcome statements that describe what a trainee teacher should know, understand, and be able to do in order to achieve QTS. The standards are organised in three sections:

- S1. Professional values and practice
- S2. Knowledge and understanding
- S3 Teaching.

Each of these is further articulated in indicators that describe the criteria for the award. The teaching section has three sub-areas: planning, expectations and targets; monitoring and assessment; teaching and class management.

The requirements are set out in four areas:

- R1. Trainee entry requirements
- R2. Training and assessment
- R3. Management of the initial teacher training partnership
- R4. Quality assurance.

The *Handbook of Guidance* (Training and Development Agency for Schools, 2006b), which accompanies the professional standards for QTS and the requirements for initial teacher training, states that various people are involved in making the necessary judgements involved in the award of QTS, and that assessments are wide ranging:

The guidance focuses particularly on assessment, because the standards are outcome statements that indicate what trainee teachers must know, understand, and be able to do in order to achieve QTS. The many different people involved in assessment – school based tutors, class teachers, higher education tutors and the trainees themselves – need to develop a common understanding of what is involved in

meeting the standards. Assessment against the standards is a matter of skilled professional judgement made at different times in different contexts, and often draws on evidence from a range of sources collected over time. (p. 7)

Guidance to help the assessors reach their judgements is provided for each sub-element. For example, for S3.2.6 *Recording progress*:

Assessors may find it helpful to consider, for example: do the trainee's records provide a basis for setting or review learning objective? Do records enable clear feedback to be given to pupils on strengths and areas for improvement in their work, celebrating achievements and helping pupils to know what they need to do and how they can improve? Are the trainee's records easily understood by other colleagues who need to know in some detail about pupils' progress and levels of Achievement? Do their records provide a sound basis on which they, or others, can draw to present accurate reports on pupils' progress and attainment? (Training and Development Agency for Schools, 2006b, p. 40)

The only assessments that are carried out by the TDA itself (rather than the range of assessors mentioned above), are the QTS skills tests. The relevant standard is:

S2.8. Those awarded qualified teacher status must demonstrate that they have passed the qualified teacher status skills tests in numeracy, literacy and ICT. (Training and Development Agency for Schools, 2006b, p. 29)

The tests are computerised. Registration and booking for the tests takes place online via the TDA website: www.tda.gov.uk/training. The tests are taken at centres located throughout England. Trainee teachers have unlimited opportunities to pass the tests, but must have passed all tests before QTS can be awarded.

Scotland

The *Standard for Initial Teacher Education* (Quality Assurance Agency for Higher Education, 2000) is intended to operate as a quality assurance mechanism, and as an instrument to approve teacher education programmes. It also describes a 'graduating standard' for new teachers. The standard was developed under the aegis of a Standing Committee on Quality Assurance in Teacher Education in Scotland. The stakeholders included higher education institutions, local authorities, schools, the Scottish Higher Education Funding Council, the Quality Assurance Agency for Higher Education in Scotland (QAA), the General Teaching Council for Scotland, Her Majesty's Inspectors of Schools (HMI), and the Scottish Executive.

The standard comprises a set of benchmark statements that describe requirements for each programme of initial teacher education in Scotland. It was prepared by a group of initial teacher education specialists drawn from higher education institutions, the General Teaching Council for Scotland, local authorities, schools, and HMI, with an observer from QAA.

The standard was expected to be useful to:

- those involved in designing, approving, accrediting and validating programmes

- those who teach in these programmes, including staff in higher education institutions and schools
- those engaged in external examining
- prospective employers
- those who are responsible for the assessment, review and monitoring of programmes
- students who undertake these programmes; those who are responsible for building Continuing Professional Development (CPD) on the statement indicated in this document
- those members of other professions, and the public more generally, who have an interest in the professional education of teachers.

The standard describes ‘core professional interests’ and ‘key educational principles’. It emphasises the need to understand and respect different educational contexts and to acknowledge that the core professional interests will be put into practice in diverse social, cultural, linguistic, and educational settings.

The standard sets out ‘benchmarks’ and ‘expected features’ within a ‘triangle’ of:

- professional knowledge and understanding
- professional skills and abilities
- professional values and personal commitment.

The expected features describe what the teachers will know and be able to do in relation to each benchmark. All are cross-referenced to competency statements that are currently in use in initial teacher education programmes in Scotland, and are set out in the *Guidelines for Initial Teacher Education in Scotland* (Scottish Office Education and Industry Department, 1998).

While the standard incorporates the competencies described in the *Guidelines for Initial Teacher Education*, it does not specify how or by whom graduating teachers should be assessed:

The benchmark information ... does not ... contain detailed requirements for specific contexts, methods of learning or teaching, or approaches to assessment. Those who design and deliver programmes will be expected to take decisions on these matters, indicating how they relate to the benchmark information. (Quality Assurance Agency for Higher Education, 2000, p. 4)

Assessment is envisaged as being based on the gathering of information from multiple sources using a range of methods:

It will include the use of data from [higher education institutions], as well as from schools and other places in which the student teacher is undertaking her/his professional education. Schemes of assessment will be developed as part of the programmes of study for students and these schemes will relate to this benchmark information. (Quality Assurance Agency for Higher Education, 2000, p. 6)

Australia

This section describes the research project that evaluated the Bachelor of Learning Management (BLM) at Central Queensland University (Ingvarson et al., 2005).

In all Australian states, graduating teachers are given at least ‘provisional’ registration on the basis of successful completion of an approved teacher education course. No teacher registration or other body has developed standards-based evaluations of the performance of newly graduated teachers. The research project described below was included in this report, not because it describes current practice in Australia but because it provides an interesting example of how standards might be ‘operationalised’ to evaluate the performance of graduate teachers and gather information about teacher preparation courses as a basis for improvement.

To our knowledge this is the only example, in Australia, of an independent, systematic, standards-based evaluation of the performance of a group of graduate teachers. The evaluation was carried out by a group of researchers from the Australian Council for Educational Research, led by Dr Lawrence Ingvarson, as part of a commissioned research project in 2004–05.

The main question addressed in the evaluation was:

Can graduates from the Bachelor of Learning Management (BLM) course at Central Queensland University be distinguished from graduates from other teacher education courses in terms of standards of classroom performance?

There were two main components to the evaluation:

- *an observational study* – this study involved classroom observations and interviews with 31 primary teachers who graduated in 2003 and taught in Queensland in 2004. This part of the project also included interviews with their principals. Eighteen of these primary teachers had a Bachelor of Learning Management from the Rockhampton or Noosa campuses of Central Queensland University and the remaining 13 teachers had qualifications from other Queensland teacher education programmes
- *a survey study* – this included (a) a survey of all teachers who graduated from Queensland teacher education programmes in 2003 and taught in Queensland in 2004, and (b) a survey of all school principals in Queensland about their perceptions of the preparedness of graduates from teacher education programmes.

The observational study used the Professional Teaching Standards developed by Education Queensland as the basis for developing a framework for the observations of teachers’ performance.

There are 12 components to the Professional Teaching Standards. Each component is broken down into several sub-elements, and each sub-element is broken down in turn into several indicators.

To suit the purposes of the study, the standards were adapted so that they could be used as an instrument (the Framework of Teaching) for the observation of classroom teaching. As only two

observations of each teacher could be made in the time available, it was not possible to cover all 12 standards. Some lent themselves readily to use in an observational study over a brief time span. 'Standard 1: Structure flexible and innovative learning experiences', for example, points to actions that one would expect to observe in almost all classroom lessons. Other standards, such as 'Standard 4: Construct relevant learning experiences that connect with the world beyond school' and 'Standard 6: Integrate information and communication technologies to enhance student learning', would require longer periods of time if reliable measures were to be obtained.

In the Framework of Teaching, the sequence of the standards was restructured to make them reflective of what teachers actually do in typical teaching situations – moving from knowledge of students to the selection of learning goals suitable to their stage of development, through to selection of learning activities, establishing a supportive and challenging learning environment, assessing student progress, and, finally, reflecting on future steps in light of assessment and other data.

For the purposes of the study, the standards were placed in two main groups: standards about classroom practice, and standards about wider contributions to professional activity and the school community. The main sources of evidence for the first group were the observations and pre- and post-lesson interviews. For the latter, the main sources were interviews with principals and/or supervisors, but teachers were invited to comment about their contributions in their interviews.

Nine highly experienced teacher/observers were trained to use the Framework of Teaching over four days in late October 2004. These people were trained in:

- *observation* – training in how to focus on identifying and documenting evidence when observing classrooms
- *interviewing* – training in the use of pre-and post-lesson interview schedules and tape recording
- *judgement* – training in interpreting the interview and observation evidence and in the use of scoring rubrics in judgements about the level of the performance.

Observers were trained to use a customised rubric based on the Framework of Teaching. The rubric had eight components. Each component was broken down into several elements. The rubric contained four main levels of performance for each element and descriptors for each level.

The intended sample for the observational study was 20 pairs of beginning teachers from 20 different primary schools. Each of the selected schools was to have at least one teacher who graduated from a Central Queensland University teacher education programme in 2003 and one teacher who graduated from another Queensland teacher education programme, also in 2003. This pairing design would provide some control over the influence of school context on graduate teaching practice.

Observers visited the school and conducted their observations and pre- and post-lesson interviews in pairs. They recorded their evidence and made judgements independently, using the rubric. Principals were interviewed for about 30 minutes.

The observers made an initial judgement, based on the evidence, as to the level of the teacher-graduate's performance for each element. They then decided, within the level, whether the performance was above, at, or below the standard for that level, as described in the rubric. The resulting data was entered into a data file for analysis.

The data were analysed using analysis of variance to compare mean scores for Bachelor of Learning Management (BLM) and Bachelor of Education graduates on each of the components and each of the elements in the standards. Overall, the results showed that the observers consistently rated the 18 BLM graduates higher than they rated the 13 non-BLM graduates on all the standards components and elements. Another noteworthy aspect of the observational study was that the outcomes were consistent with claims made by the developer of the BLM about its special features, which were an emphasis on providing extensive training in the core aspect of pedagogy, and on building strong links between theory and opportunities in schools to put theory into practice.

The researchers cautioned that the findings of the observational study should be interpreted with care, as the numbers of graduates were small and it was not possible to achieve a random sample of graduate teachers from non-BLM courses.

The surveys of graduate teachers and their principals also drew on Education Queensland's Professional Teaching Standards to determine the relative effectiveness of the BLM over other teacher preparation courses.

BLM graduates rated themselves as significantly better prepared for their first year of teaching on all of the standards-based impact measures included in the study. These included:

- knowledge of the content they were expected to teach and how to teach it
- knowledge of students and how they learn
- classroom management
- assessment and reporting
- futures orientation
- working with parents
- reflection on teaching.

Principals rated the overall preparedness of teachers from the BLM teacher education course significantly higher than the preparedness from non-BLM courses, but on most of the specific measures there were few significant differences between their ratings of BLM and non-BLM trained teachers. The one specific measure in which principals identified a significant difference that favoured the BLM-trained teachers was 'working with professionals and others'.

This study served wider purposes than fulfilling its main aim of evaluating a particular programme. The trained observers found that their involvement created a powerful form of professional learning. The graduate teachers also appreciated the opportunity to reflect on their work and receive feedback from the observers. The participants, and others with an interest in the processes, gained a better understanding of valid methods for assessing the outcomes of teacher

education courses. The evaluation provided a valuable opportunity to develop and trial methods for gathering first hand evidence about the performance of graduate teachers and to develop survey instruments that could be used as benchmarks in teacher education.

The researchers commented:

[The evaluation] has the potential to provide a beginning to more rigorous studies of teacher education in Australia. Such studies will depend on the development of more valid methods of measuring the outcomes of teacher education. This evaluation provides a start to that process by bringing together three types of independent evidence, but later studies should include more, such as student evaluations, examples of student work and development over time and videotapes. (Ingvarson et al., 2005)

United States of America

The main role of the National Council for the Accreditation of Teacher Education (NCATE) is to provide a voluntary national assessment and accreditation service. Most states also have their own agencies or professional standards bodies responsible for approval of teacher education programmes. NCATE accreditation is usually voluntary, but some states mandate it.

NCATE is a non-profit, non-governmental organisation. It is a coalition of more than 30 national associations (including the main teacher unions) representing the profession of education. Membership on its policy boards includes representatives from organisations of teacher educators, teachers, state and local policy makers, and professional specialists.

NCATE standards define 'graduating standards' for teachers in terms of what teachers who have newly graduated from those institutions can be expected to know and do. However, NCATE standards are used primarily to accredit programmes of colleges and universities that prepare teachers for work in schools and educational settings.

An important part of NCATE's mission is to provide:

assurance to the public that the graduates of accredited institutions have acquired the knowledge, skills, and dispositions necessary to help all students learn. (NCATE, 2001, p. 1)

NCATE also aims to provide leadership for reform in teacher education:

Through standards that focus on systematic assessment and performance based learning, NCATE encourages accredited institutions to engage in continuous improvement based on accurate and consistent data. By providing leadership in teacher education, NCATE ensures that accredited institutions remain current, relevant and productive, and that graduates of these institutions are able to have a positive impact on P-12 students. (NCATE, 2001, p. 1)

NCATE accreditation is voluntary. About 600 of the country's 1,300 education courses were accredited in 2001, and these produced more than two-thirds of America's teachers (Darling-Hammond, 2001, p. 753).

The NCATE standards are developed and articulated by groups of teaching practitioners under the aegis of the Standards Committee of the NCATE Unit Accreditation Board. The standards are revised every five years to ensure that they reflect research and state of the art educational practice.

In the revision process, which began in 1997, reviews of literature were conducted in these areas:

- research on teaching and learning
- research on effective teacher preparation programmes
- research on regional accreditation.

Importantly, the revision processes also conducted an in-depth study of:

- model standards for beginning teacher licensing, created by the Interstate New Teacher Assessment and Support Consortium (INTASC)
- the standards and assessments of the National Board for Professional Teaching Standards.

The six NCATE standards are divided into two sections: 'candidate performance' (Standards 1 and 2) and 'unit capacity' (Standards 3 to 6). Each of the six standards contains three components:

- the language of the standard itself
- rubrics that delineate the elements of each standards
- a descriptive explanation of the standards.

The NCATE standards are designed primarily for the accreditation of colleges and departments of education, but they also define what is to be expected of newly graduated teachers. Of the six overarching standards, Standard 1 is the most explicit in this regard:

Standard 1: Candidate Knowledge, Skills, and Dispositions

Candidates preparing to work in schools as teachers or other professional school personnel know and demonstrate the content, pedagogical, and professional knowledge, skills, and dispositions necessary to help all students learn. Assessments indicate that candidates meet professional, state and institutional standards. (NCATE, 2001, p. 10)

Assessment of graduates' performance is integral to NCATE standards development and implementation. Unlike in the past, when institutions were accredited on the basis of the quality of the courses offered, now quality of teaching, as demonstrated by actual performance assessed against the standards, is a crucial factor when the decision to accredit a course is being made:

NCATE 2000 aims to create a performance-based system *that takes into account graduates' performance in the accreditation decision* [emphasis added]. While continuing to examine what programmes do in the course of preparing teachers, the

system will also use performance measures ranging from education schools' internal assessments of students, including portfolios, videotapes, and performance events of various kinds, to scores on performance-based state licensing examinations that are compatible with NCATE's standards (Darling-Hammond, 2000).

Candidates at NCATE-accredited schools of education in the new millennium will experience a focus on performance unlike any seen by candidates in the 20th century. In the 21st century, beginning with the NCATE 2000 standards (<http://www.ncate.org>), institutions accredited by NCATE will be expected to focus on candidate performance. Teacher candidates will be expected to show mastery of the content knowledge in their fields and to demonstrate that they can teach effectively. Administrators will be expected to demonstrate that they can create an environment conducive to student learning. All candidates will understand the criteria by which their professional competence will be judged. Multiple assessments of candidate performance will be the rule. Institutions will set benchmark levels of performance, based on exemplars provided by NCATE-affiliated professional associations. (Wise et al., 2000)

The final sentence of NCATE Standard 1 points to the important links between the NCATE standards and other sets of standards with which they are aligned; for example, the Interstate New Teacher Assessment and Support Consortium and the National Board for Professional Teaching Standards and various sets of state licensure standards. (The 'institutional' standards referred to in Standard 1 include 'candidate proficiencies' that are spelt out in further articulations of the NCATE performance standards).

The NCATE standards and the standards with which they are aligned create expectations that graduating teachers will be able to provide evidence of their capacity to create classroom environments where diversity is understood and valued, curriculum in which diversity issues are incorporated, and inclusive teaching strategies. The standards also expect the schools of education to produce graduates who understand and use technology to inform and improve all areas of teaching and learning.

A college, department, or school of education seeking NCATE accreditation must meet specific preconditions. When the preconditions are met, NCATE schedules an accreditation visit. The institution then prepares a report, showing how it meets each of the six standards. The report will include information on graduates' performance in assessments such as state licensure examinations. The NCATE team interviews members of the faculty, reviews all the evidence and writes a report on its findings. All material is forwarded to NCATE's Unit Accreditation Board, which reviews the data and makes the final accreditation decision. All procedural accreditation documents are available on NCATE's website at www.ncate.org.

There is evidence to support claims that graduates from NCATE accredited institutions are more likely to meet state teacher licensing requirements and are having positive effects on student achievement. In the 1980s, Arkansas, North Carolina, and West Virginia required NCATE accreditation for all their schools of education. All three states saw above-average jumps in

student achievement in the 1990s, according to National Assessment of Educational Progress test scores (National Education Association, 2000).

In May 1999, the Educational Testing Service announced the results of an in-depth study on teacher qualifications, academic ability, and teacher pass rates on state teacher licensure (PRAXIS II) examinations. (The Educational Testing Service is a national organisation that designs and carries out teacher assessments on behalf of clients, mainly state teacher licensing bodies). This study, which examined the scores of 270,000 candidates applying for licensure, found that graduates of institutions with NCATE-accredited schools of education scored highest of all test-takers nationally. Of all candidates who took the exam, 91 percent of those graduating from NCATE-accredited institutions passed. Eighty-four percent of those who graduated from institutions not accredited by NCATE passed. Only 74 percent of candidates who had never enrolled in a teacher preparation programme passed. Wise points out that:

Several thousand more candidates would have qualified for a state license if graduates of the non-NCATE institutions had passed the exam at the same rate as the NCATE graduates. In a time of high demand for qualified candidates, this result would make a difference to school districts looking for qualified teachers. (Wise et al., 2000, p. 17)

The crucial question of alignment arises again when considering the relationships between the NCATE standards, the standards developed by subject associations, and the assessments used by the Educational Testing Service on behalf of the state teacher licensing bodies to grant licences:

There is also the question of whether the current licensing tests are aligned well enough with the standards for teacher knowledge that have been developed by the relevant professional associations. NCATE has initiated an effort in which representatives of the subject-matter associations are reviewing the PRAXIS II exam and providing ETS [Educational Testing Services] with feedback on alignment with their standards. ETS is now revising the content area tests. (Wise et al., 2000, p. 17)

Cameron and Baker (2004, pp. 68–69) draw attention to the gaps in research on teacher education. They point out the wide differences among various programmes in terms of their levels of teacher-educator involvement in school practicum, and of basic modes of delivery (school-based, external, or web-based). They call for more research, for example, on Māori-medium teacher education and the contribution of subject knowledge to effective teaching, and what and how student teachers learn about equitable and engaging approaches to teaching.

Cameron and Baker note that:

The research on ‘outcomes’ is inconclusive internationally and virtually non-existent in this country. ... It is clear that ‘the outcomes question’ is not one that can be easily conceptualised or addressed. The implications of asking this question require debate in New Zealand so that underlying assumptions about the purposes of schooling, the evidence sought, and approaches to analysis are explicit. (p. 70)

The work of NCATE shows how ‘the outcome question’ may be addressed through the development and use of standards that describe what graduates of teacher education programmes may be expected to know and do. These standards shape the content of teacher education courses. When they are aligned with other professionally developed and accepted standards, and used as the basis for a performance-based system that takes into account graduates’ performance in the accreditation decision, such ‘graduating’ standards can play a powerful role in improving the outcomes of teacher education programmes (see Darling Hammond, 2000, and Wise et al., 2000).

Standards for full teacher registration

New Zealand

Teachers in New Zealand who wish to move from provisional to full registration with the New Zealand Teachers Council must meet a number of conditions. These include the completion of a total of two years’ supervised teaching (in minimum blocks of 10 weeks) following the completion of the teacher education programme, and participation in an advice and guidance programme during this period. They also need to satisfy the Satisfactory Teacher Dimensions.

The Satisfactory Teacher Dimensions

The Satisfactory Teacher Dimensions were originally developed by the Teacher Registration Board (the precursor of the New Zealand Teachers Council) on the basis of evidence gathered in literature reviews relating to teacher effectiveness, and after extensive consultation about effective professional practice with many educational and community groups. They were generally well received by teachers who saw the standards as a clear means of setting higher expectations for entry into the profession (Langley, 2003, p. 8).

The dimensions set out generic content standards for teaching. They appear to be a good reflection of New Zealand teachers’ values and beliefs about what matters most in their profession. They are fourfold: professional knowledge, professional practice, professional relationships, and professional leadership. Each of these categories has a number of more specific behavioural descriptors that expand on the meaning of that dimension.

At present, the dimensions are used as criteria for the renewal of registration as well as initial registration. A similar approach is also followed in some states of the United States, based, in some cases, on individual state adaptations of the 10 Interstate New Teacher Assessment and Support Consortium standards. Renewal of registration, or ‘licence to teach’ in the United States may be based on the same standards as for initial licensing, but there are often additional requirements such as the completion of courses or performance assessments linked to the standards.

The Satisfactory Teacher Dimensions do not entail specific assessment methods or performance requirements. The assessment process for moving from provisional to full registration is part of the school performance management system. This method has the advantage of placing less stress

on new teachers than, for example, the procedures currently used by the Victorian Institute of Teaching. Our view, however, is that (a) the profession, through a professional body such as the New Zealand Teachers Council, should have more direct oversight of factors that decide entry to the profession, and (b) that performance management systems lack the necessary rigour, validity, and consistency to provide adequate guarantees that provisionally registered teachers are ready to move to full registration status. If a statutory body has a responsibility for developing professional standards for high stakes decisions, such as deciding who joins a profession, it is important that it has the capacity to ensure rigour, consistency, and fairness in their application.

It is also our view that, while the Satisfactory Teacher Dimensions provide a good example of a set of generic teaching standards, they may best be understood as a set of principles to guide the development of subject and year level specific standards (e.g. for teachers of science, English or early childhood). Valid standards capture what good teachers know and can do. Generic standards do not do this. For beginning teachers, especially, it is important to drill down further. Recent studies indicate that ‘content’ knowledge, defined broadly to include deep knowledge about the content to be taught, about how students learn that content, and so on, is the most important determinant of preparedness during the first year of teaching (Ingvarson et al., 2005). What a good early childhood teacher knows and does when using play to develop a young child’s fine motor skills is different from what a good science teacher knows and does when they are engaging students in a productive discussion about cloning. If standards and methods of assessing teachers against standards are to be valid, they must be sensitive to the differences in teachers’ knowledge and practice in different subjects and different year levels.

Victoria, Australia

Before the establishment of the Victorian Institute of Teaching in 2001, teachers in the state of Victoria, Australia, were deemed to be ‘qualified’ to teach on the basis of completion of an approved course of teacher education. The brief of the first Teacher Registration Board, which was set up in the 1970s, was to monitor the qualifications of applicants for teaching positions and to maintain a ‘register’ of qualified teachers. The Teacher Registration Board was disbanded in 1992. Nearly 10 years later it was replaced by the Victorian Institute of Teaching, which was conceived as a professional body with legislated responsibility to provide more stringent assurances of teacher quality to the public and the profession.

The Victorian Institute of Teaching Standards and Professional Learning Project, 2003

In 2002, the first Council of the Victorian Institute of Teaching (VIT) started to develop new policies and processes for registering teachers in Victoria. In February 2003, the Victorian State Minister for Education and Training launched the ‘Standards and Professional Learning Project’ as the first major policy initiative of the new Institute.

The brief of the project, which was intended as a year-long trial or pilot of possible future processes for all teachers seeking full registration, was:

- to develop professional teaching standards for full registration

- to support new teachers (most of whom were newly graduated teachers from teacher education programmes) to move from provisional to full registration at the end of their first year of teaching.

This involved designing and implementing evidence-based assessment processes to show that the standards had been met. The Institute's intention was that the standards and assessments would provide:

- assurance of quality teaching to the public and the profession
- opportunities for professional learning for graduates, principals, mentors, and others involved in the project.

The project involved approximately 200 graduate teachers, their mentors and principals; 115 schools (11 independent, 20 Catholic, and 84 government) from all regions in the state of Victoria; a research-based evaluation team (ACER); a stakeholder reference group and the VIT Standards and Professional Learning subcommittee.

The work of developing the standards began on the first planning day in December 2002, when groups of teachers, principals, and other educators who had expressed interest in being part of the project met to workshop a set of interim standards that were drafted by members of the VIT Standards and Professional Learning branch. In developing these draft standards, the team referred to various national and international standards models (especially those developed by the Australian national subject associations for English, mathematics, and science teachers', discussed in a later part of this report).

The draft standards were refined throughout the year in consultation with many individuals and groups. Consultation included conventional practices such as meetings with stakeholders across the state, and providing opportunities to make comments and written submissions. However, it went further. The standards were continually discussed and revised at meetings of teachers, mentors, and principals who were actually working with them in the learning and assessment project. If a standard did not seem to be 'working', it was changed. The standards thus met some tough tests as they were actually developed in tandem with the assessment and professional learning experiences that formed the major part of the project.

During the first half of 2003, members of the Standards and Professional Learning branch of the VIT began to develop professional learning and assessment portfolio tasks that would:

- be a vehicle for provisionally registered teachers' professional learning
- provide evidence that provisionally registered teachers had met the standards

The first task, the student work-based portfolio task, required graduates, with feedback from mentors, to analyse and document the progress of two students over three to five weeks, or 10 to 15 hours of lessons, in the context of the progress of the whole class.

The second task was the classroom observations task. For this task, the plan was that the provisionally registered teacher and mentor would engage in three classroom observations during

the year. For each observation there would be pre- and post-lesson discussions between the provisionally registered teacher and mentor.

The third task was for the graduate to provide evidence of having satisfied the ‘professional engagement’ standards by completing a list of the professional activities they had undertaken, outside their normal teaching duties, that showed engagement with the profession.

As a set, the portfolio tasks were designed so that they provided evidence of teacher performance on all of the standards. They were also designed so that the process of carrying them out provided opportunities for professional learning.

The VIT held meetings for provisionally registered teachers and their mentors regularly throughout the year to support the process. Meetings were also held with principals about their role in supporting the mentoring process and managing the portfolio assessment at the end of the year. Participants provided feedback on the draft standards and discussed their mutual experiences of the project. The Standards and Professional Learning branch provided a comprehensive programme of support through regular workshops and a training programme for assessors.

In the Victorian context, where historical factors like the union-led protests against, and ultimate collapse of, ‘inspection’ in the 1970s still strongly influence teachers’ attitudes towards attempts to evaluate their work, the question of assessment was extremely sensitive. The approach eventually accepted was that formative assessment, based on the VIT standards, should be carried out throughout the year by mentors. This would be followed by a summative assessment at end of the year in which principals, on the advice of school-based panels, would examine the portfolio of evidence and make a recommendation to the VIT regarding applicants’ suitability to be awarded full registration.

ACER conducted a comprehensive evaluation of the project at the end of 2003. The full ACER Evaluation Report is available on www.vit.vic.edu.au/content.asp?Document_ID=26.

Overall, the evaluation found high levels of support for the processes among participants. Among the more significant findings were:

- 68 percent of PRTs, 81 percent of mentors and 89 percent of principals agreed that completing the student work-based portfolio task would have a beneficial impact on the teaching of the PRT in the future
- 87 percent of PRTs, 93 percent of mentors and 98 percent of principals believed that completing the student work-based portfolio task had deepened their understanding of the standards
- 72 percent of graduates, 86 percent of mentors and 97 percent of principals agreed that the provisionally registered teachers had made beneficial changes to their teaching as a result of feedback given during classroom observations
- 61 percent of graduates and 83 percent of mentors agreed that the classroom observation activities had deepened their understanding of the standards

- 96 percent of provisionally registered teachers agreed that working with their mentor and other teachers in the course of the project showed them the value of collaboration and teamwork. This view was shared by 90 percent of mentors and 89 percent of principals.

School-based interviews showed considerable variation in the ways in which the various processes, especially classroom observations and the summative evaluation, had been carried out. It became apparent that the quality of learning in schools that had followed a more laissez faire approach was lower than in schools that had, for example, followed the Standards and Professional Learning branch's advice that observers should use the standards when making formative assessments of classroom teaching. It took time for some mentors to understand that 'formative assessment' still meant 'assessment' in relation to the standards, and that this was important factor affecting the value of the feedback they gave to beginning teachers.

Comments made by teachers in interviews indicated that mentors' advice in 'low rigour' schools tended to favour the traditional 'handy hints' approach familiar to generations of teachers. In this approach, the experienced teacher simply passed on useful tips and showed the less experienced teacher some basic tactics and strategies for maintaining order. These usually fell short of engaging the PRTs in discussions that focused on the standards, thereby limiting their opportunities to receive useful feedback and deepen their professional knowledge.

Under the new VIT arrangements, the final decision about a teacher's entry to full membership of the teaching profession in Victoria, based on the portfolio, rested with the principal and a school-based panel assessment processes. The ACER evaluation questioned the rigour of these processes. It found that while they were considered fair by a great majority of participants, their lack of consistency across schools raised some concerns about fairness and credibility and their ability to provide guarantees of the PRT's eligibility to gain full registration. If the VIT is finally responsible for registration and its credibility to the public and the profession, consideration may need to be given to additional assessment processes that ensure consistency across schools and school systems.

In 2004 and 2005, on the basis of the success of the pilot project, the processes outlined above were applied to all PRTs in Victoria. ACER has now completed evaluations of the 2004 and 2005 processes, the reports of which are available on the VIT website.¹

United States

Interstate New Teacher Assessment and Support Consortium

In the United States, individual states are responsible for 'licensing' or 'certifying' teachers. (The terms are used interchangeably in the literature). All states require that teachers possess at least a bachelor's degree in education or in a content area. Most states require candidates to have

¹ www.vit.vic.edu.au/content.asp?Document_ID=26

completed a specified period of supervised practice teaching. This varies from nine to 18 weeks. Fourteen states have professional standards boards or commissions, such as the California Council on Teacher Credentialing, that establish state licensure requirements. In other states, the licensing function is conducted by the State Education Department. Forty-two states require some form of teacher testing (National Association of State Directors of Teacher Education, 2000). The tests may include tests of basic skills, subject matter knowledge, general knowledge, or pedagogical content knowledge. The Educational Testing Service, in Princeton New Jersey is a major developer and conductor of these tests (Wilson & Youngs, 2005, p. 593).

Different tests are used to evaluate teachers across many areas; for example, teaching subjects such as chemistry or languages, elementary education, and special education. In 2001, more than 600 tests of basic skills, teaching knowledge, and subject knowledge were in use (Mitchell, Robinson, Plake, & Knowles, 2001).

Licensure is a staged process in most states of the United States. Thirty-one states require teachers to hold an initial licence that is valid for two to five years. To earn a 'full' licence after this time, teachers must complete additional requirements such as completion of an advanced degree or programme of professional development. Some states require candidates to pass assessments of classroom performance before being awarded full licensure. States require that candidates complete the Interstate New Teacher Assessment and Support Consortium content-specific portfolio assessments discussed below (Wilson & Youngs, 2005, p. 593).

Created in 1987, the Interstate New Teacher Assessment and Support Consortium (INTASC) is a project of the Council of Chief State School Officers (CCSSO). The consortium includes national education organisations and state education agencies involved with the preparation, licensing, and ongoing professional development of teachers. It has no direct authority over these arrangements, but exercises considerable influence. The consortium's membership currently includes over 30 individual states, with representatives from state education agencies, higher education institutions, and national professional associations.

The consortium's mission² is to provide a forum for its member states to liaise and collaborate in the development of:

- compatible educational policy on teaching among the states
- new accountability requirements for teacher preparation programmes
- new techniques to assess the performance of teachers for licensing
- new programmes to enhance the professional development of teachers.

² http://www.ccsso.org/projects/interstate_new_teacher_assessment_and_support_consortium

In 1992, INTASC developed the *Model Standards for Beginning Teacher Licensing and Development: A Resource for State Dialogue* (INTASC 1992). The 10 ‘model core principles’ that are set out in this document reflect agreed values and a learner-centred view of teaching that cuts across content areas and grade levels.

In subsequent years, various committees and associations of practising teachers, teacher educators, and school and state agency staff translated the core standards into model licensing standards in individual subject/stage of schooling areas; for example, mathematics, language arts, and foreign languages. These processes continue today.

It is important to remember that the INTASC standards for teachers are closely linked with recognised subject and grade level Standards Frameworks for student performance.

The 10 core INTASC standards were incorporated into a revision of the NCATE standards in 1994. They are also aligned with those of the National Board for Professional Teaching Standards. This alignment is underpinned by a common approach to assessment:

As a result of these combined initiatives, systems of licensing and certification that directly assess what teachers know and can do are gradually replacing the traditional methods of requiring graduation from an approved programme or tallying specific courses as the basis for granting programme approval. (Darling-Hammond, 2000, p. 763)

Performance-based assessments illustrate INTASC’s core principles and content standards. Assessment is the language of communication in education (Black, 1997) and, when used both formally and informally, is one highly visible means by which performance is measured. (Weber et al., 1998)

Using the *Model Standards for Beginning Mathematics Teacher Licensing and Development: A Resource for State Dialogue* (INTASC 1995) as a framework, the three-year Performance Assessment Development Project (PADP), a subset of 10 states, created and field-tested a complete performance-based assessment system for beginning mathematics teachers. The product of this work includes the *Mathematics Teacher Performance Assessment Handbook* (INTASC, 1996), which guides beginning teachers in completing the portfolio assessment:

A portfolio-based assessment was developed, because a portfolio provides a comprehensive view of a beginning mathematics teachers’ classroom practice and provides multiple sources of evidence to evaluate a teacher’s understanding and performance of good teaching. Significantly, the portfolio contains primary data that includes instructional lessons designed by a beginning teacher and actually used in the mathematics classroom, videotapes of student and teacher interaction, and feedback provided to students as a part of classroom assessment. Secondary data are also included in the portfolio through the teacher’s commentaries on teaching methods and performances and ways individual lessons might be revised to improve the lesson. The portfolio provides beginning teachers with the opportunity to depict what they do in the classroom and to discuss a much greater depth of understanding

of what is happening in the mathematics classroom than through only one type of evidence, such as a traditional classroom observation.

The portfolio also measures aspects of performance that cannot be measured in other ways by focusing on the context of the teacher's classroom, rather than on a hypothetical context, as most on demand assessments do. In particular, beginning teachers demonstrate what they know about their own students, how individual student learn mathematics, and how to accommodate learners with diverse needs. The teacher collects and composes this evidence over a period of time, demonstrating how to create opportunities for diverse learners to learn mathematics, how to integrate and connect previous student learning to new learning, and how to diagnose sources of problems in student learning and identify strengths on which to build future instruction. (Weber et al., 1998)

There is no doubt that the INTASC standards embody both aspects of the definition of standards discussed at the start of this report. In accordance with the first meaning the 10 INTASC principles are 'flags' and 'rallying points' that reflect a carefully arrived at consensus about what counts among members of the profession as 'good' teaching. In line with the second definition of standards as 'specifications or exemplars of measure', they are also used as tools that are used to make judgements about teaching quality, as described by Sykes and Plastrik (1993):

A standard is a *tool* for rendering appropriately precise the making of *judgements and decisions* in a context of *shared meanings and values*.

Like the INTASC standards, the INTASC portfolio assessments were designed to be compatible with the assessment processes of the NBPTS. The overall intention was to ensure a continuity of 'good' teaching practice throughout a person's career.

INTASC establishes subcommittees to translate these core principles into standards and performance-based assessments across the curriculum; for example, the mathematics subcommittee, consisting of highly regarded teachers of mathematics, teacher educators and researchers from across the country, translated the 10 core principles into 'Standards for Beginning Teachers of Mathematics'. All teachers are regarded as specialists, either in terms of the level at which they teach (e.g. early childhood), or in terms of their subject area (e.g. high school language arts).

INTASC emphasises that its 'common core' principles are not analogous to generic or context-free teaching behaviours. Like the five principles of the National Board for Professional Teaching Standards, they are designed as first-level statements that infuse all statements at other levels of articulation. Application of these common understandings and commitments are manifested in specific contexts – defined by students, subjects, and school levels, among others. Assessments of specific teaching decisions and actions must occur in varied contexts that will require varied responses. Subject-specific pedagogical decisions, for example, need to be evaluated in the context of subject-specific standards.

The work of INTASC has been guided by that of the National Board for Professional Teaching Standards. The INTASC licensing standards and assessments for beginning teachers, both before they enter teaching and during their first two years in a school, are compatible with those of the National Board for Professional Teaching Standards. Assessors are exemplary teachers who receive similar training to that of the National Board assessors. Assessments broadly follow the National Board practice of portfolios and assessment centre tasks, but differ in their level of demand and complexity.

Standards for full registration as a teacher: Connecticut

The state of Connecticut provides a useful example of a United States state that decided to improve its education system primarily by focusing policy on initiatives that enhance teacher quality. Since the mid 1980s, Connecticut has initiated and sustained

a coherent policy package linking school finance reform equalization and challenging expectations for students to teacher salary increases, teacher licensing and re-certification reforms and a teacher support and assessment system guided by student and teaching standards. Rather than pursue a single silver bullet or change strategies every few years, Connecticut made ongoing investments in improving teaching through high standards and high supports and through a coherent connection to student learning. (Wilson, Darling-Hammond, & Berry, 2001)

The main elements of the Connecticut reforms were:

- strong and consistent political and administrative leadership over at the past 20 years
- awareness of and response to the growing evidence of the importance of teacher quality to student learning (Darling-Hammond 1997; National Commission on Teaching and America's Future, 1996)
- mindfulness of the importance of new standards for students and their links with teaching standards
- investment in Connecticut Department of State Education research and development capacity
- the creation and development of policies and programmes that linked teacher development and student achievement
- the alignment of performance-based student and teacher standards
- a rigorous teacher licensure and development programme.

Following the enactment of the Education Enhancement Act and its companion legislation in 1990, the Connecticut Department of State Education established a three-tier certification system. This included certification at beginning, provisional, and 'professional' levels. First-year teachers were required to participate in a system of support and assessment, the Beginning Teacher Educator Support and Training Program (BEST). Currently, candidates are required to complete a teaching portfolio that requires subject-specific demonstrations of teaching, such as videotapes, lesson plans, student work samples and reflections of teaching based on subject-specific standards. Upon successfully completing these requirements, candidates are given a provisional

teaching licence. For a full licence, teachers who wish to teach in the Connecticut state education system require additional professional development and a master's degree.

Teachers now typically complete the portfolio in their second year of teaching. The standards used for professional growth and assessment are linked to the Connecticut student standards, national standards for teaching developed by the National Board for Professional Teaching Standards and INTASC, and research on effective teaching:

Teachers are evaluated on the appropriateness of their teaching decisions for the students they serve, the range of strategies they use effectively, the curriculum's logic and coherence, the quality of work they assign, their skill in assessing and responding to student learning, and their capacity to evaluate their own teaching and make adjustments based on evidence of student learning. (Wilson, Darling-Hammond, & Berry, 2001, p. 15)

The portfolios are evaluated by two trained assessors who are already certified to teach in the candidate's teaching area. They gather and organise evidence individually, then work in pairs using a rubric to guide their assessments. All candidates, and the superintendents of their home districts, receive evaluation results in September. Those who score at levels two through four typically receive a provisional teacher's licence. Those who score level 1 may apply for a third year in the BEST programme. Candidates who score 0 (unacceptable) are eligible for a third year only if the district superintendent can find 'good cause' for doing so.

High levels of support are made available to BEST teachers. These include a comprehensive mentoring programme, workshops delivered by certified teachers, 'libraries' of model portfolios that are available for review at regional support centres, and an electronic portfolio prototype.

Between 1986–87 and 1996–97, more than 11,000 teachers entered Connecticut's education system through BEST. Between 1986–87 and 1996–97, more than 12,000 teacher principals and teachers were trained as mentors, assessors, and portfolio scorers. Most of the state's teachers have now experienced BEST as beginners, mentors, assessors or scorers (Wilson, Darling-Hammond, & Berry, 2001, p. 26).

In an evaluation carried out by the Connecticut Department of State Education in 1997, more than 80 percent of respondents who had participated in BEST as assessors reported that the assessor training had significantly improved their teaching and their ability to reflect on their teaching. They also reported significant effects on their professional knowledge and collegial interactions with other teachers. Ninety-five percent of mentors reported that participating in the BEST support training had a moderate or significant impact on their professional knowledge, teaching practice and ability to reflect on it, and collegial interactions with other teachers. Half of the beginning teachers reported that completing the portfolio had improved their teaching practice, 72 percent said that it had significantly improved their self reflection, and nearly 60 percent said that it helped them to focus on the important aspects of their teaching.

Within three years of the passing of the Education Enhancement Act, previous shortages of teachers in the state of Connecticut had been ‘transformed’ to surpluses.

Even as demand has increased in recent years, insiders report that the competition for teaching positions in Connecticut is high and that the pool of qualified applicants is impressive. Baron (1999) found that educators in districts with sharply improved achievement cited the high and steadily increasing quality of teachers and administrators as a critical reason for their gains and noted that ‘when there is a teaching opening in a Connecticut’s elementary school, there are often several hundred applicants (p. 28). Fisk (1999) quotes Art Wise from NCATE, ‘I have little doubt that Connecticut has the best qualified teachers in the country’ (p. 119). In 1990, nearly one third of the new teachers hired had graduated from colleges rated ‘very selective’ or better in Barron’s Index of College Majors (1988) and that 75 % of them had undergraduate grade point averages of B or better (CSBE, 1992, p. 3). The quality of teacher education has improved as standards for programs have increased. (Wilson, Darling-Hammond, & Berry, 2001, p. 26)

Wilson, Darling-Hammond, and Berry (2001, p. 28) suggest that ‘the harvest of this work is also seen in Connecticut’s sharply increasing student achievement, despite demographic trends that would appear to press in the opposite direction’. The proportions of minority students with diverse language and economic backgrounds grew steadily and the poverty index in the state rose by nearly 50 percent. Data gathered during this period, however, showed a narrowing in the gaps between white and minority students and between students from more and less wealthy families, as student achievement rose among all groups.

In the 1998 National Assessment of Educational Progress (NAEP) reading tests, Connecticut reading students far outscored all other students in the United States (Wilson, Darling-Hammond, & Berry, 2001, Figure 6, p. 29). The proportion of fourth grade students who scored at or above proficiency level in reading moved from 34 percent to 46 percent. This compared favourably with the national average of 29 percent.

Connecticut was among the five states with the highest mathematics scale scores for fourth graders in the NAEP Trial State Assessment in 1996. It was also among the eight states with the highest average scores for eighth graders. The proportion of fourth grade students who scored at or above proficiency level in mathematics rose from 24 percent in 1992 to 31 percent in 1996. The proportion of eighth grade students who scored at or above proficiency level in mathematics rose from 22 percent in 1990 to 31 percent in 1996.

Caution is obviously needed in interpreting this and other data that appear to suggest direct links between a particular policy, or set of policies, and improvement in student achievement. Wilson et al.(2001) note that their study is limited in its capacity to make empirical claims about what the Connecticut Department of State Education did to contribute to the overall reform effort. Quoting Cohen and Barnes (1993), they offer the hypothesis that sustained improvement and ‘success’ was due to the design of a system that encouraged learning among all participants.

Standards for experienced teachers

Australia

Some Australian state education systems have developed sets of standards that describe different stages or ‘levels’ of teachers’ expertise and experience, from ‘beginning’ to ‘advanced’. (These standards have similarities with those developed by the Ministry of Education in New Zealand that are used in performance management in schools). In some states, for example Victoria, the standards have been tied to performance appraisal and processes of annual performance review that are linked, through industrial agreements, to career progression and salary. All related assessment processes are carried out in schools under the authority of school principals.

In Victoria and New South Wales, the respective teacher registration bodies have developed standards that are already being used in government and non-government schools for teacher appraisal and professional development. Other states are at various stages of standards development. The role of registration (or similar) bodies varies, state by state.

Both Education Queensland and the Department of Education and Training in Western Australia have developed comprehensive sets of standards. Details of the Western Australian example are provided below. Examples of similar sets of standards in different Australian states can be found on the various Department of Education and registration body websites. The comprehensive standards developed by Education Queensland are of particular interest, as are the standards of the Queensland Board of Teacher Registration.

Western Australia: Competency Framework for Teachers

These standards were developed by the Department of Education and Training, Western Australia for teachers who work for the Department – the major employer of teachers in the state.

The framework was developed over a number of years, through extensive consultation involving teachers, professional associations, tertiary institutions, the Australian Education Union, and other key stakeholders.

The framework documents³ describe the competency standards as a ‘tool’ for classroom teachers to:

- reflect on their professional effectiveness
- determine and prioritise areas for professional growth
- identify professional learning opportunities
- assist their personal and career development planning.

3

[http://policies.det.wa.edu.au/our_policies/ti_view?uid=c6f2687650a84ec90c17e565efc06c80&iview=su
mmmary_view](http://policies.det.wa.edu.au/our_policies/ti_view?uid=c6f2687650a84ec90c17e565efc06c80&iview=su
mmmary_view)

The framework was also designed to:

- raise the quality of education in Western Australian schools by providing teachers with a document that supports their efforts to improve their professional practice thereby enhancing student outcomes
- provide direction for tertiary institutions and professional development providers as they continue to develop programmes that ensure the development of quality teaching.

There are no external or formally specified assessment processes that apply to the framework, but there is an expectation that teachers and schools will use the framework for the purposes described above.

Teachers of Advanced Practice may elect to apply for the Level 3 Teacher Classroom position, for which there is an external performance assessment process, described below.

The framework describes teachers' competencies within five 'dimensions':

- Dimension 1. Facilitating student learning
- Dimension 2. Assessing and reporting student learning outcomes
- Dimension 3. Engaging in professional learning
- Dimension 4. Participating in curriculum policy and other programme initiatives in an outcomes-focused environment
- Dimension 5. Forming partnerships within the school community.

It has three 'phases' that indicate three levels of competence for each competency within each of the five dimensions. For example, the phases for Dimension 2, assessing and reporting student learning outcomes, are:

- Phase 1: Monitor, assess, record and report student learning outcomes. A teacher operating within this phase is able to:
 - monitor and assess student learning outcomes to provide the basis for ongoing planning and reporting
 - record student learning outcomes
 - explain own developing approach to teaching and learning.
- Phase 2: Apply comprehensive systems of assessment and reporting strategies in relation to attainment of learning outcomes. A teacher operating within this phase is able to:
 - collect a range of evidence to monitor student learning outcomes
 - record evidence of student attainment of learning outcomes in order to inform ongoing planning and reporting processes
 - report student learning outcomes
 - participate in whole-school monitoring, recording and reporting activities.
- Phase 3: Consistently use exemplary assessment and reporting strategies that are highly responsive and inclusive. A teacher operating within this phase is able to:
 - develop and apply fair and inclusive practices in assessment and reporting
 - develop and implement a range of exemplary assessment strategies

- review the effectiveness of an exemplary assessment strategy
- make consistent judgement on student progress and achievement based on a range of evidence
- share knowledge and experience of using exemplary assessment strategies with colleagues
- provide comprehensive, relevant information to students, parents and other caregivers and the wider community.

The framework also identifies ‘critical elements’ for each dimension at each phase.

The Western Australia framework provides a well-articulated example of standards that attempt to discriminate between different levels of teachers’ performance at different stages (‘phases’) of their careers and experience. Other examples of standards of this kind are to be found in other Australian states; for example, in New South Wales, the Institute of Teachers has recently published a set of standards for teachers at four levels.

Our experience is that standards writers using this approach face difficulties in writing standards statements that discriminate between levels of performance in classroom teaching practice. ‘Graded’ indicators at the different stages often appear forced and artificial, and can be misleading.

Presumably the intention of standards such as these is to provide measures of improved performance by adding on extra or different requirements as the levels progress. But the elements of teachers’ work do not readily lend themselves to this kind of treatment. A great deal of what teachers can be expected to know and do applies from the first to the last day of their working lives. The issue is not only about *what* they know and can do – that is, adding to their repertoires as time goes on – but of the breadth and depth of their professional knowledge and the extent of their ability to carry out essential teaching tasks. Valid standards describe what accomplished teachers get better at over time. This kind of learning depends on insightful feedback about one’s own practice in relation to the standards. The best way to ensure this is through cycles of self-assessment and peer assessment. For this reason, we see rigorous assessment and the development of valid and reliable methods and instruments for assessment as essential to an effective standards-based professional learning system

Well written standards have a sound underpinning theory about the nature of teacher development from novice to expert. They are clear about the deep structure of what effective teachers get better at, such as knowledge of their students. Writing standards that reflect the nature of professional development is difficult and limited by current research. Many standards that attempt to represent stages of development simply play with adverbs, or resort to adding more ‘bits’ to the teachers’ role or duties.

Western Australia: Phase 1 Competency Standards for Early Childhood Teachers

These standards describe the five dimensions of the Western Australia Competency Framework in terms of the professional knowledge, skills and values considered important for early childhood

teachers (teachers who hold a relevant teaching qualification and work with children aged three to eight) at Phase 1. They are written under the same five dimensions as the general Western Australia Competency Framework for Teachers.

The document claims to be ‘grounded in a number of critical aspects of early childhood teaching practices, as identified by practising early childhood teachers in Western Australia’ (Department of Education Western Australia, p.4). These are described under the headings:

- professionalism
- professional knowledge and content knowledge
- contextual influences
- the environment
- relationships
- reflective practice.

The attributes of what early childhood teachers can be expected to know and be able to do are then carefully articulated in a series of prose statements under each dimension. For example, under Dimension 1: Facilitating student learning:

The Phase 1 teacher understands that play, both structured and unstructured, has a central role in young children’s learning and development in all domains (cognitive, social emotional, aesthetic, physical, and language). They create a supportive educational environment that values play ...

For each dimension there is a ‘Teachers’ Voices’ section; for example:

I knew she could read and write, because I know where she comes from. Her Mum runs the Post Office, so she was sorting mail before she came to school. (Sue, Broome District Office)

The Western Australia Competency Standards for Early Childhood provide an example of how standards developed for a particular stage of schooling can more fully articulate the knowledge, actions, and dispositions of teachers who teach students at a particular stage of their education. Generic standards are useful for many purposes, but because the pedagogies that relate to different subjects and age levels of students are different, in important ways, standards that attempt to probe pedagogical qualities and attributes at deeper levels need to be much more specific. This applies particularly when standards are used as measures. In a performance assessment process the Western Australia Early Childhood Competencies would be much more useful to assessors (who would preferably be early childhood specialists themselves) than a set of generic standards, and the resulting judgements would be more valid.

Denmark: The Teachers’ Certification Project: ‘Teachers in Motion’

In Denmark, primary and lower secondary school teachers gain ‘authorisation’ to practise as teachers by passing the national examination from a teachers education college. Upper secondary school teachers are required to hold a masters degree from an approved university and to complete a school-based training period of two years.

Once they are ‘qualified’, teachers in Denmark are not subject to any further evaluation of their practice in the course of their careers, although they are supported by optional courses and local team activities.

This situation is now under scrutiny. Aware of all the research that shows strong links between quality teaching and successful student learning, policy makers in Denmark, as in other countries, are seeking ways to improve teachers’ professional learning and to increase their accountability.

Researchers at the Danish University of Education, in collaboration with the Centre for Further Education, have recently developed a Teachers’ Certification System which is essentially a performance based assessment system based on a set of standards. They envisage that the system, or adaptations of it, may be used at various stages of a teacher’s career, from entry to advanced practice, to enhance teachers’ professional learning and provide guarantees of quality to the public and the profession.

A pilot programme was developed, the first part of which was to articulate standards that would express the beliefs and values of teachers in Denmark. The standards developers, led by the team from the Danish University of Education, drew upon the ideas of Donald Schon that emphasise reflection on practice.

‘Wisdom of practice’ was a recognised principle in the construction of the Danish standards, with practising teachers playing the major role in their development. Importantly, the standards were subject-specific. The first standards were for mathematics and science. These were followed by Danish, history, social science, and English.

In the second part of the pilot programme, 12 teachers were certified over one year against the mathematics and science standards. This entailed an assessment system that began with materials and directions that provided a clear account of what was expected. Teachers were given opportunities to reflect on their practice individually and in close dialogue with colleagues. One aim of this part of the project was for teachers to develop a common language to identify and describe their own ‘good’ teaching in relation to the standards, and to express professional concerns.

Evaluation was on the basis of a portfolio which contained written analysis and reflections on the teachers’ classroom experiences and how they helped their students to learn. The teachers were expected to engage with educational theory and to explain how it had improved their practice.

While this work is still at an early stage, the approach has wide support. From September 2005, new certifications are to be offered in Danish, science, history, social science and English (Andressen et al., 2004).

The New South Wales Quality Teaching Initiative (a different focus on improving teacher quality)

Like the models of professional teaching standards described above, this initiative arose from raised political awareness of the importance of teaching to effective student learning. However, it

approached the question of how to improve teacher quality from a slightly different, though complementary, perspective. It sought ways of focusing teachers' attention on developing a kind of pedagogy that would result in 'deep' and 'significant' learning experiences and outcomes for students.

The Department of Education and Training in New South Wales released *Quality Teaching in NSW Public Schools* in 2003. The initiative, which has affinity with other 'productive pedagogies' models, was developed by the department in consultation with researchers from the University of Newcastle. It has three 'dimensions':

1. *Intellectual quality* refers to pedagogy focused on producing deep understanding of important, substantive concepts, skills and ideas. Such pedagogy treats knowledge as something that requires active construction and requires students to engage in higher-order thinking and to communicate substantively about what they are learning.
2. *Quality learning environment* refers to pedagogy that creates classrooms where students and teachers work productively in an environment clearly focused on learning. Such pedagogy sets high and explicit expectations and develops positive relationships between teachers and students, and among students.
3. *Significance* refers to pedagogy that helps make learning meaningful and important to students. Such pedagogy draws clear connections with students' prior knowledge and identities, with contexts outside of the classroom, and with multiple ways of knowing or cultural perspectives.

Each of the three dimensions of pedagogy has six 'elements'; for example, for 'intellectual quality' these are 'deep knowledge', 'deep understanding', 'problematic knowledge', 'higher-order thinking', 'metalanguage', and 'substantive communication'. It needs to be kept in mind that the lineage of productive pedagogies goes back to Newmann's research programme in the 1980s and 1990s and the effort to build stronger links between school restructuring and the quality of teachers' pedagogy.

Like Newmann's 'authentic pedagogy' (1966), which is based on research on effective teaching, productive pedagogies is essentially a classroom observation instrument, developed primarily for research purposes. It also has valuable uses as an instrument that teachers can use to assess their own performance. As is apparent, the dimensions of productive pedagogies are much the same as can be found in many sets of teaching standards. Like well written standards, they point to observables and focus attention on the quality of what students are doing as a result of conditions for learning set up by the teacher. But, as generic standards, they are silent on the importance of knowledge to teachers' pedagogy.

Researchers from the University of Newcastle have recently begun a four-year longitudinal study – the Systemic Implications of Pedagogy and Achievement in New South Wales Public Schools (SIPA) – of the links between teachers' professional development, pedagogy, and student achievement. This study will track the pedagogical experiences of three cohorts of approximately 3,000 students at different year levels. Measures of the quality of the pedagogy these students

experience will be drawn on the basis of classroom observations (using specially developed classroom observation instruments), and measures of the learning and assessment tasks students complete as part of their regular classroom experiences.

As well as tracking the students' pedagogical' experience, teachers' professional learning will be monitored through observations, interviews, and an annual survey.

Ladwig and Gore believe that because the New South Wales teaching model and the SIPA research raise the possibility of 'being more declarative' about what counts as quality teaching, they could 'well advance the teacher standards movement in Australia well beyond most comparable international initiatives' (Ladwig & Gore, 2005, p. 29). This may be the case, but we have some reservations about the generic features of the model. Pedagogy, as previously noted, has important subject and stage of schooling characteristics. Early childhood teachers know and do very different things from teachers of physics at Year 12. While the attainment of 'deep knowledge' and 'deep understanding' is equally important in both kinds of classroom, there will be major pedagogical differences in how those goals are reached. If measures of teachers' performance are to be valid this will be a major concern, as the developers of subject and year-level-specific standards and assessments discussed above have found.

Standards for advanced teaching practice

Australia

Development of subject specific standards and certification systems for accomplished teachers in English, mathematics and science

In 1999, the Australian Science Teachers Association (ASTA), the Australian Association for the Teaching of English (AATE), the Australian Literacy Educators Association (ALEA), and the Australian Association of Mathematics Teachers (AAMT), working in collaboration with Monash University, began projects to develop subject-specific standards for accomplished teachers in English, mathematics and science. Content standards have now been developed for each of these three subject areas and the work now focuses on assessment and certification against the standards.

A feature of these projects was that the standards were developed by teachers. For example, in science:

One of the first steps taken by the ASTA project was to establish a National Science Standards Committee. Science teachers across Australia were invited to apply for membership of the Committee. Fifteen highly regarded teachers were selected to develop the standards, representative of all states and territories and all school systems. (Australian Science Teachers Association & Monash University, 2002, p. 27)

A primary purpose of the standards was to provide the basis for a system of professional certification for highly accomplished teachers. It was envisaged that such certification would provide a valuable service to employing authorities who sought and were prepared to recognise high quality in teaching.

The model of assessment developed by the AAMT Teaching Standards and Assessment Project identified three sources through which candidates could present evidence of achievement against the AAMT standards:

- portfolio
- responses to simulated teaching decisions at an assessment centre
- an interview.

Assessment is carried out by trained assessors.

The model was evaluated in a trial process that started in August 2003. A comprehensive report is available on the AAMT website at www.aamt.edu.au/standards/assess.html

The science and English standards developers have also carried out trials of processes for evaluating teachers' performance against the standards. Details are available on the subject association websites.

Level 3 Classroom Teacher position

Work on the Level 3 Classroom Teacher position is recognised as groundbreaking in Australia. It is the only example in this country of a standards-based performance assessment process, developed by an employer, to select teachers for promotion on the basis of demonstrated quality of teaching. Initiated in 1997, the standards and assessments were the subject of broad consultation, and the position was industrially negotiated with the Australian Education Union (Western Australia branch) in the *Government School Teachers' Enterprise Agreement* in 1996⁴.

The developers of the Level 3 Classroom Teacher position envisioned Level 3 teachers as being outstanding classroom practitioners and teacher leaders. The position is open to all teachers. It is a portable classification within the Western Australia Education Department, 'attached' to the teacher, not tied to a school position. It thus opens up career opportunities for younger teachers as well as for more experienced teachers who have reached the top level of the salary scale. However, quotas apply, so that success is not easily achieved. Salary increments of up to \$6,000 are attached to the position. Successful applicants take up positions in schools in which they receive a time allowance to provide leadership to other teachers through, for example, modelling exemplary teaching strategies.

⁴ <http://www.sstuwa.org.au>

The chief purpose of the Level 3 position is to support the retention of exemplary teachers in the classroom. The position is seen as providing status and recognition of teachers' commitment to professional learning. Level 3 teachers are also expected to be leaders of other teachers. They thus help to improve teaching and learning in a whole school, as well as in a classroom context.

Level 3 selection is based on a two-stage, competency-based assessment that is external to the applicants' schools. The assessment process is usually contracted out to a service provider. In the first stage, candidates submit a portfolio of evidence addressing the competencies. In the second stage, they manage a round table discussion with colleagues ('reflective practice'). Assessment is carried out by trained assessors who are Level 3 teachers. Rubrics have been developed to help assessors to judge candidates' performance against each of the five competencies.

The Level 3 competencies are aligned with Phase 3 of the Western Australia Competency Framework for Teachers, described above. They are:

1. utilise innovative and/or exemplary teaching strategies and techniques in order to more effectively meet the learning needs of individual students, groups and/or classes of student
2. employ consistent exemplary practice in developing and implementing student assessment and reporting processes
3. engage in a variety of self-development activities, including a consistently high level of critical reflection on one's own teaching practice and teacher leadership, to sustain a high level of ongoing professional growth
4. enhance teachers' professional knowledge and skills through employing effective development strategies
5. provide high-level leadership in the school community through assuming a key role in school development processes, including curriculum planning and management, and school policy formulation.

The assessment rubrics provide further explanation of the specific teacher behaviours associated with each competency.

United States

The National Board for Professional Teaching Standards

The National Board for Professional Teaching Standards' (NBPTS) standards and assessments are developed under the auspices of the NBPTS, a national, non-profit, non-partisan professional body in the United States that was instituted in 1987. A majority of the NBPTS members are outstanding classroom teachers. The remaining members include legislators, governors, administrators, representatives of the major teacher unions and teacher educators. The board has broad support from the highest levels of state and national government, business, teacher professional organisations, foundations and parents.

By November 2004, the NBPTS had certified approximately 40,000 teachers (out of approximately 100,000 applicants). The recent increase in application rates is due to the incentives increasingly offered by various states, mainly in terms of salary increases or bonuses.

Standards for different fields are developed by NBPTS standards committees. These are generally made up of teachers who are recognised as experts in their fields. A majority of members are practising teachers. Other members typically include teacher educators, experts in child development, and other professionals from the relevant fields.

The main purpose of the NBPTS is to establish rigorous standards and assessments for certifying accomplished teaching.

Its mission is to advance the quality of teaching and learning by:

- maintaining high and rigorous standards for what accomplished teachers should know and be able to do
- providing a national voluntary system certifying teachers who meet these standards and
- advocating related education reforms to integrate National Board Certification in American education and to capitalise on the expertise of NBPTS-certified teachers.

At the first level, NBPTS standards are organised around five major generic propositions. These are:

1. teachers are committed to students and their learning
2. teachers know the subjects they teach and how to teach them to students
3. teachers are responsible for managing and monitoring student learning
4. teachers think systematically about their practice and learn from experience
5. teachers are members of learning communities.

At the second level, the standards are subject- and stage of schooling-specific. The NBPTS has now developed, in detail, sets of standards and assessments for certification in nearly 30 fields. There are two standards 'descriptors'. The first represents the four overlapping student development levels:

- early childhood, ages 3–8
- middle childhood, ages 7–12
- early adolescence, ages 11–15
- adolescence and young adulthood, ages 14–18+.

The second descriptor indicates the substantive focus of a teacher's practice. Subject-specific standards and assessment processes are designed for teachers who emphasise a single subject area in their teaching (e.g. adolescence and young adulthood/mathematics); generalist certificates are designed for teachers who teach across the curriculum (e.g. early childhood/generalist).

Teachers who apply for National Board Certification are asked to complete 10 separate assessment tasks (four portfolio entries and six assessment centre tasks.) These tasks aim to

represent the range of abilities in the content standards. Each task provides independent evidence of performance on several standards. Every standard is assessed in several ways.

Each portfolio entry must come from a different unit of work or area of the curriculum. Each is an authentic part of what teachers normally do in the course of their everyday work.

The focus of the tasks differs from one certification field to another – for example, from an early childhood teacher to an early adolescence/English language arts teacher – but the type and underlying structure of the tasks stay much the same. There is a high level of comparability across the certification fields in the amount of work and the type of evidence teachers provide in applying for Board certification. Importantly, the tasks provide evidence about what the students do as a result of the opportunities for learning the teacher has set up, not only what the teacher says or does.

The NBPTS early childhood/generalist certificate

The early childhood/generalist certificate is appropriate for teachers of students aged 3 to 8 who engage their students in all subject areas addressed in the early childhood/generalist standards.

Candidates for the certificate prepare a portfolio in which they are asked to:

- demonstrate that their teaching practice meets the early childhood/generalist standards
- show that they have access to a class of at least six students, in which 51 percent of the students are ages 3 through 8 during the 12 months before the submission of the portfolio entries
- submit student work samples and videotapes in English and/or Spanish showing their interactions with their students
- discuss how they foster children’s literacy development
- demonstrate their ability to deepen students’ understanding of an important topic/concept/theme in social studies through the integration of the arts
- demonstrate their ability to sustain a classroom environment that supports students’ growth, learning, social and emotional development and their understanding of a social skill/concept
- show how they help children acquire scientific and mathematical knowledge in understanding a ‘big idea’ in science by integrating these two disciplinary areas
- present evidence of their impact on student learning through their work with students’ families and community and through their development as learners and as leaders/collaborators.

For the assessment centre, candidates are required to demonstrate content knowledge in the areas listed below:

- literacy and English language arts
- mathematics
- science
- social studies

- children's play
- physical education, health, and safety.

The NBPTS Early Childhood/Generalist Standards (Second Edition) are:

1. Understanding Young Children – Accomplished early childhood teachers use their knowledge of child development and their relationships with children and families to understand children as individuals and to plan in response to their unique needs and potentials.
2. Equity, Fairness, and Diversity – Accomplished early childhood teachers model and teach behaviours appropriate in a diverse society by creating a safe, secure learning environment for all children; by showing appreciation of and respect for the individual differences and unique needs of each member of the learning community; and by empowering children to treat others with, and to expect from others, equity, fairness, and dignity.
3. Assessment – Accomplished early childhood teachers recognise strengths and weaknesses of multiple assessment methodologies and know how to use them effectively. Employing a variety of methods, they systematically observe, monitor, and document children's activities and behaviour, analysing, communicating, and using the information they glean to improve their work with children, parents, and others.
4. Promoting Child Development and Learning – Accomplished early childhood teachers promote children's cognitive, social, emotional, physical, and linguistic development by organising and orchestrating the environment in ways that best facilitate the development and learning of young children.
5. Knowledge of Integrated Curriculum – On the basis of their knowledge of how young children learn, of academic subjects, and of assessment, accomplished early childhood teachers design and implement developmentally appropriate learning experiences that integrate within and across the disciplines.
6. Multiple Teaching Strategies for Meaningful Learning – Accomplished early childhood teachers use a variety of practices and resources to promote individual development, meaningful learning, and social cooperation.
7. Family and Community Partnerships – Accomplished early childhood teachers work with and through families and communities to support children's learning and development.
8. Professional partnerships – Accomplished early childhood teachers work as leaders and collaborators in the professional community to improve programmes and practices for young children and their families.
9. Reflective practice – Accomplished early childhood teachers regularly analyse, evaluate, and synthesise to strengthen the quality and effectiveness of their work.

There are many research studies indicating that the NBPTS certification system is generating highly effective forms of school-based and collaborative professional learning and the development of a new infrastructure to support that professional learning.

Assessments are carried out by specially trained assessors, most of whom hold NBTS certification. Some writers have criticised the NBTS on the grounds of lack of evidence about its influence on teacher quality teaching and student achievement (Finn, 2003; Ballou & Podgursky, 1998; Podgursky, 2001; Ballou, 2003). However, recent and mounting evidence now suggests that NBTS-certified teachers are of better quality and do have more positive effects on student learning than most other teachers. Research by Goldhaber et al. (2004) on NBTS-certified teachers found a strong correlation between teacher performance on exams (e.g. licensure tests) and both the probabilities of application and NBTS-certification. This is important because numerous studies have found a positive correlation between teachers' performance on academic assessments and student learning outcomes (Ferguson & Ladd, 1996; Goldhaber, 2004; Greenwald et al., 1996).

The findings of a large study (Goldhaber, 2004) that used teacher and student-level administrative records from North Carolina as data, suggested that NBTS-certified teachers were more effective, in terms of student learning than non-Board certified teachers. However, a direct causal relationship between certification processes and improved student achievement could not be established. Another study (Vandervoort et al., 2004) compared the academic performance of students in the classrooms of 36 NBTS-certified teachers with that of the students of their non-certified peers in 14 Arizona school districts. In the 48 comparisons using gain scores adjusted for students' entering ability, the students in the classes of NBTS-certified teachers surpassed students in the classroom of non-NBTS-certified teachers in almost three-quarters of the comparisons. Almost one-third of these differences were statistically significant.

Research in this field is continuing. However it important to remember that research has not yet reached consensus on which, if any, identifiable teacher behaviours or characteristics are associated with gains in students' learning (see Chapter 2 of this report). Because of this, the matter still needs to be treated with great caution.

England

The Threshold classification

Experienced English government school teachers who wish to access a substantial pay rise may apply to 'cross the threshold' by demonstrating that they have moved to a stage of highly effective practice. The process is voluntary.

Standards for the Threshold position were developed by the Department for Education and Skills (DfES). There are separate sets of standards for primary, secondary, special, and 'non-standard' teachers, but all have the same five dimensions:

1. knowledge and understanding
2. teaching and assessment
3. pupil progress
4. wider professional effectiveness
5. professional characteristics.

Teachers who wish to ‘cross the threshold’ complete an application form upon which they summarise evidence using concrete examples from their day-to-day work to show that they have worked at the indicated standards over the past two to three years. They are asked not to attach any supporting evidence to the form, but to ensure that any evidence that they have cited is available on request. Teachers are also advised to provide no more than three examples for each standard and to limit their responses to 250 words per standard. The assessment process has internal (within the school) and external components. In-school assessment is carried out by head teachers, who may consult with other school managers in making the assessment. The training received by head teachers to carry out this duty emphasises that:

- There is an expectation that the majority of teachers who apply will be successful.
- Unnecessarily high hurdles should not be placed in the path of teachers who apply.
- The assessment is designed to confirm teachers are carrying out their role satisfactorily and is not seeking to identify exceptional teachers⁵.

An external verification process is managed in England on behalf of the DfES by Cambridge Education Consultants, and in Wales by a consortium of local education authorities (LEAs). There are now two types of assessor verification – distance verification and on-site verification. The majority of schools receive distance verification through a process in which external assessors read the applications without visiting the school. The chief purpose of the assessors is to certify that the process has been correctly carried out by the head teacher and to confirm the head teachers’ judgements.

Menter et al. (2004), with reference also to the research of Mahony and Hextall (2000), note that:

In England, from the outset, the Threshold proposals met with a storm of controversy. Fierce debates ranged over: the values underpinning the policy; the nature and adequacy of the performance standards against which individuals would be assessed; the potential for bias in the assessments; the logistics and technologies of application and assessment; and negative impacts on individuals and general concerns with issues of equal opportunity (p. 12)

Bottery (1998) noted the anxiety among teachers that increasing differentiation within schools and between schools would weaken teachers’ professional collegiality. Case study material by Menter et al. indicated that teachers were cynical about the Threshold, seeing it as an unnecessary and burdensome hurdle over which they must jump in order to access a well-deserved and overdue pay rise. Some school managers in the case studies were more supportive of the idea of the Threshold, but many were sceptical. A major concern of the researchers was the wide variation that was found between schools in the ways in which the assessments were carried out. Another was that sometimes processes in schools appeared to unfairly discriminate against groups of teachers, for example, women and minority ethnic teachers.

⁵ <http://www.teachernet.gov.uk/management/payandperformance/performancethreshold>

A research team from Exeter University (Chamberlin et al., 2001) found considerable teacher and head teacher dissatisfaction with the Threshold evaluation methods. In the 1,000 schools of their study sample, they found that the success rate of applicants was 97 percent (the same as the national success rate). This figure alone, they said, raised questions about the effectiveness and validity of the evaluation. It also raised the obvious question of whether the evaluation was necessary in the first place. A number of observers commented that simply giving these teachers a pay rise, without an evaluation, would have been easier and cheaper.

While the Exeter research showed that most teachers were not overly critical of the role played by principals in their evaluations, some, especially the few who failed, were highly critical and claimed that they had been victimised. Only seven of the 174 unsuccessful teachers felt that the judgement of their case was justified. The other 167 were ‘shocked’, ‘furious’, or ‘demoralized’. For example, with respect to some of their principals, some unsuccessful teachers said:

Our perception of the Threshold evaluation is that it is part of a performance management system rather than an effective way of identifying and rewarding accomplished teaching.

Scotland

The Standard for the Chartered Teacher Award was developed by the General Teaching Council for Scotland.

- The General Teaching Council is responsible for:
- accrediting and recommending for approval by Scottish Ministers all programmes leading to the award of Chartered Teacher
- liaising with providers to verify results of modules
- liaising with employers to confirm relevant eligibility criteria
- informing employers of progress of teachers in terms of the number of modules completed to enable employers to deal with salary increments
- liaising with teachers as they progress through their programme
- conferring the professional award of Chartered Teacher.

The award is for experienced teachers who choose to undertake the professional learning necessary for the award of Chartered Teacher.

Any teacher may undertake the Chartered Teacher programme, provided he/she has:

- full registration with the General Teaching Council for Scotland
- reached the top of the main grade salary scale
- maintained a Continuing Professional Development (CPD) portfolio.

A CPD portfolio should contain:

- a record of the CPD activities the teacher has been involved in over the last few years

- evidence of how these activities have impacted on the teacher's work with pupils and colleagues
- evidence of the teacher's own learning.

The Standard for the Chartered Teacher Award has four key components:

1. professional values and personal commitments
2. professional knowledge and understanding
3. professional and personal attributes
4. professional action.

The first and third components are further articulated, with up to seven elements in each.

'Illustrative examples' are provided under the headings of:

- effectiveness in promoting learning in the classroom
- critical self-evaluation and development
- collaboration with, and influence on, colleagues
- educational and social values.

A wide range of providers offer the necessary professional learning opportunities for the Chartered Teacher programme. They include local education authorities, further and higher education institutions, private providers and consultants. All programmes that lead to the award of Chartered Teacher must be delivered through a 'partnership' of providers. The partners have collective responsibility for the quality of the participants' experiences and each partner has particular priorities and responsibilities.

Higher education institutions are responsible for the validation of modules and programmes and, where appropriate, the awarding of the academic qualification. Local education authorities and schools play partnership roles of various kinds in developing teachers and protecting the needs of pupils. Further education institutions and private providers/consultants provide opportunities for the enhancement of teachers' professional knowledge, skills, and understanding.

All providers must:

- ensure all modules/programmes have been submitted to the General Teaching Council for accreditation and approval
- be registered with the National Register of Continuing Professional Development providers
- notify the General Teaching Council that participants have satisfactorily fulfilled the requirement for a module. The module will only be credited to the teacher's record when the result has been formally approved by the provider's Board of Examiners.

There are two routes for achieving the Standard for Chartered Teacher: the programme route and the accreditation route.

In the programme route, teachers complete Module 1 'Self evaluation' using guidelines developed by the General Teaching Council. This is assessed by their chosen provider, using criteria

developed on the basis of the standard. This module must be satisfactorily completed before the candidate proceeds further.

They then complete:

- three further core modules
- four option modules
- one four-module or two two-module work-based projects.

These are all assessed by the providers. (Candidates may choose one or several providers).

In the accreditation route, candidates are required, in addition to completing Module 1, to submit a portfolio and commentary showing how they have achieved and maintained the Standard for Chartered Teacher. The process for preparing the portfolio is supported at a local level and the assessment of the submission is dealt with by an independent, national panel of assessors, approved by the General Teaching Council for Scotland.

Recognition of prior learning is given in both routes.

Applicants who complete the programme using the programme route are awarded a masters degree by their provider. Applicants who complete the programme using the accreditation route receive the Professional Award of Chartered Teacher from the General Teaching Council. Applicants are expected to cover most of the costs of undertaking the modules.

The Chartered Teacher Award provides an interesting example of a demanding ‘course-based’ pathway for teachers to attain certification of advanced practice. Available evidence (still mainly anecdotal) suggests that it is not popular with teachers, largely because of the high costs attached to completing the necessary courses and the heavy workload it requires. The extent of its overall effectiveness in terms of improving teacher quality is still unknown.

4. Recommendations: Research questions and parameters for further research

The parameters for research for the New Zealand Teachers Council would need to be linked, in the main, to research that enabled the Teachers Council to carry out its core functions effectively. These core functions are to:

1. provide professional leadership
2. encourage best practice in teaching
3. establish and approve standards for initial teacher education programmes
4. establish and maintain standards for qualifications that lead to teacher registration
5. approve and monitor teacher education programmes
6. exercise disciplinary functions relating to teacher misconduct and incompetence
7. identify research priorities and where appropriate promote and sponsor research according to those priorities
8. develop a code of ethics for the teaching profession.

Most of these functions will require research on, and development of, standards for purposes such as the following.

Standards for the accreditation of teacher education programmes

Accreditation would be perhaps one of the central quality assurance functions of a professional body such as the New Zealand Teachers Council. As the example of the National Committee for the Accreditation of Teacher Education (NCATE) demonstrates, the development and operation of an accreditation system can provide many opportunities for professional leadership and involvement, in the interests of the public. It may be useful to investigate the capacity of standards and current course approval arrangements for teacher education to provide opportunities for this kind of professional leadership.

The third and fifth functions of the Teachers Council above, for example, point to the need to ensure standards for the accreditation of teacher education programmes are consistent with research on the characteristics of effective teacher education programmes. There have been several recent syntheses of research on the characteristics of effective teacher education. Wilson and Floden (2003) provide one of the most comprehensive. Their review was guided by five questions of key interest to policy makers:

- What kinds of subject matter preparation, and how much of it, do prospective teachers need?
- What kinds of pedagogical preparation, and how much of it, do prospective teachers need?
- What kinds, timing, and amount of clinical training ('student teaching') best equip prospective teachers for classroom practice?
- What policies have been used successfully to improve and sustain the quality of preservice teacher education?
- What are the components and characteristics of high quality alternative certification programmes?

It is clear from their literature review that it is not easy to find definitive answers to these apparently straightforward questions. These researchers found that the research results were often contradictory and confusing. Only 64 studies met their criteria for inclusion in terms of quality and rigour, which is surprising given the huge literature on teacher education and the scale of the teacher education enterprise. Not enough of it has been asking the kind of questions of interest to policy makers and accreditation bodies.

Recently, however, the American Educational Research Association has produced a major report reviewing research on almost every conceivable aspect of teacher education (Cochran-Smith & Zeichner, 2005). These authors also point out that 'teacher education research has had very little influence on policymaking and practice in teacher education programs' (p. 756). This volume contains a chapter by Zeichner setting out a comprehensive research agenda for teacher education that would be valuable for the New Zealand Teachers Council to consider. Brouwer and Korthagen (2005) report on a major study of the effects of teacher education in Holland and highlight the fact that the knowledge base of empirical research about relationships between the processes and outcomes of teacher education programmes 'is far from complete' (p. 216).

The document *Research on Initial Teacher Education* (Cameron & Baker, 2004) provides a useful analysis of New Zealand research about initial teacher education and presents findings in the form of an annotated bibliography and a literature review of initial teacher education in New Zealand from 1993 to 2004.

New Zealand and international research shows that, in an optimal situation, teacher registration and standards-based accreditation of programmes can be powerful, interlocking functions, especially with a move to outcomes or performance-based accreditation. In developing standards for provisional and full teacher registration, the teaching profession can play a stronger role in regularly reshaping preparation programmes in the light of research and the demands of practice. Accreditation is granted to programmes whose graduates meet the standards of performance for registration.

We have found that teacher education programmes in Australia vary significantly in their effectiveness in preparing graduates for teaching (Ingvarson, Beavis & Kleinhenz, 2003; Ingvarson et al., 2005). Perhaps surprisingly, one of the main reasons is the depth of opportunity teachers have to understand the content that they are expected to teach in ways that help students learn. These findings are supported by Hill, Rowan and Ball (2005), in a long-term study that

showed teachers' 'mathematical knowledge for teaching' predicted student gains in mathematical achievement.

The International Association for the Evaluation of Educational Achievement (IEA) has commenced an international study of teacher education. ACER and Michigan State University are jointly managing the study and its focus is on the preparation of teachers of mathematics. The study is examining relationships between national teacher education policy, teacher education practices and the quality of teacher graduates across 20 countries. The study commenced in 2006 and will be completed in 2009.

In New Zealand, a research programme investigating factors related to the differences in the effectiveness of teacher education programmes could play a valuable role in the development of more valid accreditation standards. Such a programme would be a valuable way for a body like the New Zealand Teachers Council to exercise leadership, engage the profession, and enhance the quality of teacher education.

Methods for assessing teacher performance in relation to registration standards

The New Zealand Teachers Council might explore the feasibility and usefulness of a research project to develop methods for assessing teacher performance in relation to registration standards for entry to the profession. As this review has indicated, there is a clear trend to make a distinction between gaining a university qualification and gaining full entry to the profession. The preparation of a teacher is only just beginning at graduation. The rubber stamp days when registration was simply automatic on evidence of completion of a university programme in teacher education are ending. Induction programmes are recognised as very important in ensuring a successful transition into the profession and retention of good teachers. Registration increasingly means gaining a qualification *and* completing successfully an induction period, including a staged series of performance assessment tasks integrated with the normal work of a beginning teacher. These assessments are designed to promote professional collaboration and development toward meeting the entry performance standards.

Researchers are becoming increasingly confident that reliable and valid consideration might be given to a programme of research that will lead to the development of a range of standards-based performance assessments for the registration of beginning teachers. Generic 'shells' for assessment tasks might be developed that can be tailored to specific fields of teaching. Earlier sections in this report indicated some of the complexity involved in establishing valid performance standards systems for high stakes purposes such as registration, but, as Connecticut demonstrates, a policy focus on teacher quality pays off in the long term. Such projects should be conducted, of course, in full collaboration with education authorities and teacher organisations.

However, there is a clear message in the research literature arising from too many half-baked teacher evaluation schemes: Do not venture into this field of performance assessment unless there

is a clear possibility of doing it well – in ways that are professionally and publicly credible, legally defensible, and psychometrically rigorous.

Teacher educators will use these standards and assessments to enhance the quality of their teacher education programmes. Beginning teachers themselves will use the standards as a guide to their own learning and what they will be expected to know and be able to do before gaining entry to the profession.

Standards for professional recognition of highly accomplished teachers

An important function of the New Zealand Teachers Council is to provide professional leadership and encourage best practice in teaching. This is likely to involve the Teachers Council in developing processes for recognising the work of teachers of ‘advanced’ or ‘accomplished’ practice in order to give stronger incentives for teachers to provide evidence of their professional learning over time.

This report has identified two broad ‘routes’ taken by different jurisdictions to recognise the work of teachers who choose to pursue certification of advanced or accomplished practice: evidence-based performance assessments (e.g. NBPTS, United States) and the completion of university-type approved courses (e.g. the programme route for the Chartered Teacher, General Teaching Council of Scotland). If the Teachers Council were to consider taking on the task of developing an advanced certification system, it would be useful for it to undertake prior research comparing the effectiveness of these two approaches.

The main research question could be: Which certification system for teachers of advanced practice provides:

- the most valid indication of professional development and attainment of advanced standards of practice?
- the most effective means for engaging teachers in effective forms of professional learning?
- the greatest opportunities for professional ‘ownership’ of the standards and participation in the operation of the certification system?
- the most economical basis for operating the system?

Other research questions include:

- What purposes will the standards developed by the Teachers Council serve (e.g. quality assurance, professional learning for teachers)? How will the identified purposes influence the standards development processes? (There will be a need to clarify the purposes and the specific applications, e.g. standards for registration, standards for teachers of advanced practice.)
- How detailed and comprehensive will the standards need to be to meet their specific purposes (e.g. will they be subject/year-level-specific)?

- How can standards be developed and implemented in ways that best support professional learning?
- What will be the best consultation/validation processes for the development of standards? Who are the main stakeholders and how should the research community be involved?
- To what extent should standards development processes be linked to registration/certification assessment processes based on the standards?
- If the Teachers Council decides to develop standards-based assessment procedures, how does it intend to develop and trial assessments, and review their psychometric qualities?
- What role should schools and school principals play in determining a teacher's suitability to become full registered?
- What will be the relationship between assessment for registration/certification and performance management processes in schools?

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Council of Chief State School Officers (CCSSO) www.ccsso.org

Department of Education and Training, Victoria www.det.vic.gov.au

Department for Education and Skills (DfES) www.dfes.gov.uk

Department of Education and Training, Western Australia www.eddept.wa.gov.au

National Association of State Directors of Teacher Education (NASDTEC) www.nasdtec.org

National Council for the Accreditation of Teacher Education USA (NCATE) www.ncate.org

National Education Association (NEA) www.nea.org

Quality Assurance Agency for Higher Education (QAA) www.qaa.ac.uk

Training and Development Agency for Schools (TDA) www.tda.gov.uk

Annotated bibliography

Beyer, L. E. (2002). The politics of standards and the education of teachers. *Teaching Education*, 13(3), 305–316.

A number of industrialised countries around the world are in the process of creating new directions for education, focused on elementary and secondary schools and the preparation of teachers in universities. The current emphasis on national standards for P–12 teachers and university faculty in the United States and elsewhere must be challenged. Standards Based Teacher Education (SBTE) relies on a set of ideas and commitments that needs to be both understood and critiqued. The process of teaching in this system is based on a technical-rational approach to teaching, and largely ignores social, political, and philosophical understandings. The paper provides an analysis of SBTE and its shortcomings, as well as suggesting an alternative vision for the preparation of teachers.

Blandford, S. & Squire, L. M. (2000). An evaluation of the Teacher Training Agency Headteacher Leadership and Management Programme (HEADLAMP). *Educational Management and Administration*, 28(1), 21–33.

The Headteacher Leadership and Management Programme (HEADLAMP) was introduced by the Teacher Training Agency (TTA) in 1995, providing access to an open market of induction and management development opportunities for newly appointed headteachers who would each have an entitlement for the purchase of training within two years of their appointment. This paper reviews HEADLAMP provision from the headteachers' perspective based on a cohort study that investigated attitudes towards issues such as management of the programme, sources of needs assessment, role of local education authorities, funding and quality. Recommendations for the future development of HEADLAMP are offered.

Brundrett, M. (2000). The question of competence: The origins, strengths and inadequacies of a leadership training paradigm. *School Leadership and Management*, 20(3), 353–370.

During the 1990s the Teacher Training Agency showed its commitment to adopting elements of a 'competence' model of educational management training in the construction of the National Standards for Headteachers (TTA 1997, 1998). These same 'standards' have come to underpin the most ambitious programme of educational management training and development ever attempted in the United Kingdom. This article attempts to trace the origins of competence-based approaches to management training and suggests that the model, though having much to commend it, contains within it a variety of underlying and unresolved tensions.

Burgess, H. (2000). What future for initial teacher education? New curriculum and new directions. *Curriculum Journal*, 11(3), 405–418.

This article analyses aspects of the implementation of the National Curriculum for Initial Teacher Training (ITT). It focuses on the impact of the standards upon course design and structure and particularly the emphasis on the development of subject knowledge. The assessment of students in terms of subject knowledge and the standards for qualified teacher status (QTS) are explored alongside the development of partnership schools and mentoring programmes. The impact of external agencies such as Office for Standards in Education (OFSTED) and the Teacher Training Agency [now Training and Development Agency for Schools] is included in the discussion. Future implications for primary and secondary ITT programmes are considered.

Butcher, J. (2002). A case for mentor challenge? The problem of learning to teach post-16. *Mentoring and Tutoring: Partnership in Learning*, 10(3), 197–221.

This article investigates a tension in mentoring in secondary Initial Teacher Training (ITT) in England and Wales. Neither the ITT Standards nor the literature clarify which mentor strategies can be effective in the particular domain of the post-16 classroom. A case study was conducted on a sample of distance learning Postgraduate Certificate in Education (PGCE) students and their mentors as the former learned to teach post-16. Five research instruments were developed and used iteratively to generate qualitative data. This revealed that ITT mentoring is inconsistent in relation to post-16 teaching. The results illuminate the need for more effective models of post-16 mentoring in ITT, including the use of challenge alongside support. The conclusions have implications for mentors in secondary ITT, and will be a source of help for student teachers.

Campbell, J. & Husbands, C. (2000). On the reliability of OFSTED inspection of initial teacher training: a case study. *British Educational Research Journal*, 26(1), 39–49.

This article examines the technical reliability of inspection processes in initial teacher training, drawing extensively on methodology and procedures adopted by the Office for Standards in Education (OFSTED) between 1996 and 1998. A definition of reliability is advanced and tested against the procedures of inspection. The methodology of inspection is found to be insufficiently reliable for the consequences which flow from it. Tensions are explored between the technicist model of inspection underlying OFSTED initial teacher training procedures and the 'informed connoisseurship' model hitherto deployed by members of Her Majesty's Inspectorate. In consequence, there are unresolved tensions between the expressed aspiration for 'improvement through inspection' and the use of inspection to police compliance.

Chadbourne, R. (1999). Australian views on the American National Board standards for early childhood teachers. *Unicorn: Journal of the Australian College of Education*, 25(2), 37–96.

If recent attempts in Australia to introduce career structures and regular performance appraisals for teachers are to succeed, we need to develop standards of highly accomplished teaching. The Americans have spent millions of dollars over the past ten years doing this.

This paper reports what a group of Western Australian teachers thought about building on the United States standards for exemplary early childhood teaching. In principle, these teachers concluded that with some amendments the United States standards could be used productively in Australia. They have the power to make a major contribution in the areas of advocacy, professional affirmation, career development and professional development within the Australian early childhood teaching community. However, these teachers cautioned that, in practice, Australia needs to develop its own standards, even if the outcome might be quite similar to that in the United States.

Cope, P., Brice, A., et al. (2003). Grading the practice of teaching: An unholy union of compatibles. *Assessment of Evaluation in Higher Education*, 28(16), 673–685.

This paper reviews policy in the assessment of school experience and examines the practice of grading currently in place in Scotland and supported by the General Teaching Council for Scotland. It discusses the problems inherent in attempts to grade practice, notably the difficulty of controlling for contextual variation between different placements. It explores research in this area in order to see whether there is any evidence that such practices can be reliable or valid. It concludes that grading is unsustainable in the light of both the research evidence and the conceptual problems that underpin the assessment of school experience.

Davies, T. (2004, May). Changing schools of thought: Back to the future. *Research in Education*, (71), 9–25.

The United Kingdom Education Act 2002 furthers a sense of institutional fragmentation and scope for local enterprise. An emerging ‘decentralised’ agenda enables schools that demonstrably meet accountability criteria to opt out of National Curriculum requirements in order to pursue individual interests, supportive technologies and new partnership arrangements. The recognition of the demands of an information/learning society will necessitate different models of teaching and learning for differentiated consumers pursuing new patterns of employment. Information and communication technology is driving change in both curriculum content and the methodologies of teaching and learning. Image analysis and its relation to media literacy will challenge and stimulate creative networks in schools and the wider learning community.

Everton, T., Galton, M., et al. (2000). Teachers' perspectives on educational research: knowledge and context. *Journal of Education for Teaching*, 26(2), 167–183.

In recent years there has been considerable debate in the United Kingdom about the impact and value of educational research. At the same time, the Teacher Training Agency (TTA) [now Training and Development Agency for Schools, or TDA] has been keen to promote the idea of teaching as an evidence-based profession. This paper analyses the findings of a TTA questionnaire, designed to investigate teachers' views on research and the value they attributed to it. The findings point to the need for the concerns of teachers to be given greater weight when research agendas are set and funding allocated, but they also suggest that if research is to influence classroom practice, then it is vital that teachers are again

given extended opportunities for further professional study alongside those who are conducting research.

Fenstermacher, G. D. & Richardson, V. (2005). On making determinations of quality in teaching. *Teachers College Record*, 107(1), 186–213.

This article examines the notion of quality teaching, exploring its conceptual, empirical and normative properties. It begins by analysing the concept of teaching, separating it into its task sense (what teachers try to do) and its achievement sense (the student learning that teachers foster). The analysis suggests that any determination of quality in teaching must account for both the worthiness of the activity (good teaching) as well as the realisation of intended outcomes (successful teaching). Good teaching is not the same as successful teaching, nor does one logically entail the other. For teaching to be good and successful, it must be conjoined with factors well beyond the range of control of the classroom teacher. The analysis of the concept of teaching is then used to explore three programmes of research on teaching: process-product, cognitive science, and constructivist. The article concludes with an analysis of the policy implications of this explication of quality teaching.

Fleknoe, M. (2002). Measuring the impact of teacher professional development: Can it be done? *European Journal of Teacher Education*, 25(2/3), 119–135.

In England and Wales, Teacher Training Agency-funded professional development for teachers must be evaluated for its impact on pupils in schools. Further, it is the responsibility of the Higher Education Institution to provide evidence of impact. A case study illustrates the possibilities and difficulties of providing such evidence. The article concludes that, although this is a desirable development, ethically sound and politically correct, evaluation of impact is probably unrealistic for the majority of programmes. The evidence presented here was used by Leeds Metropolitan University in the recent inspection of its provision. The programme was rated at 'one' (the highest point) on a four-point scale for impact.

Galluzzo, G. R. (1999). Consensus and the knowledge base for teaching and teacher education. In J. D. Raths & A. McAninch (Eds), *What counts as knowledge in teacher education?* (pp. 69–84). Stamford, Connecticut: Ablex Publishing Corporation.

Gary Galluzzo contributes a history of how the National Council for Accreditation of Teacher Education has conceived of the 'knowledge base' of teaching. He concludes, in part, that there is little consensus today regarding a knowledge base. He asserts that development of knowledge to ground teacher preparation is a task that teacher education must meet, regardless of the philosophical stance of teacher educators.

Gibson, D. G. (1995). Managing probationer teachers: A case study approach. *Educational Review*, 47(3), 255–262.

This article focuses on the research findings of a case study undertaken in four Scottish primary schools to provide background information for the production of a teaching pack commissioned by the General Teaching Council (GTC). It looks at the transition from student teacher to probationer; the availability of experienced support; factors which the school should provide to probationers; and the adoption of a partnership model.

Gilroy, P. (2002). Controlling change: Teacher education in the UK. *Journal of Education for Teaching*, 28(3), 247–250.

This article explores how one of the three elements of a university education, the teacher education, has been reformed in Great Britain. It looks at the situation of teacher education; the creation of a series of alternative routes into teaching; the attempts to increase the attraction of the teaching profession; and ways to increase teacher supply.

Grossman, P. L. (1990). *The making of a teacher: Teacher knowledge and teacher education*. New York: Teachers College, Columbia University.

This book serves several purposes. The first purpose is to define and delineate more carefully the nature of pedagogical content knowledge for secondary English. The second and more central purpose is to investigate the relationship between this body of knowledge and the content of subject-specific teacher education coursework. The case studies of teachers can inform our understanding of the sources teachers draw upon in constructing their pedagogical content knowledge, as well as the specific contribution of subject-specific teacher preparation. Finally, the case studies of teachers who learn to teach without formal teacher education question the assumptions that subject matter knowledge can suffice as initial professional knowledge for teaching and that classroom experience by itself can serve as teacher education.

Haigh, M., & Tuck, B. (1999). *Assessing student teachers' performance in practicum*. Auckland, New Zealand: Auckland College of Education.

After completing a degree in relevant content areas prospective secondary school teachers in New Zealand typically enrol in a one-year diploma at a college of education. A critical component of that year is supervised teaching within selected secondary schools, under the guidance of an experienced teacher – an associate teacher. During each attachment a visiting lecturer for the college of education also observes the student teaching. This study examines the levels of agreement between the associate teacher and visiting lecturer's evaluations of 150 student teachers. The analyses examines correlations between the judge's holistic ratings of teaching competence and ratings of specific teaching competencies. Structural analyses of the rating instruments are reported and the implications of the results for assessment of practicum in pre-service teacher education programmes identified.

Hays, T., Gerber, R., et al. (1999). Mentorship: A review of the concept. *Unicorn: Journal of the Australian College of Education*, 25(2), 84–95.

This paper reviews the literature on mentor relationships and outlines how mentor relationships are significant for both the mentor and the protégé. The paper defines the concept of mentorship, discusses the process of mentoring and the benefits of the relationship for the mentor and the protégé, outlines the factors and functions facilitating good mentorships and presents different conceptual models of mentor relationships. Finally, the paper discusses the implications of fostering mentorship in education and outlines further research required in this field.

Heneman, H. G., & Milanowski, A. T. (2003). Continuing assessment of teacher reactions to a standards-based teacher evaluation system. *Journal of Personnel Evaluation in Education*, 17(2), 173–195.

Building on their evaluation of a field test, this paper provides a description and evaluation of the first two years of district-wide implementation of a standards-based teacher evaluation system in Cincinnati public schools. It describes the new system and changes that were made to it as a result of the pilot study. It then focuses on two substantive research issues - the inter-rater agreement of classroom observations and teacher reactions to the new system.

Hextall, I., & Mahony, P. (2000). Consultation and the management of consent: Standards for qualified teacher status. *British Educational Research Journal*, 26(3), 323–343.

Since its inception in 1994, the Teacher Training Agency has relied heavily upon the process of consultation as its preferred style of operation. In recent analyses of the state of democracy in England the quality of consultation has been used as one indicator of the democratic state of the nation. Against this background the paper presents findings from an in-depth study of the processes and procedures used to develop the Standards for the Award of Qualified Teacher Status, paying particular attention to the consultation exercise undertaken by the Teacher Training Agency in the spring of 1997. Findings raise issues that mirror those being expressed by others concerned about the state of democracy in England.

Hobson, A., Malderez A., et al. (2005). Teachers' experiences of initial teacher preparation, induction and early professional development in England – does route matter? *Journal of Education for Teaching*, 31(2), 133–136.

The 'Becoming a teacher' (BaT) project is tracking beginner teachers from a range of different routes into teaching, including university-administered, school-centred and employment-based initial teacher preparation (ITP) programmes, over a period of five academic years. It will explore teachers' experiences of ITP, induction and early professional development, and how these experiences may vary according to provider type and ITP route/programme. Data are being generated via a longitudinal survey of approximately 5,000 student teachers and via regular, in-depth interviews and electronic-mail exchanges with a subset of survey respondents.

Ingvarson, L. (1995). Professional credentials: Standards for primary and secondary science teaching in Australia. Melbourne: Faculty of Education, Monash University.

The purpose of this Australian Science Teachers Association (ASTA) project is to produce a discussion paper on professional standards and related issues. The discussion paper will establish a common information base for ASTA Council members so that ASTA's future involvement in the area can be planned. It is not intended that this discussion paper will include a set of professional standards for teachers of science.

Ingvarson, L. (1999). The power of professional recognition. *Unicorn: Journal of the Australian College of Education*, 25(2), 60–70.

This article presents a case study of one teacher undertaking professional certification with the United States National Board for Professional Teaching Standards (NBPTS). It describes what the teacher had to do for certification and illustrates how the certification process can be a powerful strategy for involving all teachers in high quality professional development that leads to improvements in student learning. The article argues that the introduction of a national certification system is a highly relevant strategy for tackling the crisis in the teaching profession identified in *A Class Act, the report of the Senate Inquiry into the Status of the Teaching Profession* (1998).

Ingvarson, L. (1999). Professional certification: do we need it? *Unicorn: Journal of the Australian College of Education*, 25(2), 5–12.

This article reviews the findings and outcomes of the Senate Employment, Education and Training References Committee report *A Class Act: Inquiry into the Status of the Teaching Profession*, considering issues in teacher certification and standards, and the need for a national professional body for teachers.

Jasman, A. M. (1999). Addressing teachers for career progression: The Level 3 classroom teacher in Western Australia. *Unicorn: Journal of the Australian College of Education*, 25(2), 13–23.

Educational and school reform agendas emphasise the importance of quality teaching for quality learning. The Education Department of Western Australia and the State School Teachers Union of Western Australia implemented a trial project in 1997 to establish a career path for classroom teachers that would recognise quality teaching. The assessment processes and two sets of standards developed within the Teacher Career Path project are described. The first standards provide the basis for selecting teachers to Level 3 status. The second involves the development of comprehensive professional competency-based standards to support teacher development. The further development of these standards is then discussed.

Kellor, E. M. (2005). Catching up with the Vaughn Express: six years of standards-based teacher evaluation and performance pay. *Education Policy Analysis Archives*, 13(7), 1–26.

Traditional methods of paying and evaluating teachers in the United States are longstanding, but discussions about changing these systems to support teacher quality and student achievement goals are becoming more common. Efforts to make significant changes to these programmes can be difficult and take many years to design, gain approval, and implement; thus, few examples of alternative teacher compensation and evaluation systems exist. The experience of a large urban charter school that designed and implemented an innovative teacher compensation system and standards-based teacher evaluation system that has been in place for six years offers important lessons in designing, implementing, evaluating and refining these systems.

Kirk, G. (2000). The General Teaching Council for England. *School Leadership and Management*, 20(2), 235–246.

This article describes the background to the establishment of a General Teaching Council for England. It summarises the legislation covering the aims, powers and composition of the GTC. It then compares provision in England with the established and more powerful GTC for Scotland. Finally it attempts to assess the extent to which the GTC, as the single voice of the profession, will strengthen its impact on educational policy.

Leask, M. (2004). Using research and evidence to improve teaching and learning in the training of professionals – an example from teacher training in England. *British Education Research Association Annual Conference*. University of Manchester.

In 2002, the Teacher Training Agency (TTA) made a decision to allocate resources to support four goals related to the improvement in quality of teacher training – the *codification* of the knowledge base, the *identification* and *recording* of good practice in the preparation of teachers and the *dissemination* of this good practice using web-based technology. A team within the TTA – the Effective Practices and Research Dissemination team (EPRD) – was established to work with providers of initial teacher training to establish and disseminate the evidence base for practice. Whilst this paper focuses on the strategy the EPRD team developed, the international and national context for the drive to achieve evidence-informed practice is common to other professional groups.

McAninch, A. (1993). *Teacher thinking and the case method: Theory and future directions*. New York & London: Teachers College Press.

The author argues that decisions about teacher preparation must be grounded in an understanding of how teachers learn, of what they see as the sources of teaching knowledge, and how their workplaces influence what and how they will continue to learn. An understanding of teachers' cognitive development is required to appreciate the likely effects of formal teacher education. A close look at teachers' classrooms is necessary to ground judgements about the aims of teacher preparation. Arguments for adapting case study methods to teacher preparation must be based in close attention to the special character of teachers and classrooms.

Murray, F. B. (2000). The role of accreditation reform in teacher education. *Educational Policy*, 14(1), 40–59.

There has been an undeniable erosion of the value and status of academic degrees in teacher education. The erosion has not been stemmed by traditional accreditation mechanisms that are based on mere consensus standard setting. It is argued that a new system of teacher education accreditation, based on evidence of student learning, valid assessment of student learning, and continuous programme improvement based on evidence, is more likely to stem the erosion than the current approach.

National Commission on Teaching and America's Future. (1996). *What matters most: Teaching for America's future*. NY: Author.

The report offers a blueprint for recruiting, preparing and supporting excellent teachers in all of America's schools. The plan is aimed at ensuring that all communities have teachers with the knowledge and skills they need to teach so that all children can learn, and all school systems are organised to support teachers in this work. The commission's proposals are systemic in scope - not a recipe for more short-lived pilots and demonstration projects. They require a dramatic departure from the status quo – one that creates a new infrastructure for professional learning and an accountability system that ensures attention to standards for educators as well as students at every level - national, state, local school district, school, and classroom.

Olson, L. (2005). Education schools use performance standards to improve. *Education Week*, 24(36), 1–4.

The article informs that policymakers often complain that teacher education programmes don't have to answer for the quality of their graduates. But over the past five years, as a result of new accreditation rules, hundreds of those institutions have been quietly revamping how they collect and use data about their students. The standards, which were phased in by the Washington-based National Council for Accreditation of Teacher Education starting in 2001, require education schools to provide evidence that their graduates can successfully teach. Institutions seeking accreditation must assess their students' performance regularly and use the results to refine and improve their programmes.

Reynolds, A. (1995). The knowledge base for beginning teachers: Education professionals' expectations versus research findings on learning to teach. *The Elementary School Journal*, 95(3), 199–222.

What should a newly licensed teacher know and be able to do? In this article, the findings from 5 studies undertaken by Educational Testing Service to elicit judgements from education professionals (teachers, teacher educators, state department officials) regarding this question are discussed. The studies detail teaching tasks and knowledge/skills in 4 domains (general principles of teaching and learning content, content-specific pedagogy, and enabling skills, e.g. reading and computational skills).

Reynolds, M. (1999). Standards for professional practice: The TTA and initial teacher training. *British Journal of Educational Studies*, 47(3), 247–261.

This article examines the implications of the change from competences to standards for initial teacher training in Great Britain. It looks at a comparison between Teacher Training Agency (TTA) and that Management Charter Initiative; standards and quality in education; and the TTA approach to professional practice.

Reynolds, M. (2001). Education for inclusion, teacher education and the Teacher Training Agency standards. *Journal of In-service Education*, 27(3), 465–476.

This article outlines the implications of education for inclusion in the United Kingdom, noting the complexities of providing inclusion in the school context, critically evaluating the

approach to teacher development espoused by the Teacher Training Agency (TTA), and highlighting inadequacies in this approach regarding inclusion and ramifications for the TTA stance toward faculty development.

Robson, D. & Pearson, M. (2004). *The standard for full registration: Evaluation of current practice in the teacher induction scheme in Scotland*. Paper presented at the British Educational Research Association Annual Conference, University of Manchester.

The Standard for Full Registration (SFR), published in June 2002, was the result of a joint project between the General Teaching Council for Scotland (GTCS) and the Scottish Executive Education Department (SEED). This paper presents the results of a detailed analysis of interim and final profiles submitted to the Council in academic sessions 2002–2003 and 2003–2004 focusing on the frequency, variation and nature of supporter meetings, observed sessions and CPD activities. The paper also outlines how the findings of the research analysis have been used to develop the guidance provided by the Council to enhance the support provided and the associated profile recording process.

Ruby, A. (1999). The Buntine oration. Difference is the essence of humanity. *Unicorn: Journal of the Australian College of Education*, 25(2), 71–83.

This oration outlined the impact of economic and cultural globalisation on East Asian nations and used this to build a case for education policies based on recognition of the important role education plays in developing social cohesion through tolerance and acceptance of difference. The author argues that curriculum practices need to reflect local and regional differences while at the same time operating within a context of a wider national agenda. Only by incorporating both the local and the global will education policy makers be able to ensure that students are given the support of their local communities and at the same time retain access to the wider economic and cultural opportunities created by globalisation.

Saunders, L. (2005). Editorial. *British Educational Research Journal*, 31(1), 3–7.

This article comments on the response given by Lesley Saunders, a member of the General Teaching Council for England to the editorial 'Interesting Times, and Interested Research' that was previously published in the *British Educational Research Journal*. It looks at the content of the editorial which run counter to the current education policy in Great Britain; questions whether the policy could really change in response to research evidence; and presents the issues raised by Saunders.

Sutton, A., Wortley, A., et al. (2000). Superteachers: from policy towards practice. *British Journal of Educational Studies*, 48(4), 413–429.

This article is concerned with the origins and evolution of the Advanced Skills Teacher (AST) initiative from its announcement in 1995 to the end of 1999. It examines the Government rationale and the contributions of the Department for Education and Employment (DfEE), the Teacher Training Agency (TTA) and the School Teachers' Review Body (STRB).

Tomlinson, J. (1995). Professional development and control: the role of General Teaching Councils. *Journal of Education for Teaching*, 21(1), 59–69.

The role of GTCs in professional development and control is discussed. There are three arguments in favour of a GTC: the importance of the ideal of a profession in the modern world; the need for the GTC as a focus and a publicly responsible body; and the very valuable nature of the GTC as a source of advice to policymakers on issues of preservice and in-service education and training. These propositions are considered, and an argument in favour of a degree of professional control over the education and training of teachers, as an essential part of a self-regulating profession that is open to public scrutiny of standards and procedures is developed.

Tomlinson, J. (1998). The importance of the General Teaching Council. *Teacher Development*, 2(1), 149–154.

The significance of General Teaching Councils (GTCs) for England and Wales in terms of the status and self-esteem of the teaching profession is considered. The necessary powers and duties and the constitution of Council are reviewed. It is argued that the British Government's consultation document, *Teaching: High Status, High Standards* (Department for Education and Employment, 1997), while raising the appropriate questions, contains no commitment to principle with regard to composition, powers, or relationships with other national agencies. Moreover, the Education Act will merely empower the Secretary of State to set up a GTC; all the detail will be contained in regulations subsequently.

Tymms, P. (2004). Are standards rising in English primary schools? *British Educational Research Journal*, 30(4), 477–495.

The officially reported impressive rises in standards in mathematics and English in primary schools since 1995 are challenged. The article looks at the increases from four different perspectives. First, the general pattern of change is considered. Secondly, the statutory test data are compared with the results from several different studies. Thirdly, the standard setting procedures are considered and mechanisms by which the observed patterns could have been produced are set out. Finally, parallels are drawn with the experience in Texas where an apparently remarkable set of data was shown to be largely illusory. A case is made for an independent body to be set up with the express and sole purpose of monitoring standards over time.

Wallace, J., Wildy, H., et al. (1999). Selecting teachers for advanced certification: the Western Australia level 3 experience. *Unicorn: Journal of the Australian College of Education*, 25(2), 24–36.

This paper examines issues related to the selection of teachers for advanced certification in the context of the Western Australian Level 3 Classroom Teacher scheme. The perceptions of Level 3 applicants and school leaders are used to highlight the difficulty of designing a process which is both procedurally rigorous and sensitive to the needs of individual teachers.

Appendix A: Approaches to standards and professional certification, NCATE

Name and description of Standards	The standards of the National Council for the Accreditation of Teacher Education (NCATE)
State/Country	United States of America
Name and type of responsible body	<p>NCATE's main role is to provide a voluntary, national assessment and accreditation service. Most states also have their own agencies or professional standards bodies responsible for approval of teacher education programmes. NCATE accreditation is usually voluntary, but some states mandate it.</p> <p>NCATE is a non-profit, non-governmental organisation. It is a coalition of more than 30 national associations (including the main teacher unions), representing the profession of education. Membership on its policy boards include representatives from organizations of (1) teacher educators, (2) teachers, (3) state and local policy makers, and (4) professional specialists.</p> <p>NCATE standards define 'graduating standards' for teachers in terms of what teachers who have newly graduated from those institutions can be expected to know and do. However, NCATE standards are used primarily to accredit programmes of colleges and universities that prepare teachers for work in schools and educational settings.</p> <p>An important part of NCATE's mission is to provide:</p> <p style="padding-left: 40px;">assurances to the public that the graduates of accredited institutions have acquired the knowledge, skills, and dispositions necessary to help all students learn. (NCATE, 2001, p. 1)</p> <p>NCATE also aims to provide leadership for reform in teacher education:</p> <p style="padding-left: 40px;">Through standards that focus on systematic assessment and performance based learning, NCATE encourages accredited institutions to engage in continuous improvement based on accurate and consistent data. By providing leadership in teacher education, NCATE ensures that accredited institutions remain current, relevant and productive, and that graduates of these institutions are able to have a positive impact on P-12 student learning. (NCATE, 2001, p. 1)</p>
Standards	<p>The NCATE standards are developed and articulated by groups of teaching practitioners under the aegis of the Standards Committee of the NCATE Unit Accreditation Board. The standards are revised every five years to ensure that they reflect research and state of the art educational practice.</p> <p>The 6 'core' NCATE standards are divided into two sections: 'candidate performance' (standards 1 and 2) and 'unit capacity' (standards 3-6). Each of the 6 standards contains three components:</p> <ol style="list-style-type: none"> 1. the language of the standard itself

	<p>2. rubrics that delineate the elements of each standards, and</p> <p>3. a descriptive explanation of the standards.</p>
Purpose	<p>The NCATE standards are designed primarily for the accreditation of colleges and departments of education, but they also define what is to be expected of newly graduated teachers. Of the 6 overarching standards, Standard 1 is the most explicit in this regard:</p> <p style="text-align: center;">Standard 1: Candidate Knowledge, Skills, and Dispositions</p> <p>Candidates preparing to work in schools as teachers or other professional school personnel know and demonstrate the content, pedagogical, and professional knowledge, skills, and dispositions necessary to help all students learn. Assessments indicate that candidates meet professional, state and institutional standards. (NCATE, 2001, p. 10)</p>
Professional learning	<p>The INTASC standards provide a basis for and are part of a standards based professional learning and assessment system which has different iterations and is operationalised in different contexts.</p>
Assessment and Certification	<p>Assessment of graduates' performance is integral to NCATE standards development and implementation. Unlike in the past, when institutions were accredited on the basis of the quality of the courses offered, now quality of teaching, as demonstrated by actual performance assessed against the standards, is a crucial factor when the decision to accredit a course is being made:</p> <p style="text-align: center;">NCATE 2000 aims to create a performance-based system <i>that takes into account graduates' performance in the accreditation decision</i> [emphasis added]. While continuing to examine what programmes do in the course of preparing teachers, the system will also use performance measures ranging from education schools' internal assessments of students, including portfolios, videotapes, and performance events of various kinds, to scores on performance-based state licensing examinations that are compatible with NCATE's standards (Darling- Hammond, 2000).</p> <p>In the past, it was sufficient to demonstrate that candidates had complete coursework which covered content stipulated under the various standards, but under the new NCATE/state guidelines programme completers must also demonstrate mastery of educational precepts in a P-12 educational setting...the performance of an institution's programme completers and graduates and the performance of its students' students will be expected to meet acceptable standards in the national accreditation and state approval processes. (Conn, 1999)</p>
Recognition and Incentives	<p>NCATE accreditation is voluntary. About 600 of the country's 1,300 education courses were accredited in 2001, and these produced more than two-thirds of America's teachers (Darling Hammond, 2001, p. 753). The main incentive for teacher education institutions to seek NCATE accreditation is that, among educators, NCATE is seen to provide guarantees of quality.</p>

Appendix B: Standards of professional practice for full registration, Victoria

Name and description of Standards	Standards of Professional Practice for Full Registration
State/Country	Victoria, Australia
Name and type of responsible body	<p>The Victorian Institute of Teaching</p> <p>Before the establishment of the Victorian Institute of Teaching in 2001, teachers in the state of Victoria, Australia, were deemed to be ‘qualified’ to teach on the basis of completion of an approved course of teacher education. The brief of the first Teacher Registration Board (TRB), which was set up in the 1970s, was to monitor the qualifications of applicants for teaching positions and to maintain a ‘register’ of qualified teachers. The TRB was disbanded in 1992. Nearly 10 years later it was replaced by the Victorian Institute of Teaching (VIT), which was conceived as a professional body with legislated responsibility to provide more stringent assurances of teacher quality to the public and the profession.</p>
Standards	<p>The standards were developed for teachers who, after at least one year of provisional registration with the VIT are ready to apply for full registration</p> <p>The VIT developed the standards in consultation with teachers and other stakeholders. Consultation was part of a pilot learning and assessment project, carried out in 2003, during which 200 provisionally registered teachers trialled a portfolio assessment process in tandem with processes for refining the (then) draft standards. The standards were continually discussed and revised at meetings of teachers, mentors and principals who were working with them in the learning and assessment project. If a standard did not seem to be ‘working’, it was changed. The standards thus met some tough tests as they were actually developed in tandem with the assessment and professional learning experiences that formed the major part of the project.</p> <p>The standards comprise a ‘Statement of Principle’ and eight standards grouped under three themes: ‘Professional Knowledge’, ‘Professional Practice’, and ‘Professional Engagement’. Each of the eight standards is further articulated in four ‘characteristics’.</p>
Purpose	The awarding of full registration with the Victorian Institute of Teaching to qualified applicants who have completed at least one year as a provisionally registered teacher.
Professional learning	<p>Applicants complete a portfolio which supplies evidence of meeting the standards for full registration in response to three ‘tasks’</p> <ul style="list-style-type: none"> • The Analysis of Teaching and Learning task • The Collegiate Classroom Activities task (classroom observations) • The Professional Activities task. <p>They undertake the tasks with the help of a mentor/colleague from their school.</p>

	<p>The applicants for full registration ('Provisionally Registered Teachers') their principals and mentors attend training sessions conducted by the VIT several times during the year.</p> <p>The VIT has produced extensive print and electronic resource materials to support the processes in schools.</p>
Assessment and Certification	<p>Formative assessment is provided by the mentor and, in some cases, principals or other senior teachers, throughout the provisional registration period.</p> <p>At the conclusion of this period, the applicant presents his/her portfolio to a school based panel which is convened and chaired by the school principal. The panel considers the evidence and makes a recommendation to the VIT about the applicants' eligibility to be awarded full registration.</p>
Recognition and Incentives	<p>Successful applicants are awarded full registration with the VIT. All teachers who teach in schools in Victoria must be registered with the Institute.</p>

Appendix C: Approaches to standards and professional certification, INTASC

Name and description of Standards	Standards of the Interstate New Teacher Assessment and Support Consortium (INTASC)
Country	United States of America
Name and type of responsible body	The Interstate New Teacher Assessment and Support Consortium (INTASC) is a project of the Council of Chief School Officers (CCSO). The consortium includes state education agencies and national organisations involved in the preparation, licensing and on-going professional development of teachers. It has no direct authority over these arrangements, but exercises considerable influence.
Standards	<p>In 1992, INTASC developed the <i>Model Standards for Beginning Teacher Licensing and Development: A resource for State Dialogue</i> (INTASC 1992). The 10 ‘model core principles’ that are set out in this document reflect agreed values and a learner centred view of teaching that cuts across content areas and grade levels.</p> <p>In subsequent years, various committees and associations of practising teachers, teacher educators, and school and state agency staff translated the core standards into model licensing standards in individual subject/stage of schooling areas, e.g. mathematics, language arts and foreign languages. These processes continue today.</p> <p>It is important to remember that the INTASC standards for teachers are closely linked with recognised subject and grade level Standards Frameworks for student performance.</p> <p>The 10 core INTASC standards were incorporated into a revision of the NCATE standards in 1994. They are also aligned with those of the National Board for Professional Teaching Standards (NBPTS). This alignment is underpinned by a common approach to assessment:</p>
Purpose	<p>INTASC endeavours to provide a national focus and alignment of standards for licensing teachers in the United States. Its mission is to provide a forum for its member states to liaise and collaborate in the development of:</p> <ul style="list-style-type: none"> • compatible educational policy on teaching among the states • new accountability requirements for teacher preparation programmes • new techniques to assess the performance of teachers for licensing • new programmes to enhance the professional development of teachers.
Professional learning	The INTASC standards provide a basis for and are part of a standards-based professional learning and assessment system which has different iterations and is operationalised in different contexts. (See PADP example below).

Assessment and Certification	<p>INTASC establishes subcommittees to translate the core principles into standards and performance-based assessments across the curriculum, e.g. the mathematics subcommittee, consisting of highly regarded teachers of mathematics, teacher educators and researchers from across the country, translated the ten core principles into "Standards for Beginning Teachers of Mathematics".</p> <p>Using the <i>Model Standards for Beginning Mathematics Teacher Licensing and Development: A Resource for State Dialogue</i> (INTASC, 1995) as a framework, the three-year Performance Assessment Development Project, (PADP), a subset of ten states, created and field tested a complete performance-based professional learning and assessment system for beginning mathematics teachers. The product of this work includes: <i>The Mathematics Performance Assessment Handbook</i> (INTASC, 1996), which guides beginning teachers in completing the portfolio assessment and provides specific procedures for assessing portfolios, training materials for preparing portfolio evaluators, and beginning validity and reliability data:</p>
Recognition and Incentives	<p>The INTASC standards are used grant full licensure to teachers in many states of the USA. Some states require that candidates complete the INTASC content-specific portfolio assessments. These are regarded as a powerful form of professional learning for teachers.</p>

Appendix D: Approaches to standards and professional certification for accomplished teachers, USA

Name and description of standards	National Board for Professional Teaching Standards (NBPTS) Certified Teacher
Country	United States of America
Name and type of responsible body	National Board for Professional Teaching Standards (NBPTS)
Standards	<p>The NBPTS sets standards in more than 30 fields. Most of these fields are defined by two dimensions: the developmental level of the students and the subject or subjects taught.</p> <p>The first dimension encompasses:</p> <ul style="list-style-type: none"> • early childhood, ages 3-8 • middle childhood, ages 7-12 • early adolescence, ages 11-15 • adolescence and young adulthood, ages 14-18+. <p>The second dimension highlights the substantive focus of a teacher's practice, allowing most teachers to select either a subject-specific or a generalist certificate.</p> <p>There is also a third dimension for teachers of children with special needs and teachers of children for whom English is a new language.</p> <p>All sets of standards are based upon five common core principles:</p> <ul style="list-style-type: none"> • Teachers are committed to students and their learning. • Teachers know the subjects they teach and how to teach those subjects to children. • Teachers are responsible for managing and monitoring student learning. • Teachers think systematically about their practice and learn from experience. • Teachers are members of learning communities. <p>Standards are set by standards committees. A standards committee, generally made up of 15 members who are exemplary practitioners in their field, is established for each certificate field.</p>
Providers of professional learning	The NBPTS is not a provider of professional learning. Various teacher education institutions across the USA offer courses and support for teachers who are attempting to gain Board Certification, but taking courses is not part of the certification processes.

<p>Assessment and Certification</p>	<p>Assessment processes emphasise performance-based assessment methods that are fair, valid and reliable. Assessment Development Laboratories (ADLs), working with standards committee members, develop assessment exercises and pilot test them with small groups of teachers. The assessment process is structured around two key activities: (1) the compilation of a teacher's portfolio of practice during the course of a school year, and (2) participation in one-day of assessment centre activities.</p> <p>The assessment centre exercises are designed to complement the portfolio, validate that the knowledge and skills exhibited in the portfolio are, accurate reflections of what candidates know and can do, and give candidates an opportunity to demonstrate other knowledge and skills.</p> <p>Assessors are mainly accomplished teachers, most of whom have Board Certification.</p>
<p>Recognition and Incentives</p>	<p>Many employers of teachers across the USA who recognise the value of NBPTS certification contribute to the cost of teachers' completing the Certificate. They also provide substantial salary bonuses for Board Certified teachers.</p> <p>Many teachers report that they have gained substantial professional satisfaction and a sense of enhanced professional efficacy from their experience of undertaking NBPTS certification.</p>

Appendix E: Approaches to standards and professional certification for accomplished teachers, Scotland

Name and description of Award	The Chartered Teacher Award provides recognition of the work of accomplished teachers in Scotland
Country	Scotland
Name and type of responsible body	<p>General Teaching Council for Scotland (GTCS)</p> <p>The GTCS is responsible for:</p> <ul style="list-style-type: none"> • Accrediting and recommending for approval by Scottish Ministers all programmes leading to the award of Chartered Teacher • Liaising with providers to verify results of modules • Liaising with employers to confirm relevant eligibility criteria • Informing employers of progress of teachers in terms of the number of modules completed to enable employers to deal with salary increments • Liaising with teachers as they progress through their programme • Conferring the professional award of Chartered Teacher.
Standards	<p>The standards are for experienced teachers who choose to undertake the professional learning necessary for the Award of Chartered Teacher</p> <p>Any teacher may undertake the Chartered Teacher programme, provided he/she has:</p> <ul style="list-style-type: none"> • full registration with the GTC for Scotland • reached the top of the main grade salary scale • maintained a Continuing Professional Development (CPD) portfolio. <p>A CPD portfolio should contain:</p> <ul style="list-style-type: none"> • a record of the CPD activities the teacher has been involved in over the last few years • evidence of how these activities have impacted on the teacher's work with pupils and colleagues • evidence of their own learning. <p>The Award for Chartered Teacher was developed by the GTCS in consultation with teachers and other stakeholders.</p> <p>The Standard for Chartered Teacher has four key components:</p> <ol style="list-style-type: none"> 1. professional values and personal commitments 2. professional knowledge and understanding 3. professional and personal attributes 4. professional action. <p>Components 1-3 are further articulated, with up to seven elements in each.</p> <p>The standards also include 'illustrative examples' under the headings of:</p> <ul style="list-style-type: none"> • Effectiveness in Promoting Learning in the Classroom • Critical Self-evaluation and Development

	<ul style="list-style-type: none"> • Collaboration with, and influence on, Colleagues • Educational and Social Values
Purpose	Professional recognition and reward through the Chartered Teacher Award
Levels/pathways	There are two 'routes': the programme route and the accreditation route. (See below under 'Assessment and Certification'.)
Providers of professional learning	<p>A wide range of providers offer the necessary professional learning opportunities for the chartered teacher programme. They include local education authorities, further and higher education institutions, private providers, and consultants. All programmes that lead to the award of chartered teacher must be delivered through a 'partnership' of providers. The partners have collective responsibility for the quality of the participants' experiences and each partner has particular priorities and responsibilities.</p> <p>Higher education institutions are responsible for the validation of modules and programmes and, where appropriate, the awarding of the academic qualification. Local education authorities and schools play partnership roles of various kinds in developing teachers and protecting the needs of pupils. Further Education Institutions and private providers/consultants provide opportunities for the enhancement of teachers' professional knowledge, skills and understanding.</p> <p>All providers must:</p> <ul style="list-style-type: none"> • ensure all modules/programmes have been submitted to the GTC for Scotland for accreditation and approval • be registered with the National Register of CPD providers • notify the GTC for Scotland that participants have satisfactorily fulfilled the requirement for a module. The module will only be credited to the teacher's record when the result has been formally approved by the provider's Board of Examiners.
Assessment and Certification	<p>There are two routes for achieving the Standard for Chartered Teacher: the programme route and the accreditation route.</p> <p>All teachers (for both routes) complete Module 1 'Self evaluation' using guidelines developed by the GTCS. This is assessed by their chosen provider, using criteria developed on the basis of the standard. This module must be satisfactorily completed before the candidate proceeds further</p> <p>Teachers who choose the programme route then complete:</p> <ul style="list-style-type: none"> • three further core modules • four option modules • one four-module or two two-module work-based projects. <p>These are all assessed by the providers. (Candidates may choose one or several providers).</p> <p>The accreditation route</p> <p>In addition to Module 1 candidates who choose the accreditation route are required to submit a 10 000 word portfolio and commentary showing how they have achieved and maintained the Standard For Chartered Teacher. Requirements for evidence are broad –teachers may choose to write about such things as developing an anti-bullying policy, setting up an art exhibition or designing new teaching strategies.</p> <p>The process for preparing the portfolio is supported at a local level. Further guidance and assistance is to be found on the GTCS website.</p> <p>Assessors</p> <p>The assessment of the submission is by an independent, national panel of assessors, approved by the GTCS.</p>

		Recognition of Prior Learning is given in both routes
Recognition and Incentives	and	<p>Chartered teachers receive a salary increase of up to £7000 per annum. Applicants who complete the programme using the programme route are awarded a masters degree by their provider.</p> <p>Applicants who complete the programme using the accreditation route receive the Professional Award of Chartered Teacher from the General Teaching Council of Scotland.</p> <p>Applicants are expected to cover most of the costs of undertaking the modules. This can range from £6,000 (accreditation route) to £12,000 (programme route).</p> <p>108 teachers have attained chartered teacher status so far. Evidence (mainly anecdotal at this stage) suggests that teachers are not happy about meeting the associated costs. They also say that they find the associated workload heavy. The GTCS sees such reactions as part of a 'culture change'. It will continue to gather evidence about teachers' perceptions of the processes and about the efficacy of chartered teachers in schools.</p>

Appendix F: Summary of examples of standards discussed in the report

GRADUATING STANDARDS AND STANDARDS FOR ACCREDITATION OF TEACHER EDUCATION COURSES				
Standards	Developed by:	Purpose	Assessment	Recognition and incentives
Standards and requirements for Quality Teacher Status (UK) The Standards are outcome statements that describe what a trainee teacher should be able to do in order to achieve QTS	The Teacher Training Agency (TTA).	Award of Quality Teacher Status (QTS).	Assessment against the standards is a matter of skilled professional judgement made at different times in different contexts, by many different people – school based tutors, class teachers, higher education tutors and the trainees themselves.	Award of QTS.
The Standard for Initial Teacher Education (Scotland)	Standing Quality Teacher Education in Scotland. Committee on Assurance in Education	Intended to operate as a quality assurance mechanism, and as an instrument to approve teacher education programmes. It also describes a ‘graduating standard’ for new teachers.	Those who design and deliver teacher education programmes are expected to take decisions on assessment in relation to the Standard.	Achievement of the Standard.

<p>The Standards of the National Council for the Accreditation of Teacher Education (NCATE) (USA)</p>	<p>The National Council for the Accreditation of Teacher Education (NCATE) (USA).</p>	<p>NCATE standards are used primarily to Provide voluntary accreditation of programmes of colleges and universities that prepare teachers for work in schools and educational settings. They also define 'graduating' standards for teachers in terms of what teachers who have newly graduated from those institutions can be expected to know and be able to do.</p>	<p>Performance based assessments as an integral part of NCATE standards development and implementation.</p>	<p>NCATE accreditation of teacher education programmes. (Considered to be a guarantee of quality).</p>
<p>STANDARDS FOR FULL TEACHER REGISTRATION</p>				
<p>The Satisfactory Teacher Dimensions (New Zealand)</p>	<p>Developed by These standards were developed originally by the New Zealand Teacher Registration Board, the precursor of the New Zealand Teachers Council.</p>	<p>Purpose Criteria for the award of full registration and renewal of registration.</p>	<p>Assessment The assessment process for moving from provisional to full registration is part of the school based performance management system.</p>	<p>Recognition and incentives Full teacher registration.</p>
<p>The Standards of Professional Practice for Full Registration (Victoria Australia)</p>	<p>The Victorian Institute of Teaching.</p>	<p>Standards for full teacher registration.</p>	<p>Formative and summative portfolio based assessment carried out at the school level.</p>	<p>Full teacher registration.</p>

Standards of the Interstate New Teacher and Assessment Consortium (INTASC) (USA)	Various committees and associations of practising teachers translate the 10 'core' INTASC standards into model licensing standards in individual subject/year level/specialist areas.	To provide a national focus and alignment of standards for licensing teachers in the USA.	Core principles are translated into standards and performance based assessments across the curriculum.	State licensing of teachers.
STANDARDS FOR EXPERIENCED TEACHERS				
Standards	Developed by	Purpose	Assessment	Recognition and incentives
Competency Framework for Teachers (Western Australia)	The Department of Education and Training Western Australia.	Use as a 'tool' for classroom teachers to: <ul style="list-style-type: none"> • reflect on their professional effectiveness • determine and prioritise areas for professional growth • identify professional learning opportunities • assist their personal and career development planning. 	No formally specified processes.	Professional learning.
Professional Standards for Teachers (2 nd and 3 rd level of a four level framework (Victoria, Australia).	Department of Education and Training Victoria.	Professional learning and performance appraisal.	School based Annual Review processes.	Professional learning linked to satisfactory performance and salary maintenance.
Phase 1 Competency Standards for Early Childhood Teachers	The Department of Education and Training Western Australia.	Use as a 'tool' for early childhood teachers to: <ul style="list-style-type: none"> • reflect on their 	No formally specified processes.	Professional learning.

		<ul style="list-style-type: none"> professional effectiveness and determine areas for professional growth identify professional learning opportunities and assist their personal and career development planning. 			
STANDARDS FOR 'ADVANCED' TEACHING PRACTICE					
Standards	Developed by	Purpose	Assessment	Recognition and incentives	
Subject specific standards developed by subject associations in English and Mathematics (Australia)	The Australian Association for the Teaching of English (AATE), the Australian Literacy Educators Association (ALEA), and the Australian Association of Mathematics Teachers (AAMT) in collaboration with Monash University.	Professional learning and (future) professional certification of accomplished teachers.	Portfolio assessment processes have been developed for The Science and Mathematics standards.	Professional recognition of accomplishment.	
Standards for The Level 3 Classroom Teacher status (Western Australia)	Department of Education Western Australia (DEWA).	Recognition of accomplished teaching and award of Level 3 classroom teacher status.	Portfolio and 'Reflective Review' with peer assessment processes external to the school.	Professional recognition of accomplishment. Award of Level 3 status and salary increase.	
Standards of the National Board for Professional Teaching Standards (NBPTS) (USA)	The National Board for Professional Teaching Standards (NBPTS).	NBPTS recognition and certification of accomplished teaching.	Portfolio and Assessment Centre activities in more than 30 fields. Peer assessment external to the school.	Professional recognition of accomplishment. Most states offer incentives – e.g. salary increases.	

The NBPTS Early Childhood/Generalist Certificate	The National Board for Professional Teaching Standards (NBPTS).	NBPTS recognition and certification of accomplished teaching in early childhood.	Portfolio and Assessment activities in the Early Childhood/Generalist field. Peer assessment external to the school.	Professional recognition of accomplishment as an Early Childhood/Generalist teacher. Most states offer incentives – e.g. salary increases.
The Threshold Classification	Department for Education and Science (DFES) UK.	Recognition and salary increase for teachers who have reached the top of the incremental salary scale.	School based assessment plus an external verification of the assessment.	Salary increase.
The Standard for the Chartered Teacher Award (Scotland)	The General Teaching Council for Scotland (GTCS).	Recognition and reward of the work of accomplished teachers in Scotland.	<i>Programme route</i> : assessment based on completion of approved courses. <i>Accreditation route</i> based mainly on a portfolio assessment.	Award of Chartered Teacher and substantial salary increase.