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INTERNATIONAL APPROACHES TO TEACHER SELECTION AND RECRUITMENT
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1. INTRODUCTION

This report presents the findings of our review of the evidence base on comparative practices of teacher selection and recruitment, specifically on the different mechanisms countries use to assess teacher readiness to take up teaching posts, with particular emphasis on testing or examinations.¹ It is intended that the report will be helpful to countries or states that are looking to review their existing methods of recruiting and selecting teachers, and to those who are advising them.

1.1. The nature and scope of the review

The review was conducted between February and August 2009. It began with searches of relevant databases, including the *Educational Resources Information Centre* (ERIC), the *British Education Index* (BEI) and *Google Scholar*, in addition to selective internet searches. The review was confined to literature published in or translated into English, while literature which was research-based and published during the last ten years was prioritized. Following an examination of the titles and (where available) abstracts of literature identified by our searches, the full texts of all potentially relevant material were retrieved. All such texts were subsequently screened by a member of the research team in order to assess their relevance to the study. Where their relevance was confirmed, the content of these sources was examined in detail as part of the review and analysis process leading to the production of this report.

1.2 The structure and content of the report

The main focus of this report is on mechanisms and processes designed to assess the readiness or competence (to take up a teaching post or to remain in the profession) of newly qualified teachers (NQTs), by which we mean those who have recently completed (or are about to complete) a programme of initial teacher preparation (ITP).² Nevertheless, we also address – and some of the discussion applies to – a number of related issues, such as: (i) means of ensuring that the quality of the pool of would-be teachers from which countries are selecting (or whose competence they are assessing) is as high as possible; and (ii) means of assessing the competence of those who have been teaching for a longer period but who were not originally ‘trained’ to the current standards and/or who do not hold permanent posts.

¹ In the field of education, the terms ‘test’ and ‘examination’ are often used interchangeably and – consistent with this – are often defined in similar ways. For example, examination has been defined as ‘*a set of questions or exercises testing knowledge or skill*’, and test as ‘*a set of questions or problems designed to test a specific skill or knowledge*’ (<http://www.thefreedictionary.com>). The term ‘examination’ may in fact be used in a narrow sense, whereby an individual performs in an examination ‘under test conditions’, e.g. working alone, under time constraints, and supervised to ensure that the candidate and no-one else is carrying out the work; or in a broader sense, when the exercises designed to test the candidate’s knowledge and/or skill do not meet these ‘test’ conditions, and where they might include, for example, essays and dissertations carried out in the candidate’s own time. In this report we use the term ‘examination’ in its narrow sense, and the term ‘assignments’ to refer to exercises such as essays and dissertations which are not produced under ‘test conditions’.

² We use the term *initial teacher preparation (ITP)* to refer to what is variously described as initial teacher training (ITT), initial teacher education (ITE), initial teacher education and training (ITET) and pre-service training or education. Whilst our preference for the use of ITP has been explained elsewhere (Hobson *et al.* 2008), in this report we use the various terms interchangeably, for reasons of style. We also use the terms ‘student teacher’, ‘trainee’ and ‘trainee teacher’ interchangeably to refer to those undertaking ITP programmes.

The literature shows that in different countries, prospective entrants to (and in some cases existing members of) the teaching profession are subject to a variety of systems designed to assess their readiness or competence to enter (or remain in) the profession as fully fledged teachers. These systems may be differentiated according to:

- *when* the assessment takes place; and
- *how* it takes place or *what methods* are employed to gauge teachers' (or would-be teachers') competence.

In Section 2 below we address the 'when' question as it applies to the screening, certification and licensing of would-be and beginning teachers; while in Section 3 we address the 'how' question and provide an overview of the main methods employed in different countries to assess teachers' competence or readiness to teach. In Section 4 we examine more fully one such method (or related set of methods) by reviewing research evidence both in favour and against the use of different approaches to teacher testing. Finally, in Section 5 we conclude the report by summarising the main outcomes of our review of literature and by making a number of recommendations to those countries looking to review their existing methods of assessing teachers' competence to teach, and to the bodies charged with the task of advising them.

2. SCREENING, CERTIFICATION AND LICENSURE: *WHEN TO ASSESS COMPETENCE FOR TEACHING*

As many authors (e.g. Mahony and Hextall 2001) point out, different countries and different authors tend use different terms to refer to the same concept, and to use the same terms to refer to different concepts. In this report, for reasons of consistency, we use the term *certification* to refer to the process that confirms the satisfactory completion of an initial teacher preparation (ITP) programme, and *licensure (or licensing)* for the quasi-legal process that confirms the suitability of the candidate to teach. Using these terms in this way means that we occasionally deviate from the language used by some of the authors of the texts that we cite in this report. While teacher licensing normally occurs post-certification, namely to confirm, at a later date, the suitability to teach of recently ‘qualified’ (and sometimes more experienced) teachers, it should be noted that in some countries and states certification and licensure are one and the same process, that these dual functions are, in effect, amalgamated.³

We discuss certification and licensure a little more fully in Sections 2.2 and 2.3 below. First though, in Section 2.1, we acknowledge that the selection (or screening) of teacher candidates begins (or, according to some studies, ought fruitfully to begin) at a much earlier point in time.

2.1 Screening candidates for entry to ITP

Barber and Mourshed’s (2007) study of the world’s best-performing school systems (the McKinsey Report) found that these do not simply employ rigorous and effective selection procedures at the certification and licensure stages; they also begin the process of seeking to ensure the selection and recruitment of the potentially most effective teachers at an earlier stage, through restricting entry to ITP while at the same time attempting to ensure that the pool of candidates for ITP is as large and strong as possible. The report thus notes that ‘*The top performing systems we studied recruit their teachers from the top third of each cohort graduat[ing] from their school system*’ (Barber and Mourshed (2007) (p.16).⁴ Claiming that their ‘*benchmarking suggests that the same broad policies are effective in different school systems irrespective of the cultural context in which they are applied*’ (p.16), the authors state that:

³ In other cases, certification and licensure can amount to little more than documentation or verification of the beginner teacher’s level of knowledge of the subject(s) to be taught. In some countries (e.g. in central and south Asia) the study of a particular subject, such as English or Science, to a certain (normally undergraduate degree) level may be all that is required, in terms of formal qualifications, for someone to be eligible to teach it – it is not necessary for them to undertake an additional programme of initial teacher preparation. Where this approach exists, it tends to reflect a prevailing or dominant view in those countries that what people need to know in order to become teachers (or even to become effective teachers) is principally subject or content knowledge; the study of pedagogy (for example) may be viewed as relatively unimportant. It should be noted that none of the world’s top-performing school systems follow this approach. Barber and Mourshed (2007) note that amongst the countries they examined in order to discover ‘*how the world’s best-performing school systems come out on top*’, including the world’s top ten best-performing systems as measured by OECD’s Programme for International Student Assessment (PISA) as well as systems they studied which were making rapid progress, in every case teachers began their careers with a period of ITP, normally comprising ‘*either a three- or four-year undergraduate program, or a one-year postgraduate program following an undergraduate degree in a subject other than education*’ (Barber and Mourshed 2007: 18).

⁴ A broader discussion of methods of seeking to make teaching an attractive career choice, and of recruiting, selecting and employing teachers, can be found in McKenzie and Santiago (2005: Chapters 3 and 5, respectively).

Almost universally, the top school systems do two things: they have developed effective mechanisms for selecting teachers for teacher training, and they pay good starting compensation. These two things have a clear and demonstrable impact on the quality of people who become teachers. These same features are frequently absent in lower-performing systems. (Barber and Mourshed 2007: 17)

The same study found that the most effective mechanisms for selecting candidates for ITP ‘acknowledge that for a person to become an effective teacher they need to possess a certain set of characteristics that can be identified before they enter teaching: a high overall level of literacy and numeracy, strong interpersonal and communications skills, a willingness to learn, and the motivation to teach’ (Barber and Mourshed 2007: 17).⁵

Failure to control entry into ITP is said to have a detrimental effect on teacher quality because (for example) it tends to lead to an oversupply of candidates, resulting in a situation whereby some ITP graduates are unable to secure teaching posts. This, in turn, makes ITP less appealing to potential new recruits. Making ITP more selective is considered to make teaching more attractive to high performers. Ladd (2007) thus notes that:

Too great a supply ... is not necessarily a blessing. Some countries with teacher surpluses find it hard to ensure that talented people choose to enter teaching. And surveys find that school principals in countries with a teacher surplus worry more about teacher morale and enthusiasm than do those in countries without such a surplus. (p.205)

Some research has identified the admissions (notably interview) process as a key area where those who may have unrealistic expectations or a lack of commitment to ITP or teaching could with benefit be discouraged from entering the profession (Ashby *et al.* 2008).

However stringent the selection approach, though, it seems that some candidates may later effectively deselect themselves by deciding to withdraw from the training process. Ross and Hutchings (2003: 37) cite statistics showing that only around 82 per cent of entrants to ITP in England tend to complete their courses, and suggest conflicting explanations for this:

*Studies of withdrawal indicate that students are most likely to withdraw during or immediately after teaching practice, and that the main reasons given by the students were a mismatch between expectations and reality, especially in relation to workload; perceived lack of support; financial problems; and perceptions of low teacher morale. Tutors felt that students’ inability to cope with teaching lay at the heart of most withdrawals, especially lack of confidence, and unwillingness to discipline a class, and an inability to prepare lessons (Ross and Hutchings 2003: 37-38, cf. Hobson *et al.* 2009a).*

Chambers and Roper (2002) argue that the frequent use in this respect of the term ‘wastage’ is possibly misleading, and that an ITP course in itself could be seen as a test of suitability for teaching as a profession.

⁵ The specific methods of selecting candidates for ITP are addressed in Section 3.1 below.

In addition to this voluntary wastage, some countries, such as France, employ a system of competitive screening *during the ITP course*, in order to determine which candidates are allowed to continue with their training. This is one method of controlling the number of candidates with access to public employment as a teacher; and it might be considered preferable to overly stringent screening procedures employed at the entry-to-ITP stage, since those undertaking the screening are likely to have more evidence of trainees' potential to be effective teachers part-way through ITP than at the entry-to-ITP stage. On the other hand, reducing the pool of prospective teachers at the earlier stage might be more cost effective, and would also avoid the cost in human terms to rejected candidates who have committed time and resources to their training.

2.2 Certification related to the completion of an ITP course

As indicated above, certification normally takes place at the end of a course of initial teacher preparation (though unusually in France the mid-course screening test also serves to certify candidates).⁶ The basic purpose of certification is to proclaim the candidate's successful or satisfactory completion of ITP (according to the training provider), and accordingly it is usually defined in terms of mastery of course content. This '*long-standing model of teacher entry to the profession*' is '*still the most widespread in existence*' (Larsen *et al.* 2005: 13). In those countries which distinguish ITP as different from, and more than, knowledge of the subject to be taught, but view successful completion of an ITP programme as a sufficient measure of an individual's capability and competency to begin a teaching career, such certification may serve in itself as a licence to teach.⁷ By contrast, a range of 'certification plus licensure' models is now more prevalent in the English-speaking world.⁸

In some countries (e.g. the USA) there are no systematic national or even state databases on the content of teacher preparation programmes, and/or no central information source on the various requirements of schools of education. It is clear, though, that '*there is considerable variation in the content of purportedly similar courses and experiences*' (Boyd *et al.* 2007: 47). Even '*the content knowledge that constitutes a major [subject] or that must be demonstrated on certification varies widely*' (*ibid.*: 48).

The validity of certification gained on completion of a would-be teacher's ITP, as a means of assessing their capability or 'readiness' for teaching, depends partly on the quality of the institution and/or the relevant course of teacher preparation, though the quality of ITP may also vary *within* particular programmes, relating (for example) to the expertise of particular subject specialists or (where programmes have them) school-based mentors, and/or their capacity for working with beginner teachers (Hobson *et al.* 2006, Hobson *et al.* 2009b). Ross and Hutchings (2003: 52) report concerns expressed in England by the Universities Council for the Education of Teachers (UCET) that teacher education is being potentially undermined by inadequate funding, and in particular by the relatively low level of remuneration available to staff associated with higher education institution-based components of ITP programmes, since '*[s]uitably qualified teachers now earn very much more in school, and would have to take a substantial pay drop to move into teacher education.*' In some national systems the quality of ITP programmes is assured through the use of external examiners, while arrangements may also be in place to secure external accreditation of the institution or the programme itself. In the United States, for example, the National Council for the Accreditation of Teacher Education (NCATE) performs this latter function (Fox and Certo 1999). The governments of other countries, such as England, have attempted to overcome or minimise the perceived problem of variable content and quality in ITP by introducing a national curriculum for initial

⁶ The specific methods by which ITP providers assess their student teachers and determine whether or not they are judged to have successfully completed the course – or are certificated – are discussed in Section 3.2.

⁷ Such countries include Finland, Japan, Hong Kong, Poland and Russia.

⁸ Such models are discussed in Section 2.3 below.

teacher preparation and/or by ensuring periodic inspections of training providers and programmes. Such procedures are intended to validate course content and certification procedures, and thus quality assure the assessment of trainee or newly qualified teachers' readiness to teach (this is undertaken in England by the inspection body Ofsted – the Office for Standards in Education).⁹

2.3 Licensure denoting suitability to teach

For a variety of reasons, including the concerns noted above over the content of ITP or the quality of ITP providers, many countries (especially in the English-speaking world) now follow 'certification-plus-licensure' models, with the aim that beginning teachers will be licensed to teach '*after demonstrating that they meet teaching standards and not only because they have successfully completed teacher education programmes*' (Darling-Hammond 1999, cited in Larsen *et al.* 2005: 15).

Public reassurance is one benefit frequently attributed by commentators to the introduction or use of the 'certification-plus-licensing' approach, which is seen as '*the state's legal vehicle for establishing competence for members of professions*' and for seeking to establish '*the minimum standard for acceptable practice*' (Darling-Hammond and Youngs 2002: 16). A 2001 poll in Ontario, Canada, for example, showed that 80 per cent of Ontarians were in favour of a proposed new teacher qualifying test designed for this purpose, which Glassford (2005) took to suggest that a '*significant proportion of the general public fears that teacher education programs, as currently constituted, are not preparing candidates as well as they should for what those beginning teachers will face in the classrooms of the future*' (p.17).¹⁰

One way in which the certification-plus-licensure approach is realised in practice, in some countries, is through newly qualified (*certificated*) teachers having to undertake a period of induction or probation, during (or by the end of) which they must confirm their capability or competence in order to secure their *license* to teach beyond this point in time. While such probationary or induction periods normally (e.g. in England and New Zealand) last for one or two years, a different approach is used in Boston and Chicago, where teachers are not given permanent contracts until they have been teaching for as many as three or four years, respectively. Both approaches, though, provide a mechanism by which ineffective or under-performing newly or recently qualified teachers can be removed from their posts and from the profession (see Section 3.4 below).

2.4 Selection and assessment for appointment to teaching posts in particular schools

In addition to the existence of mechanisms for assessing the potential and demonstrable capability of would-be and beginner teachers at the entry-to-ITP, certification and licensure stages, some countries and states also employ centralised procedures for assessing NQTs' readiness or suitability for taking up particular teaching posts, one of the outcomes of which may be the placement of teachers in particular schools. Where there are no state- or country-wide procedures for this, individual schools employ their own procedures. (Centralised and school-level methods of selection for the appointment of NQTs to specific schools are discussed in Section 3.3 below.)

2.5 Teacher assessment post-licensure

It is also important to note briefly that, however effective the selection processes are at the entry-to-ITP, certification and licensing stages, most systems recognise the need for a means of removing from post those teachers who turn out to be ineffective or incompetent. Barber and Mourshed (2007) found that '*Most top-performing systems recognise that no selection process is perfect, and so implement procedures*

⁹ Some brief examples of how ITP programmes are evaluated in different parts of the world are provided in Appendix I.

¹⁰ Tests and other methods of assessment for licensure are discussed in Section 3.4 below.

to ensure that the lowest-performing teachers can, if necessary, be removed from the classroom after appointment to their teaching position...' (p.20).¹¹ One means of dealing with the uncertainty inherent in taking on a newly-qualified teacher is to make the appointment conditional (as in the practice of insisting on a probationary or 'induction' year); another, often followed concurrently in (for example) England, is to make it temporary, at least in the first instance:

Many schools appoint newly-qualified teachers to temporary contracts (sometimes of only 11 months, possibly to avoid employment protection liabilities), and then make the appointment permanent if they feel the quality of the teacher is sufficient to merit this (Ross and Hutchings 2003: 63).

There has also been a proposal in England to licence teachers working in state schools after they have achieved QTS. In a recent White Paper, the government revealed its plans for a new 'Licence to Teach' scheme, designed '*to raise the quality and status*' of the teaching profession (DCSF 2009: 3). In order to obtain the licence teachers will have to provide evidence that they have taken responsibility for keeping their professional practice up to date '*and demonstrate periodically that their professional practice and development meets [sic.] the standards required for the profession; and that they will have access to the necessary professional development support*' (DCSF 2009: 12). Initially the requirement to obtain the Licence to Teach will be for newly qualified teachers and those returning to the profession; and it is intended that the licence will need to be renewed every five years.

¹¹ Methods by which countries and states may assess teachers' competence to remain in the profession are briefly discussed in Section 3.5.

3. METHODS OF ASSESSING 'READINESS': *HOW TO ASSESS COMPETENCE FOR TEACHING*

A range of methods is employed by different countries to form judgements on an individual teacher's suitability or readiness to enter the profession. These include oral and written examinations (e.g. of beginner teachers' knowledge and understanding of specific subject disciplines and of pedagogy), observations of their teaching, interviews and portfolios. The main methods are summarised in Box 1, and are discussed in more detail, in the context of the different stages of screening and selection in which they are employed, in Sections 3.1-3.5 below.

3.1 Methods of screening candidates for ITP

In most countries, including the most successful schooling systems (Barber and Mourshed 2007), the process of selecting would-be teachers begins with entry requirements whose purpose is to screen candidates for ITP. Such entry requirements vary from country to country and may take a number of forms, including the possession of an appropriate degree or degree classification, some form of entry examination, satisfactory performance at interview, or a combination of these and/or other requirements.

Across the world, ITP programmes generally fall into one of two models – the *consecutive* model and the *concurrent* model (Eurydice 2002: xxi). The first involves students receiving degree-level education in a particular subject (or subjects) before they then enrol on a programme of ITP; the second combines the study of a particular subject with theoretical and practical elements of teacher education and training. The selection criteria for entry into ITP vary according to the model of ITP and in some cases according to the age group the candidates are training to teach. Usually entry into concurrent ITP courses requires the successful attainment of end of school qualifications¹² whilst entry onto a consecutive model of ITP necessitates some form of undergraduate study at university level. In China, entry to an ITP programme to teach children in primary schools requires prospective trainees to have completed junior high school (age 14-15), whilst entrants to courses aimed at secondary trainees need to have completed a further two to three years of senior high school education.

In some countries, including ones which have both concurrent and consecutive models of teacher preparation, potential candidates have to pass an examination in order to demonstrate their suitability for teaching and gain entry to ITP. For example, in Malaysia, Singapore and China secondary school graduates take a national examination, whilst in France, New Zealand and Canada individual teacher training institutions set their own examinations (Cobb 1999). In many cases such examinations take the form of tightly timed multiple-choice tests, sometimes referred to because of their relative simplicity as a 'pencil-and-paper' or 'tick-box' tests.

Not all countries use examinations as part of the process of screening for entry to ITP. For example, in Iceland, entry to initial teaching training is dependent on candidates' performance in their upper secondary school, while in Denmark, success within the school system is taken into account as well as performance at interview.

¹² While most systems require at least the completion of secondary education, this is not always the case, for example in Malawi (Coults and Lewin 2002: 245).

In other parts of the world, examinations comprise one element of a multiple methods approach to the process of selecting candidates for ITP. For example, in some parts of Europe (including Poland, Hungary, Romania and Portugal) selection criteria incorporate end of school qualifications, successful performance in an examination for entrance to tertiary education, and a further examination for teacher training. In Korea entry to teacher training at undergraduate level is determined by a range of factors including: student performance at school in terms of attainment and attitude; performance on the Scholastic Assessment Test (SAT); an interview by the higher education institution; and a series of tests of '*teaching attitudes and ethics*' (Wang *et al.* 2003: 18).

The entry-to-ITP screening procedures of two of the world's higher performing educational systems, Singapore and Finland, are held up as exemplars by the authors of the McKinsey Report:

Both these systems place a strong emphasis on the academic achievement of candidates, their communications skills, and their motivation for teaching. (Barber and Mourshed 2007: 17)¹³

Finland, for example, employs a multi-stage process of teacher selection which begins with a national screening process involving a 300-question multiple choice assessment which tests literacy, numeracy and problem-solving¹⁴; is followed by university-based tests which evaluate candidates' ability to process information, think critically and synthesise data; and proceeds to university-based interviews which seek to assess candidates' motivation to teach, motivation to learn, communication skills and emotional intelligence.

¹³ The latter point is reinforced by the findings of our own *Becoming a Teacher* research, a six-year study of beginner teachers' experiences of ITP, Induction and early professional development in England. One of the main recommendations of the study was that ITP providers should '*try to ensure that applicants who are accepted onto their programmes possess genuine, intrinsic motivations for wanting to become teachers*' (Hobson *et al.* 2009c: 256).

¹⁴ Prior to 2007, the first stage of the recruitment process was based largely on achievement at secondary school (Barber and Mourshed 2007: 17).

Box 1. Methods of Assessment

Examinations

'Pen and pencil' tests

These are standardized measures of knowledge and skill, normally taking the form of multiple choice questions. In spite of the name commonly used to describe them they are often, in the present day, administered online. Such tests are usually tests of subject knowledge rather than knowledge and understanding of pedagogy. They are used in many states within the US at various stages of a beginning teacher's development. In some states, tests are used to assess candidates' suitability for admission to ITP, for certification and for licensure. Different states use different numbers of tests. In Alabama, for example, there is one test of basic skill; in Colorado there are four separate tests of '*basic skills, subject matter knowledge, pedagogical content knowledge and pedagogical knowledge*' (Mitchell *et al.* 2001: 44). In England they are used to assess trainee teachers' skills in literacy, numeracy and ICT during their ITP.

Oral and written examinations

These are open-ended methods of assessment and can be used to assess a beginning teacher's subject knowledge and/or praxis. Whilst these are usually part of the ITP course requirements, there are some countries such as Slovenia where candidates for state certification have to undertake an oral examination about the legislative aspects of the profession.

Observation of classroom- and school-based practice

Most countries require prospective teachers to undertake a 'practicum' (or a school placement), usually as part of their ITP, during which their classroom practice is observed, monitored and evaluated; this then forms part of their ITP assessment. In some countries beginning teachers are (or are also) observed and their professional attributes in a school setting evaluated after the completion of their ITP. This is the case in England where, during the induction period (usually the first three terms of the first teaching post), NQTs are observed six times, while their professional attributes in and out of the classroom are also monitored. In Queensland, once the NQT has been in post for six months the head teacher produces a written evaluation of how they have performed.

Interviews

In many countries, face to face discussions with prospective entrants to teaching are employed alongside other selection criteria to determine entry to ITP courses. This is the case, for example, in England, Denmark and Finland. In some parts of the world, trainees are also interviewed as part of their final assessment for ITP. Interviews are most commonly used by prospective employers (again, sometimes alongside other methods) to help them make decisions about whether or not to appoint applicants to particular teaching posts or to a pool from which teachers are subsequently allocated to particular schools.

Portfolios

Portfolios, '*a tool for the organized collection of teaching documents and artefacts*' (Larsen *et al.* 2005: 21), are most commonly used during ITP, notably as a means by which student teachers can record progress and provide evidence of meeting externally imposed teaching standards. They are also increasingly being used (e.g. in the *Teach First* Programme in England) to encourage trainees to become reflective practitioners. Portfolios are developed by the beginner teachers themselves and contain a range of different types of materials, which may include, for example, video recordings of classroom experience, copies of evaluation reports on their teaching, field notes, evidence of involvement with out of school activities such as school trips, and written assignments. Portfolios may also be used after the completion of ITP by candidates seeking appointment to teaching posts; while in the US they also comprise one source of evidence for the Praxis III test, which is used by some states to make licensing decisions about new teachers.

Assignments

Various forms of assignments (including essays, written and oral presentations, reflective diaries, reports of action research projects) are used in many countries to assess beginner teachers' knowledge, understanding and skills (e.g. of critical reflection). They are mostly employed during ITP, alongside other methods (e.g. classroom observation), to determine whether or not the trainee should be certificated. Unusually, in Finland trainees have to produce a thesis at Masters level before they are able to qualify as a teacher.

In the United States there are no national guidelines for selection criteria to ITP programmes; this leads to variation from state to state. In California, for example, entry to a programme of ITP incorporates a combination of Praxis 1 tests (commercially produced tests integrating multiple choice tests with open-ended essay style examination questions) and locally developed tests. In Japan, applicants undergo a range of written skills tests, interviews and a physical fitness test.

In the Netherlands (which uses a consecutive model of teacher education), entry to a teacher education programme requires a Masters level degree in the subject area for prospective teachers of 'university-bound' students, whilst those aiming to teach those not expected to go on to university are educated at undergraduate level.

In an effort to ensure that the pool of candidates from which selection takes place is as large and strong as possible, some educational systems have sought to remove obstacles to entry into the profession by introducing additional or alternative ITP routes, an approach also used by those seeking to address teacher shortages. Examples include the Graduate Teacher Programme (GTP) and Flexible PGCE programmes in England. In the former, which typically lasts for one academic year, 'trainees' take-up a salaried teaching post and (if successful) achieve qualified teacher status (certification) whilst in-post; this means that more mature entrants do not have to be without a salary while they negotiate their prospective career-change. With the Flexible PGCE, a university-administered postgraduate qualification, potential entrants with families and/or who need to continue to work part-time during their training are able to do so by taking their course over five or more academic terms.

3.2 Methods of assessment for certification during ITP

Commonly across the globe, student teachers face a range of types of assessment throughout the duration of their ITP programmes. These usually incorporate assignments, observations of their teaching in school, portfolios and examinations. The length of time spent in school settings on what is commonly referred to as 'practicum' or 'teaching practice' varies. China is unusual in that the required time spent by trainee teachers in a school setting is relatively short – usually a three week block. In contrast, trainee teachers in Germany have to undertake two years of internship with at least 25 lessons being observed and evaluated as part of their assessment process (Cobb 1999). In France, trainee teachers have to complete a dissertation based on six weeks practical experience in a school as well as a further six week teaching practice in another school (Asher and Malet 1999).

In some cases a threshold test during ITP is employed to determine which candidates are allowed to continue with their training. In Germany, there are two levels or phases of training. The first (university-based) phase – in which candidates study two (secondary school) or three (primary school) subject disciplines, along with courses in pedagogy and other aspects of education – is assessed by an examination, success in which leads to the second (practicum or internship) phase of ITP (Ostinelli 2009). The internship phase is itself followed by an examination which is designed to evaluate trainees' ability to critically reflect on professional practice, the results of which are fed into a classification system used in assigning teaching posts. In France, where the mid-course test is also competitive, with success based on candidates' percentile ranking, it also serves to certify candidates.

In England, whilst there are a range of routes to becoming a teacher, all prospective teachers must meet a prescribed set of standards relating to aspects of teaching competence to achieve Qualified Teacher Status (QTS). Evidence of meeting these standards takes a range of forms including observations of teaching and professional conduct in school settings, a portfolio of evidence, and oral and written assignments. In recent years prospective teachers have also had to successfully pass online tests in numeracy, literacy and information and communications technology (ICT). Trainees are allowed to retake the tests as many times as needed for success but will only be recommended for the award of QTS on successful completion of all three.

Some countries do not make use of examinations to assess prospective teachers' abilities. In Australia, assessment systems differ from state to state but there is no standardised examination. Instead trainees are assessed by a range of 'performance-based assessments' which are principally related to prospective teachers' experience in school on the 'practicum' (Larsen *et al.* 2005). Some universities require an extended reflective action research project while others encourage trainees to set their own goals during their practicum, goals which are subsequently examined through a blend of self-assessment and school mentor assessments (Ingvarson *et al.* 2006).

Beyond the entry-to-ITP phase, qualifying to teach in Finland is also not examination-based. Instead, alongside other methods of assessment, including essays, investigation tasks and evaluations of their ability to take an active part in discussion seminars, trainee teachers have to produce a Masters level dissertation. The thesis topic for this is usually pedagogical or psychological for those wishing to teach primary aged children, and subject discipline based for those wishing to teach secondary aged children. According to Ostinelli (2009), this type of initial teacher preparation leads to a highly motivated teaching profession where attrition rates are low.

3.3 Methods of assessment for appointment to teaching posts

In some cases competitive tests are used not only for licensure but also to control the number of candidates with access to public employment as a teacher. In Spain a combination of pre-service coursework and competitive examinations (both written and oral) is used to control access to actual teaching posts in the public sector; and in Greece the weighted results of a written examination are used to allocate vacancies, with the first choice of schools going to the most successful candidates, judged by their national ranking in the test. McKenzie and Santiago (2005) note that in many countries schools have little direct involvement in teacher appointment and that '*the process of teacher selection is often highly impersonal*' (p.150). In these cases, and especially in those countries where the mechanisms for recruitment and appointment are highly centralised, they argue that '*it is hard for teachers to build a sense of commitment to the schools where they are appointed*' and there are '*concerns about whether schools have the teachers that fit their particular needs*' (*ibid.*). From their review of the evidence these authors conclude that '*greater school involvement in teacher selection ... helps to improve educational quality*' (p.141). Schaefer and Terhart (2006) give an interesting account of a move in one German Bundesland away from a centralised system and towards greater school involvement.

In most countries in which schools (or their head teachers or governing bodies) are responsible for appointing their own teaching staff, a range of selection procedures is employed. These procedures usually include one or more of the following: face to face interviews of applicants (often by a panel); observation of the candidate's teaching (e.g. of a 'sample lesson' in the school to which they are applying for a post) and/or completion of other set tasks; and an examination of the applicant's portfolio (in systems where these are used), evidence of previous academic performance (e.g. degree classification), and references (e.g. from ITP tutors and established teachers in schools in which the applicant undertook their practicum).

3.4 Methods of assessment for licensure

The most common methods of assessing teachers' (or would-be teachers') capability and judging whether the license will be awarded are various forms of tests on the one hand and performance-based assessment on the other. The latter, principally involving observations of teaching, is often associated with a 'probationary' period of employment as a teacher.

Some countries (notably those which do not suffer from teacher shortages) go further still and employ *competitive* examinations for this purpose, in an attempt to establish not only which teachers are competent or 'ready' to be appointed in schools, but which are the *most* competent.

Licensure examinations in continental Europe tend to be '*more comprehensive and competitive compared to those used in the Anglo-American world*' (Larsen *et al.* 2005: 17), and may include (for example) oral presentations in addition to written tests. Most tests or examinations are far simpler, and are usually either criterion-referenced, where success depends on a candidate's achievement in relation to a set of criteria or expectations, or standards-referenced, where candidates are expected to achieve an expected level (or standard) of success within pre-determined domains. Such examinations generally test basic knowledge and/or skills (such as those relating to literacy or numeracy), subject matter knowledge, knowledge of (or about) pedagogy, and knowledge of relevant legislation, school administration and other contextual matters. Some jurisdictions now require additional tests in language proficiency or the use of information technology.

However, even within one country there may be wide variation: in the USA, states set their certification requirements independently, and vary in the knowledge and skills they consider important for teachers. Of 38 states responding to a survey by the National Association of State Directors of Teacher Education and Certification (NASDTEC), 90 per cent required an exam on subject matter, 71 per cent on basic skills, fewer than 25 per cent on general knowledge, and only 5 per cent on pedagogy. Even where the same test was used, there were variations between different states in the pass mark set. It is perhaps not surprising, then, that many US states do not recognise each others' forms of licensure.

Assessment for licensure may well occur during an on-the-job qualifying phase involving various forms of *performance-based assessment*. These usually include observations of teaching and documentary evidence, through which beginner teachers need to demonstrate their capability to teach against a set of standards. Such forms of performance-based assessment are often associated with a probationary period, and typically take place within the context of an induction programme that includes mentoring, as is the case in England. At this end of the spectrum teacher assessment is more closely related to (and may be more likely to result in) teacher development.

The advantage of teacher preparation and selection systems that extend into an initial probationary period is that they can more easily combine licensure-related performance-based assessment with a formative element, especially where they take place '*within the context of an induction program that includes mentoring*' (Larsen *et al.* 2005: 23, cf. Hobson *et al.* 2009b). This, according to Roelofs (2007), is the best way forward, since as he argues '*all evidence of competence should be registered and interpreted within specific teaching situations*' (p.8).

Portfolios, which as we have seen have become increasingly popular in some systems as mechanisms for facilitating both the assessment and professional learning of beginning teachers during the ITP phase, are also being increasingly used (e.g. in parts of the USA) as a means of performance-based or performance-related assessment for licensure.¹⁵ In Connecticut, for example, licensure is largely based upon a portfolio in which is amassed a range of evidence relating to the first two years of teaching:

The portfolio requirements are highly structured and subject-specific. The portfolio is comprised of documentary evidence of a unit of instruction on a significant concept, including lesson logs, videotapes of classroom teaching, teacher commentaries, samples of student work, and reflections on their planning, instruction, and assessment of student progress. Teachers are asked to demonstrate how they think and act on behalf of their students. In doing so, teachers are able to show their skills and knowledge in a ... nuanced manner, speaking to their experiences in the use of specific classroom teaching strategies with particular groups of students. (Larson et al. 2005: 29)

In Scotland, there is a non-compulsory induction scheme which allows beginning teachers who have completed their ITP to be considered for registration. During this one year induction period (190 days), probationary teachers are expected to compile an online portfolio which contains evidence of meeting the Standard for Full Registration (SFR). This comprises a self-evaluation overview, a professional development action plan, a record of CPD activities, a record of observed teaching, a record of meetings with a school-based supporter, and an account of the beginner teacher's key strengths and areas for development. The portfolio is signed off by the school-based supporter and the head teacher when they feel there is sufficient evidence to meet the standards.

Several authors comment that the process of putting together a portfolio can enhance teaching by promoting (or further encouraging) reflective practice.

(A review of the accreditation mechanisms employed for – and bodies charged with – licensing new entrants to the teaching profession in different countries is provided in Appendix II.)

3.5 Assessing teachers' competence post-licensure

In some countries, teachers who are regarded as fully qualified have to meet a variety of evaluation criteria to obtain permanent tenure. This is the case in Spain and Italy where teachers have to pass a competitive examination in order to acquire a permanent position. In Germany, qualified teachers have to successfully complete a work experience placement in order to receive permanent civil service status and tenure. In the United States, some states require teachers to pass an examination to convert a provisional teaching license into a full teaching license.

¹⁵ Broadly, we might distinguish between three basic types of portfolio, namely: (i) *learning portfolios*, used primarily to document progress and learning; (ii) *credential portfolios*, mainly used to evidence achievement of predetermined standards for assessment purposes; and (iii) *showcase portfolios*, used to demonstrate 'best' achievements, e.g. for job applications.

As stated in Section 2.5, most countries have mechanisms in place to ensure that ineffective or incompetent (certificated and licensed) teachers are removed from the classroom. A detailed discussion of the methods of undertaking this task is beyond the scope of this review, though we will state that whilst the use of some form of test or examination may be one means of assessing the competence of (for example) established teachers holding non-permanent posts, or those who were appointed before more rigorous methods of certification or licensure were introduced, it would seem more prudent to use more authentic methods of performance-based assessment, such as evidence of their success or otherwise in achieving student learning. Barber and Mourshed (2007) thus note that the mechanisms employed for this purpose by most top-performing school systems are '*based on the evidence of [teachers'] classroom practice*' (p. 20).

4. ARGUMENTS FOR AND AGAINST TEACHER TESTING

In this section we summarize the main arguments that have been presented in favour of, and against, the use of tests or examinations in the screening, selection, certification, licensure and appointment of teachers.

4.1 Arguments for testing

One of the main arguments in favour of tests is that they '*put a floor under the measured knowledge individuals must have to become certified*' (Boyd *et al.* 2007: 55), and so provide reassurance to the public. As Larsen *et al.* (2005) suggest, '*there is a strong need for some form of licensure or certification process that clearly defines a minimum standard for the profession*' (p.7), especially in contexts in which there exists a mistrust of the rigour and content of teacher preparation programmes (D'Agostino and Powers 2008). To the extent that tests for certification are able to '*distinguish bad teachers from better teachers*', they can help to '*keep the worst teachers from entering the classroom*' (Loeb *et al.* 2007: 6), while the use of testing at the screening for ITP stage may potentially deter those more likely to fail from attempting the test or seeking to enter the teaching profession. At present, however, the evidence in favour of these arguments is limited, and it should be pointed out that there are alternative means of achieving these goals, including the use of other methods of teacher selection, certification, licensure and appointment outlined in Section 3 above.

Secondly, a particular area in which research suggests testing is valuable and beneficial relates to the assessment of candidate's subject knowledge. Angrist and Guryan (2008) found that '*The probability that a teacher majored in his or her subject appears to rise in states that impose a subject test*' (p.499), while Kennedy (2008) found evidence in her review of the literature based on qualitative studies that content knowledge has an important influence on teacher performance. It may be argued that alternative methods of assessing teacher candidates' subject knowledge (such as the subjects studied and grades/classifications gained in high school or on undergraduate degrees) might be equally (or even more) valid, though there is not always a good and consistent match between the content of (for example) undergraduate degrees and the content knowledge candidates are deemed to require for teaching.

In addition, to the extent that tests can effectively measure would-be teachers' literacy skills, their use may be beneficial since research carried out in the US shows that '*a teacher's level of literacy, as measured by vocabulary **and other standardized tests**, affects student achievement more than any other measurable teacher attribute*' (NCTQ undated, cited in Barber and Mourshed 2007: 16; emphasis added).

More generally, as D'Agostino and Powers (2008) comment, '*assessments ... can be an effective mechanism to encourage preservice programs to provide future teachers the opportunity to learn a broad set of skills and an expansive knowledge base*' (p.165) through their influence on the curriculum of teacher preparation programmes. On the other hand, some countries seek to achieve similar goals through alternative strategies, such as those relating to the validation and inspection of ITP providers.

Finally, tests (and competitive examinations in particular) are one method by which countries may seek to raise the status of the teaching profession and thus raise the calibre of applicants (Barber and Mourshed 2007), though again examinations are not the only way of achieving this and there is little evidence to suggest that they are the most effective way.

4.2 Arguments against testing

The main argument against the use of tests or examinations as a form of assessing beginner teachers' competence or readiness to take up teaching posts is that *'the assumption that effective teaching can be ensured by isolating sets of skills that can be measured through the use of multiple-choice tests, check-lists or schedules of competence statements ignores the complexities and highly contextualized nature of teaching'* (Larsen *et al.* 2005: 7). In particular, commonly used examinations such as multiple choice, paper-and-pencil tests cannot *'meaningfully measure such crucial teaching qualities as dedication, leadership, sensitivity, reflective thinking, ability to communicate, and social awareness'* (Glassford 2005:14), to which we would add the core responsibility that a teacher needs in order to facilitate the learning of particular pupils in particular contexts.

One US panel of experts concluded that *'there is currently little evidence available about the extent to which widely used teacher licensure tests distinguish between candidates who are minimally competent to teach and those who are not'* (Committee on Assessment and Teacher Quality 2000, cited in Larsen *et al.* 2005: 8). Similarly, a meta-analysis by D'Agostino and Powers (2008) found that *'tests reveal little about performance'* (p.165). The same authors reported that test scores tended to be *'less related to teaching performance than students' success levels in the preservice programs the tests were designed to hold accountable'*, and that *'preservice teachers' performance in college, especially during student teaching, predicted performance better than teacher tests'* (pp.164-165).

Whilst alternative forms of 'examination' (more broadly defined) such as dissertations and oral presentations may demonstrate more thoroughly a mastery of theoretical content, they may still fail to give any indication of the would-be teacher's ability to facilitate pupil learning in the classroom.

Testing for selection, certification, licensure and appointment can thus *'fail to distinguish good teachers from bad'* (Loeb *et al.* 2007: 6). In addition, it might also *'drive away potentially good teachers'* (*ibid.*), whilst where pass rates are high and candidates may freely re-sit the tests if they fail, this *'raises the question of how many applicants the exam ultimately screens out'* (Boyd *et al.* 2007: 54).

Finally, testing for certification and licensure, and perhaps high stakes competitive examinations in particular, may also be disadvantageous insofar as it may encourage ITP programme providers to *'teach to the test'* – that is, to seek to maximise trainees' potential for performing well in the examinations, rather than focussing their energies on helping the trainees to develop their capability as teachers. Where tests are employed for such purposes, there are thus *'some uneasy tensions between the gate-keeping and professional growth purposes of teacher assessment'* (Larsen *et al.* 2005: 6).

5. CONCLUSIONS AND RECOMMENDATIONS

In this report we have discussed a range of mechanisms and procedures by which the competence or readiness of teachers (notably beginner teachers) to undertake teaching posts may be assessed, and we have given some indications of which methods have been found to be effective at different stages of entry or potential entry into ITP and teaching. In this final section we make a number of concluding points and evidence-informed recommendations, again with particular emphasis on the use of tests or examinations, which is undoubtedly the most contentious of the issues discussed.

What is clear is that some high-performing educational systems successfully employ teacher tests (narrowly defined¹⁶) in relation to the screening, selection and/or appointment of teacher candidates, and that the use of such tests can bring a number of benefits, especially at the entry-to-ITP stage and as a means of assessing candidates' knowledge of specific subjects or of key areas such as literacy and numeracy. However, outside of these areas, evidence in favour of the use of such tests is very thin indeed, and on the basis of the evidence we have reviewed, we would argue that teacher tests should not be the sole or even main criterion for certification, licensure and appointment.

In relation to certification, we would argue that more authentic measures of teachers' capability or competence should be used *instead of or in addition to* tests. This viewpoint appears to be shared in some countries or states that have adopted hybrid forms of evaluation leading to certification:

While traditional forms of documentation, such as tests and term papers, are still used to evaluate students' knowledge, more authentic instruments are used to evaluate what they are able to do. (Brodsky and Woods 2000: 111, emphasis added)

The 'more authentic instruments' referred to by Brodsky and Woods include detailed work samples structured around lesson plans, portfolios of evidence, and/or the assessment of pupil progress. Where evaluation of this kind is ongoing, *'it is also used to help student teachers modify instruction to insure that students are learning'* (*ibid.*). That is, it is also developmental, which is important both because trainees and NQTs cannot be expected to be accomplished teachers and because learning teaching is a process which continues well beyond initial teacher preparation and early professional development.

In relation to licensing or to the granting of permanent contracts to certificated teachers who have gained a certain amount of teaching experience (e.g. those serving as teachers within a probationary period), we would argue that performance related methods of assessment should be employed *rather than tests* (narrowly defined) for assessing their competence as classroom practitioners. (If 'testing' or 'examination' is operationalised in the broader sense then these 'more authentic instruments' and other forms of performance-based assessment are the kinds of tests that would seem most suitable for assessing newly qualified teachers' competence for teaching.)

We feel that whether or not it is efficacious for countries, states or individual schools to employ tests, in the short term, to help make judgements about the suitability of certificated teachers for *appointment to schools* (or particular schools) will depend upon the extent to which there exists confidence in the quality

¹⁶ See page 2, footnote 1 above.

of ITP provision and assessment. In the longer term, however, we would suggest that educational systems would be better served by measures designed to improve the quality of (and confidence in) ITP than by the use of tests as a kind of safety mechanism to weed out teachers who have been inappropriately certificated. And where examinations are employed for teacher appointment, these should ideally be used alongside additional methods of establishing candidates' competence and of judging their suitability or 'fit' for the specific needs of the particular school. We agree with D'Agostino and Powers (2008) that those involved in the teacher hiring and selection process ought probably to focus as much or more on candidates' performance during ITP *'than on their scores in the tests used for licensure purposes'* (p.165).

We also agree with Larsen et al.'s (2005) recommendation that it 'is crucial to be clear about the purposes of an entry-to-the-teaching profession assessment in order to guide [its] development' (p.6). The challenge, for these authors, 'is to develop assessments for certification that successfully balance accountability demands, professional growth and other high standards' (p.6). On the basis of the literature that they themselves examined, these authors propose a set of guiding principles for developing a system for assessing candidates' readiness to begin work as a practising teacher:

- that *'a sense of professionalism in education needs to be honoured and maintained throughout any assessment framework'*: beginning teachers should be regarded as responsible professionals, and should themselves view their assessment in this light; they should be treated professionally and courteously throughout any evaluation process and given the opportunity to take responsibility for the improvement of their practice;
- that *'teacher assessment needs to be trustworthy'*, valid, reliable and comparable over time; and both the process of any assessment and the outcomes of evaluation should be meaningful and fair;
- that assessment frameworks should be *linked to growth and professional development*, should reflect a consistent policy based on current models of professional learning, and (in order to foster growth) should offer a supportive environment for assessment, with opportunities for new teachers to learn from the evaluation process;
- that programme designers must keep in mind the importance of *'feasibility'*: any system must be *'practical, cost-effective and realistic'* within the local context (pp. 47-52).

These principles might usefully be taken on board by those countries seeking to review their existing practices of beginner teacher selection, assessment, certification and licensure.

To conclude, the evidence suggests that most of the world's best performing school systems do use some form of testing (e.g. literacy and numeracy tests) at some stage as a method of screening potential entrants to the teaching profession, yet they do not rely too heavily on this method. Rather, they tend to employ testing alongside other, more authentic methods of assessing teachers' competence. Moreover, they begin the screening process at the entry-to-initial teacher preparation stage with *'rigorous checks designed to assess teaching potential'* (Barber and Mourshed 2007: 4) and they ensure that the pool from which they are selecting is as strong as possible by, for example, employing effective marketing campaigns and, more generally, making efforts to improve the status of teaching as a profession (e.g. by paying a good starting compensation or salary). They also ensure that sufficient levels of resources are targeted at the ITP phase, as well as at the post-training or certification period (e.g. the important first three years or so in post), where beginner teachers' motivation, commitment and effectiveness can be greatly enhanced through appropriate support, mentoring, leadership and opportunities for continuing professional development.

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APPENDIX I: EXAMPLES OF HOW ITP PROGRAMMES ARE EVALUATED IN SOME PARTS OF THE WORLD

In **England**, institutions that administer teacher education programmes are monitored by the Office for Standards in Education (Ofsted). All teacher training providers have to implement the standards for Qualified Teaching Status (QTS) and the Requirements for Initial Teacher Training (RITT), set by the Training and Development Agency for Schools (TDA). Ofsted, a non-governmental agency which is accountable to Parliament, inspects providers of ITP by: examining a range of documentation, including a self evaluation form provided by the ITP institution, plus trainees' assignments; observing and evaluating training sessions; interviewing programme personnel involved in the scheme; and observing ITP tutors when they assess trainees in school settings. All ITP providers are examined at least once every six years.

In the **USA**, individual states administer their own evaluation systems though most agree to be monitored by the non-governmental organization, the National Council for Accreditation of Teacher Education (NCATE). NCATE examines the quality of ITP provision and the standards achieved by the trainees in much the same way as Ofsted does in England. In addition, course providers can volunteer to submit their programmes for evaluation by The Teacher Accreditation Council (TEAC).

In **New Zealand**, any institution providing ITP must submit its programmes to the New Zealand Qualifications Authority (NZQA). All newly developed programmes must be visited and evaluated by representatives from NZQA; if they are recommended for approval, visits are repeated on a five year cycle.

In **Brazil** all ITP programmes must be accredited by the National Council of Education or the Ministry of Education. A similar accreditation system is used in **Argentina**, where ITP providers are regulated by the Federal Teacher Education Network (Avalos 2000).

APPENDIX II: ACCREDITATION MECHANISMS FOR LICENSING NEW ENTRANTS TO THE TEACHING PROFESSION¹⁷

The composition of institutions with responsibility for accrediting new entrants to the teaching profession varies across the world though these accreditation mechanisms can broadly be summarised under one of three categories. Firstly, in some parts of the world the accreditation body is directly associated with *the state*, whereby an organization attached to the government of the country has responsibility for accrediting new teachers. For example, in France and Greece the agency responsible for accreditation is the Ministry of Education. The situation is similar in Korea, Hong Kong, Malawi, Malaysia and Slovenia. In China, potential trainee teachers must pass a national examination administered by the Ministry of Education before beginning ITP. In England and Scotland the responsibility for accrediting new teachers is still undertaken at the level of the state but this is carried out by agencies with responsibility to the government; the TDA in England and General Teaching Council (GTCS) in Scotland respectively.

Secondly, in other parts of the world, accreditation of new teachers is the responsibility of *regional authorities*. This is the situation in Australia, Canada, Spain (where the individual Comunidad Autónoma accredits teachers) and Germany (where there are Federal state accreditation mechanisms run by the Lander). In the United States individual states are responsible for deciding which accreditation mechanisms to adopt (some, for example, use commercially produced examinations); this has led to problems of mobility of the teaching profession where accreditation in one state is not necessarily recognised by another. Individual states can also opt to be evaluated by the National Council for Accreditation of Teacher Education (NCATE), though not all have done so.

The third method of accreditation is through *individual teacher education institutions* where successful completion of ITP equates to professional teacher status and readiness to enter the teaching profession (this is the situation in Finland, Poland, Russia, Denmark, the Netherlands, Brazil and Argentina). In most countries using this method, the ITP course has to be approved by a government body or national organisation. For example: in New Zealand, ITP courses are approved by the New Zealand Qualifications Authority; in Japan ITP has to be approved by the 'Monbukagakusho', the Ministry of Education, Culture, Sports, Science and Technology; and in Hungary all ITP courses are approved by the Hungarian Accreditation Committee, an independent body.

Further details of the accreditation mechanisms used for – and bodies charged with – licensing new entrants to the profession in different parts of the world is presented in Table 1, together with the online sources that we consulted.

¹⁷ This review of the accreditation mechanisms used by each country referenced in this report involved extensive online documentary research. The outcomes of the review, presented here, reflect the (stated) situation at the time of writing, though it should be noted that the online documents accessed were in some cases under review and are frequently subject to update.

Table 1. Accreditation mechanisms used in some parts of the world

Country	Accreditation authority	Web sites
Brazil	HEI: All ITP programmes must be accredited by the National Council of Education or the Ministry of Education.	http://portal.mec.gov.br/index.php
Argentina	HEI: ITP providers are regulated by the Federal Teacher Education Network	http://www.me.gov.ar/
Australia	REGION: Individual states are responsible for accreditation	http://www.dest.gov.au/
Canada	REGION: Provincial departments take responsibility for accreditation.	http://www.cmec.ca/Pages/default.aspx
China	STATE: ITP students must pass a national examination administered by the Ministry of Education before beginning ITP.	http://www.moe.edu.cn/english/ http://www.unescobkk.org/fileadmin/user_upload/apeid/Documents/status_of_teachers/China.pdf
Denmark	HEI: The teacher training institutions are quality assured by external examiners appointed by the Ministry of Education.	http://www.eng.uvm.dk/
England	STATE: Training and Development Agency for Schools (TDA)	http://www.tda.gov.uk/
Finland	HEI: Ministry of Education	http://www.minedu.fi/OPM/?lang=en
France	STATE: Ministry of Education	http://www.education.gouv.fr/ http://www.iufm.education.fr/commaitre-iufm/plaquettes-documents/en_IUFM2.html
Germany	REGION: Federal state accreditation mechanisms run by the Lander.	http://www.bmbf.de/en/6595.php
Greece	STATE: Ministry of Education	http://www.ypepth.gr/en_ec_home.htm
Hong Kong	STATE: Education Ordinance	http://www.edb.gov.hk/index.aspx?nodeID=268&langno=1
Hungary	HEI: The Hungarian Accreditation Committee, an independent body, accredits all ITP courses.	http://www.okm.gov.hu/main.php?folderID=137
Italy	HEI: There is some confusion as to whether there is a state mechanism for accreditation or if accreditation is linked to successful completion of ITP. There is a surplus of teachers and not enough teaching positions at the present date. "Those wishing to take the teaching exam (<i>cattedre</i>) must have this designation. Teachers must pass another exam (<i>concorso</i>) to	http://www.pubblica.istruzione.it/

	obtain professional teaching status” from the Ministry of Public Education website: http://education.stateuniversity.com/pages/722/Italy-TEACHING-PROFESSION.html#ixzz0OoMbCgT4	
Japan	HEI: ITP has to be approved by ‘Monbukagakusho’, Ministry of Education, Culture, Sports, Science, and Technology	http://www.mext.go.jp/english/
Korea	STATE: National Ministry of Education	http://english.mest.go.kr/
Malawi	STATE: Malawi National Exam Board	http://www.malawi.gov.mw/Education/Home%20%20Education.htm
Malaysia	STATE: Ministry of Education and Ministry of Higher Education	http://www.moe.gov.my/?lang=en http://www.educationmalaysia.gov.my/
N Ireland	HEI: From 2010 GTC Ireland will have a greater role in accrediting and registering teachers	http://www.deni.gov.uk/
Netherlands	HEI: Ministry of Education, Culture and Science approve ITP courses	http://www.minocw.nl/english/
New Zealand	HEI: ITP course approved by the New Zealand Qualifications Authority	http://www.minedu.govt.nz/ www.teachercouncil.govt.nz
Poland	HEI: ITP has to be approved by the University Accreditation Committee meeting standards asset by the Ministry of National Education and Sport	http://www.poland.pl/education/structure.htm
Portugal	HEI: ITP course is sanctioned by a <i>Licenciado em Ensino</i> or a <i>Licenciatura - Ramo de Formação Educacional</i> , according to the issuing institution. All courses have to meet accreditation standards set by the independent body, INAFOP (National Institute for Accreditation of Teacher Education). But teaching positions are allocated according to ranking in a national competition.	http://www.min-edu.pt/
Romania	HEI: ITP courses accredited by National Center for Teacher Training. Successful completion of ITP leads to qualification of teacher status. But new teachers need to pass a competitive examination to be assigned a	http://www.edu.ro/

	permanent position.	
Russia	The State Attestation Commission accredits the ITP courses. Primary teachers may be trained in non-university institutions (technikums)	http://www.wes.org/eWENR/05dec/practical.htm
Scotland	STATE:GTC Scotland	http://www.gtcs.org.uk/
Singapore	STATE: Ministry of Education approves all teacher applications	http://www.moe.gov.sg/
Slovenia	STATE: Ministry of Education and Sport	http://www.mss.gov.si/en/
Spain	REGION: Comunidad Autónoma	http://www.mec.es/cesces/inicio.htm
USA	REGION: Individual states are responsible for accreditation. Some states administer a licensing exam which is a commercially produced test.	http://www.ed.gov/teachers/landing.jhtml