Public Disclosure Authorized

Public Disclosure Authorized

70547

(updated 30 December, 2009)

Teacher Education Quality Assurance

Effective Teachers and Performance Standards

Policy Brief 1

Some Key Questions on Effective Teachers and Performance Standards

1. How can the results of current teaching practice be used to create more effective policies and support networks for teacher development?
2. What incentives or disincentives are in place for teachers to use effective teaching methods?
3. Are realistic teaching performance standards in place and are they monitored and evaluated?
4. In what ways should performance standards be used: recruitment and retention; initial teacher training; induction and certification; professional development; performance pay; career progression; public confidence in the system?
5. Are current policies on teacher performance and support tied to student learning and achievement goals?

Executive Summary

- What teachers know and are able to do in a specific cultural and educational context is a better predictor of teacher quality than certification, time in the profession or remuneration.
- Mastery of subject matter knowledge, and pedagogical skills specific to teaching that knowledge, are essential to improving student learning.
- Two vital behaviors which separate out top performing teachers from everyone else, regardless of age, gender, geography, topics and anything else are: (i) use of praise versus the use of punishment; and (ii) rapidly alternating between teaching and questioning or other forms of "testing. Then when required, those teachers make immediate corrections in their feedback to students and in their teaching to ensure student learning.
- A challenge is to devise fair and objective ways to measure teacher performance against a set of professional standards.
- Teacher training institutions, governmental agencies, or professional associations of teachers tend to set professional standards.
- Standards should be explicit statements that are appropriate in all schools and measurable/observable.
- Standards should be appropriate to: age level taught, subject matter specialty, and experience of the teacher. This means that a gradation of standards across a teaching career path is the most useful, beginning with a set of basic skills expected of teachers before they begin teaching.
- Performance standards can be used to guide teacher recruitment and retention, initial teacher training courses, induction and certification programs, ongoing professional development, performance pay, and career progression.

Introduction

This policy brief seeks to address issues regarding teacher effectiveness and professional standards: what the characteristics and practices of effective teachers tend to be, why standards are important, how they can be defined, who tends to develop them, what aspects are typically included, why they need to be validated, how they can be implemented, and how results can be applied at all stages of a teacher's career. Education systems invest heavily in their teachers. Both econometric models and education models researching the impact of teachers on student achievement conclude that teachers make a significant difference to learning outcomes. The challenge is to identify what contributes to teacher quality and to implement teacher management policies to maximise student outcomes from the investment in teachers.

1. What can educational systems do to assure the quality of their teachers?

As part of their quality assurance strategies, education systems need to be confident that teachers' on-the-job performance results in improved student outcomes and positive attitudes towards ongoing learning. Teachers need to be well equipped with mastery of the subject-matter knowledge which they will be teaching. They also need "an evidence- and standards-based repertoire of pedagogical skills that are demonstrably effective in meeting the development needs of all students" (Ingvarson and Rowe, 2007:2). Quality assurance requires defining and applying teacher performance standards linked to student learning and achievement goals.

2. What is teacher quality? Is it the same thing as teacher effectiveness?

Schools typically report the quality of their teaching staff as a distribution by levels of qualifications, a quality proxy readily available. Yet formal qualifications of teachers and other information frequently recorded on a database of teachers (e.g. gender, age, degrees held, certification) seldom predict effectiveness to raise student achievement (Leigh, 2007). Some low but positive relationships have been found for teacher preparation and certification, particularly for reading and mathematics (Darling-Hammond, 1999), and for years of experience at least in the early years of teaching, ratings of teacher training institutions, and teachers' test scores (Wayne & Youngs, 2003). In the 2001 study of reading and mathematics for Grade 5 pupils in Vietnam, the largest predictor of pupil achievement in both subjects was the relevant teacher subject knowledge as measured by the same tests.

The debate on how to conceptualise teacher quality and effectiveness has continued over the past few decades. Two dominant approaches are evident in contemporary debates.

The first approach is the economic one referred to earlier that *seeks to measure teacher productivity*. It acknowledges that such measurement in the teaching profession is more difficult than in many other professions, argues that expert assessment (often by an inspector or a principal) lacks objectivity, and concludes that students' examination results should be the ultimate index of teacher productivity since they correlate with success in further study or labour market prospects. Advocates of this approach duly acknowledge that other factors impinge on student outcomes and that family background explains a large percentage of the variance in students' test scores. One way to control for family background and other student characteristics is to measure relative change in student achievement over time and to hold teachers responsible for achievement beyond or below expectations. This "value added" approach has also been applied to measuring school effectiveness and improvement (McPherson, 1992; Wyatt, 1996).

How does this first approach guide policy formulation for teacher management? Where there is evidence of an association between inputs and outcomes, policy options in teacher management

can be selected accordingly, taking account of the local context. Rice (2003) identified "five broad categories of measurable and policy-related indicators": teacher experience; teacher preparation programs and degrees; teacher certification; teacher coursework; and teachers' own test scores. However, she also warned of the complexity of the issue and the need to adopt multiple measures in making decisions (e.g. in attracting and hiring teachers). An issue that has gained momentum recently is performance pay for teachers, addressed in the separate policy brief on Incentives and Working Conditions.

A second approach to conceptualising teacher quality places the emphasis on *what teachers should know and be able to do*. Without in any way devaluing the importance of student achievement as measured by tests and other assessments, this approach also recognizes that the role of teacher involves a broad range of knowledge and skills. The teacher needs to have an in-depth understanding of the subject matter being taught and the requirements of the curriculum. The teacher also needs to understand children's development – physical, cognitive including language, social, and moral – and to appreciate factors that facilitate or inhibit learning. The teacher needs to have a good understanding of the context for learning, including the factors in the classroom (such as organization and classroom management) and factors in the home and community. Also necessary is a good understanding of instructional psychology including theories of teaching and theories of learning.

Beyond this knowledge base, the teacher needs to develop a repertoire of skills leading to effective lesson planning, the organization of structured learning experiences that takes account of the needs of different students, appropriate reinforcement, good communication, and methods of teaching that foster active learning, learning with understanding, and challenges in problem solving (see Annex 1: Effective Teaching - What is Ideal?). Other skills require the teacher to collect evidence on what students learn and understand, and to provide feedback on misunderstandings or challenges leading to deeper insights. Beyond the classroom and the lesson being taught, the teacher is expected to encourage or lead extra-curricular activities, to provide appropriate reports to parents, to collaborate with colleagues in building a positive school climate, to maintain good records, and to set a good example as a citizen. Each teacher needs to exercise a duty of care for all students, being alert to children who show evidence of being at risk. In addition, through being a role model and through incidental instruction, the teacher is expected to develop in children a love of reading, proficiency in information technology skills, concern for others, and a positive approach to lifelong learning. The list seems endless.

Research suggests that high quality/effective teachers who are able to develop sound academic achievement with their pupils tend to share many of the following characteristics. The first list is that from the OECD report (2005), and the second also based on other research analyzed by Craig, Kraft and DuPlessis (1998).

Table 1: Characteristics of High Quality/Effective Teachers

OECD List (2005)	Synthesis by Craig, Kraft and DuPlessis (1998).
• demonstrate commitment • have subject specific knowledge and know their craft • love children • set an example of moral conduct • manage groups effectively • incorporate new technology • master multiple models of teaching and learning • adjust and improvise their practice • know their students as individuals • exchange ideas with other teachers • reflect on their practice • collaborate with other teachers • advance the profession of teaching • contribute to society at large	• know their subject matter; • use pedagogy appropriate for the content; • use an appropriate language of instruction, and have mastery of that language; • create and sustain an effective learning environment; • find out about and respond to the needs and interests of their students and communities; • reflect on their teaching and children's responses and make changes to the learning environment as necessary; • have a strong sense of ethics; • are committed to teaching; and • care about their students.

Stating that quality teaching should be based on *what teachers know and should be able to do* seems beguilingly simple. But an initial challenge is to condense the complex and diverse array of knowledge and skills expected of teachers into a common conceptual framework that we might label *professional standards for teachers*. A second challenge is then to devise fair and objective ways to measure teacher performance against the standards. An adequate measure will involve far more than a subjective rating by a supervisor. It needs to be based on objective evidence, often collected and collated by the teacher, but also involving some external evaluation. Only if both of these challenges can be met will the second approach to conceptualizing teacher quality be useful for teacher management purposes.

In this brief, the terms "quality teachers" and "effective teachers" are used interchangeably. These teachers may have different teaching styles and personalities, and may be considered effective for varying reasons. The most common of these reasons discussed above is usually sound/high student achievement by most students in the class, something that is more easily measured than some other valued outcomes of good education. The measurable gains in student progress are some of the strongest indicators of improvement in educational quality. In many communities, teachers are also considered effective if many of their students attain some of the following: an enjoyment of learning; and skills to continue to learn, solve problems, and functionally operate in and contribute to their societies.

3. How crucial is teacher quality/effectiveness in affecting student outcomes?

Personnel costs – principally teacher remuneration - absorb the major share of education budgets for basic education, frequently reaching around 90% in a number of developing countries. Given the magnitude of this investment, how crucial is teacher quality in affecting student outcomes?

Broadly speaking, there are two groups of researchers who have used quantitative analyses to estimate teacher effectiveness, defined in terms of student achievement. One group has employed econometric models – an education production function - with multiple regression analysis to link inputs to outcomes (e.g. Hanusheck, 1986). However, research examining correlations between

teacher characteristics (e.g. experience, qualifications, gender, and subjective ratings by principals or supervisors) and student achievement have only yielded a few weak associations. Yet there is evidence that teachers vary considerably in producing relative differences in student outcomes and hence the major emphasis is on contrasting the most and least successful teachers. Thus a recent study by Leigh (2007) using over 9,000 teachers from 1,058 schools in Australia, State of Queensland, analysed relative student gains in literacy and numeracy over a two year period associated with a teacher effect, while controlling for other variables (class size, grade level, school, and student differences). Using changes in achievement over the time period allowed the research to effectively control for home background factors. Leigh concluded that there was a wide distribution of teacher success with similar results for literacy and for numeracy[1]. This research made no attempt to define what is involved in quality teaching. The sole focus was on relative success measured by students' gains in achievement relative to other students.

A second group of researchers has attempted to quantify the impact teachers have on student learning when compared with other major influences such as the home and community, student characteristics, and schools (through school-level variables such as leadership, financial resources, school organization and governance). The methodology for much of this research has been refined through the school effectiveness movement that has been so prominent over the past two decades. Whereas earlier studies of school effectiveness separated school effects from individual student variance, most recent studies have applied multilevel models (Goldstein, 2003; Hill & Rowe, 1996) to apportion the variance associated with the student, the class/teacher, and the school levels. The consensus emerging from this research is that "classrooms are far more important than schools in determining how children perform at school" (Muijs & Reynolds, 2001, p. vii). Alton-Lee (2003) synthesized data from a large number of studies and reviews across several countries and education systems and across different grade levels to document for the New Zealand Ministry of Education the relative impact of classes/teachers and schools on variance in student outcomes and also came to a similar finding.

4. ***What are the current trends in the development of teacher performance standards*?**

Some of the current trends include:

- Teaching standards deal with not only what will be measured, but how evidence on capability and performance will be gathered, and finally how judgments will be on whether or not the standards have been met.
- Teachers themselves often develop the standards through their professional associations;
- Teaching standards are performance based, and need to describe what teachers should know and be able to do about the teaching and learning;
- Teachers work is conceived as the application of expertise and values and includes assessment strategies and what teachers do in real teaching situations;
- Assessment of performance becomes a primary tool for on-going professional learning and development.

5. ***Who should develop professional standards for teachers****?*

Fundamental questions are: Who should develop and validate professional standards for teachers? What happens in other professions? Should standards be developed by training institutions? Or by employers? Or by government to cover both public and private sectors? Or by the profession

[1] To describe the magnitude of teacher impact, Leigh (2007) concluded that "moving from a teacher at the 25th percentile to a teacher at the 75th percentile would raise test scores by one-seventh of a standard deviation … (where) … a 0.5 standard deviation increase in test scores is equivalent to a full year's learning" (p. 11).

itself though professional gate-keeping associations as often occurs for medical practitioners, engineers, architects and many other professions?

There tends to have been a progression over time in who sets standards:

- At one stage, training institutions in most professions defined standards, particularly if the institutions were under government control (e.g. Teacher Training institutions controlled by a Ministry of Education). Graduates of accredited institutions were then accepted into employment without question.
- With increasing diversity of training options and more diverse employment opportunities, governments or agencies to which governments have devolved power (sometimes referred to as quangos, or quasi non-government organizations) such as Registration Boards have established a mechanism to certify and register professionals according to agreed professional standards (see Annex 2: Development of professional standards in other professions). Employers usually conducted on-going performance appraisals to ensure satisfactory work practices. In teaching, performance appraisals may take the form of inspection, usually by external officers; or assessment by a school principal; or by a teacher submitting evidence (e.g. in the form of a portfolio) to a designated authority.
- Some professions have progressed to a stage where members themselves have set up formal arrangements (e.g. a college, or an organization, or an authority) to act as a gate-keeper for the profession. For example, a College of Surgeons might conduct formal examinations for entry to the profession as well as monitoring quality assurance processes requiring evidence of continuing professional development for maintenance of membership. In Australia, state of New South Wales, an Institute of Teachers has been set up to oversee a system of accreditation and to provide recognition of a teacher's professional capacity against agreed professional standards prescribed by government.
- Different countries use different means to ensure adequate standards for entry to teaching as a career and for possible periodic performance appraisal on-the-job. However, with recent debates on enhanced professional standards for teachers and demands for greater accountability, the situation in many countries is in a state of flux.

Regardless of what stage a country has reached in developing professional standards for teachers, it is clear that the standards need to be:

- *owned by teachers* themselves rather than imposed if they are to work effectively in improving teaching and learning
- *perceived as fair, challenging, and helpful* in providing feedback to teachers on their performance
- capable of *affording due recognition to teachers when they improve their performance*.
- *valued by employers, used in key teacher management decisions, and respected by the public* as an authentic measure of what teachers know and are able to do.

Important policy reform issues are highlighted and underlined in the examples given below.

Table 2: Examples of agencies responsible for setting standards

Country	Intervention	Comments
South Asia		
India	India through an Act set up in 1995 the **National Council for Teacher Education (NCTE)** and gave it statutory powers for framing regulations and norms for maintaining standards of teacher education in the country, which direct bearing on teacher certification also. The NCTE performs functions that are regulatory and also concerned with academic development of teacher education. Its functions are wide ranging and	

	include: a. To undertake surveys and studies relating to various aspects of teacher education and publish the results thereof, b. To make recommendations to the Central and State Governments, Universities, and recognized institutions in the matter of preparation of suitable plans and programs in the field of teacher education, c. To co-ordinate and monitor teacher education and its development in the country, d. To lay down guidelines in respect of minimum qualifications for a person to be employed as a teacher in schools or in recognized institutions, e. To lay down norms for any specified category of courses of training in teacher education, including the minimum eligibility criteria for admission thereof, and the method of selection of candidates, duration of the courses, course contents and mode of curriculum, f. To lay down guidelines for compliance by recognized institutions, for starting new courses or training and for providing physical and instructional facilities, staffing pattern and staff qualifications, g. To lay down standards in respect of examinations leading to teacher education qualifications, criteria for admission to such examinations and schemes of courses of training, h. To lay down guidelines regarding tuition fees and other fees chargeable by recognized institutions, i. To promote and conduct innovation and research in various areas of teacher education and disseminate the results thereof, j. To examine and review periodically the implementation of the norms, guidelines and standards laid down by the Council, and to suitably advise the recognized institutions, k. To evolve suitable performance appraisal systems, norms and mechanisms for enforcing accountability on recognized institutions, l. To formulate schemes for various levels of teacher education and identify recognized institutions and set up new institutions for teacher development programs, m. To take all necessary steps to prevent commercialization of teacher education, and perform such other functions as may be entrusted to it by the Central Government.	
Other		
Nigeria	**National Teacher Development Policy Framework (2006):** Key responsibilities include: • Upgrading the criteria for recruiting students into National Colleges of Education. • Providing a framework of school-based induction for beginning teachers, which will serve as a support system for licensing and registering teachers. • Providing a framework around which Federal and State education authorities can build a wide range of programs and multiple pathways to offer serving teachers with continuing professional development, enabling them to meet the expected standards. • Creating an incentive structure to motivate teachers to improve as well as work in rural areas and with disadvantaged groups of students. • Establishing professional standards for teaching in Nigeria that: set out what teachers should know and be able to do in their teaching and that are appropriate for different levels of teaching and at various stages in	This is a useful example of the establishment of teacher accountability and performance standards. It addresses teacher quality and performance standards in the context of a broader thematic framework covered by the six components.

<table>
<tr><td></td><td>their professional career (on graduation from initial training, on completion of a probationary teaching period and for licensing as an accomplished teacher).
• Creating a framework for monitoring and evaluating teacher classroom performance, work ethics and professional standards, in addition to serving as a basis for needs-based continuing professional development of teachers.</td><td>Source: Nigeria Federal Ministry of Education (FME) 2006</td></tr>
<tr><td>Australia</td><td>Education is delivered at a state/territory level while the national government exercises authority over various aspects through national guidelines or an overall framework. In the case of professional standards for teachers, a Ministerial Council comprising the Commonwealth Minister and Education Ministers from the eight jurisdictions, endorsed in 2003 a National Framework for Professional Standards for Teaching and required all eight jurisdictions to align their own registration/accreditation arrangements with the national framework by the end of 2006.

The National Framework for Professional Standards for Teaching aims to:
- provide common national understandings of what teachers need to know and be able to do to support and improve student learning;
- describe levels of teaching quality to which teachers might aspire and ensure teacher development opportunities are available nationally to achieve these levels;
- provide a basis for national recognition of the quality of teaching; provide the basis for national alignment of standards for graduates of teacher education programs;
- strengthen initial teacher preparation and ensure national commitment to effective and adequate teacher preparation; and provide a basis for ongoing commitment by Commonwealth and State and Territory governments to support teachers' professional learning.</td><td></td></tr>
<tr><td>USA</td><td>Many examples available, including National Board for Teacher Professional Standards. NBPTS is an independent, nonprofit, nonpartisan and nongovernmental organization. It was formed in 1987 to advance the quality of teaching and learning by developing professional standards for accomplished teaching, creating a voluntary system to certify teachers who meet those standards and integrating certified teachers into educational reform efforts. Its mission is to:
• 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
• Advocating related education reforms to integrate National Board Certification in American education and to capitalize on the expertise of National Board Certified Teachers</td><td>See Annex 3 for details of their 5 core propositions for what teachers should know and be able to do</td></tr>
</table>

UK	**<u>The Training and Development Agency for Schools (TDA)</u>** is the national agency and recognized sector body responsible for the training and development of the school workforce. The 2008−09 TDA remit letter from the Department for Children Schools and Families (DCSF) identifies their priorities and role in ensuring all children and young people achieve their full potential i.e. The TDA will work with the DCSF to ensure: • High quality teaching and learning in every classroom, by securing a sufficient supply of new teachers and effective continuing professional development • Ongoing workforce reform in schools to secure effective staff deployment that addresses local needs so teachers, schools and children realize the benefits • Closer cooperation between, and integration of, schools and other children's services to meet the needs of children and families • Support for the development and roll out of extended schools They are also responsible for: • Increasing the number and quality of science, technology, engineering and maths teachers • Leading on the development of a new qualification for teachers: the masters in teaching and learning • Supporting special educational needs and disability training for the workforce • Providing training and development opportunities to support staff • Supporting the implementation of the national agreement	The TDA play a central role in supporting the workforce to help children and young people meet the outcomes of the national *Every Child Matters* agenda.

6. <u>What should be included in professional standards for teachers?</u>

How does any system decide what to include in professional standards for its teachers? The literature (e.g. OECD, 1994; Reynolds, 1992; Shulman, 1987) provides a number of sources of information to answer the questions: What should teachers know? What should teachers be able to do? In developing professional standards for teachers, it is not realistic to expect that all systems will use a common set of domains and categories within each domain. However, to the extent that teaching is a universal profession, it should be possible to map professional standards used in one jurisdiction or one country to those in another system or country. For present purposes, consider samples of professional teaching standards already developed in four different countries (i.e. USA, England, Australia/NSW and Vietnam) noted in examples in the matrix below.

In developing any category system (a set of "boxes") to represent a field (such as professional standards), the categories need to cover the whole field and to be independent of one another. Any set of professional standards should have a set of labels that include all the key aspects of quality teaching (i.e. that exhaust the field) and that are mutually exclusive. In other words, any key aspect of professional standards should fit into one and only one box in our overall framework for professional standards.

Inferring from the above examples, there are three broad domains for professional standards for teachers, and then multiple and sometimes different sub-categories under each. The three broad domains are:

- *Knowledge*. This domain might be sub-divided into several sub-categories including extensive knowledge of the subject being taught; knowledge of the curriculum; knowledge and understanding of how children develop and how they learn; knowledge of the context in which learning occurs (home, community, school factors); knowledge and understanding of theories of teaching and theories of learning; knowledge of assessment techniques, and so on.

- *Teaching skills*. Teachers will also need to be able to apply their knowledge on pedagogy and be able to plan lessons, structure information, manage a classroom, engage students in active learning, emphasise deep understanding, create a positive environment for learning, present challenging situations to encourage problem solving, collect and monitor information on achievement, maintain good student records, provide feedback to reinforce learning or correct misunderstandings, provide motivation for students, cater to the learning needs of individual children, support cooperative group work and peer tutoring, and so on.

- *Professional attitudes and behaviours*. Included here are: the attitudes the teacher brings to her/his role such as a belief that every child can learn; setting high expectations; being responsive to individual student needs including their safety beyond the classroom; being committed to one's own professional development; seeking feedback on one's own performance and engaging in strategies for improvement; involvement with parents and being a role model in the wider community; participation in professional associations; and providing leadership among colleagues.

If professional standards are written in very broad generic language, they are likely to be seen as desirable goals but unlikely to be applied in meaningful ways. On the other hand, if they are written as highly specific knowledge and skills, they are likely to lead to long checklists of behaviours, as in micro-teaching, that lack integration or coherence. (Ingvarson and Rowe (2007) distinguished four features of well-written standards:

- they should relate to a "large, meaningful and significant 'chunk' of a teacher's work";
- they should be context-free, or be readily applied in different classrooms in different locations;
- they should not be prescriptive, but allow the teacher to use diverse and innovative strategies; and
- they should be measurable or observable, even if different teachers use different kinds of evidence to demonstrate achievement of the standard.

Taken together, these features summarise the *standards-based* nature of professional competence. A key feature of current systems for professional standards is that the criteria are explicit statements about performance. In judging performance relative to these criteria, evidence needs to be provided rather than a subjective rating. That evidence is most likely to be collected by the teacher, and often organised in a work portfolio for convenient reference. It follows that two teachers might use quite different evidence for the same activity (e.g. community involvement). The evidence will also focus on outcomes rather than inputs. Student achievement is likely to be a key ingredient in the evidence collected but other outcomes will also be important. The important policy related issues are highlighted and underlined.

Table 3: Examples of groups of competencies included in national standards

Country	Intervention	Comments
Sri Lanka	**The National Institute for Education**, one of the lead teacher education and curriculum development institutes in the country identified the following areas as necessary for an accomplished teacher in Sri Lanka: • has a sound knowledge in the subject matter and constantly updates it and relates teaching/learning to social, cultural and environmental contexts; • is able to use a wide range and variety of techniques which enable students at different ability levels to learn; • has multiple qualities of a leader and is approachable, accommodates the students, peers and parents superordinates • is an extended professional reaching beyond oneself and has a high degree of commitment to make students successful in their lives; • provides an exemplary image, is a model to all; his/her mere presence makes a difference	These were established after broad consultation with teachers, head teachers, zonal officers, teacher educators, and students, as part of an action research study through the National Institute of Education. This had been initiated as a broader vision to develop a comprehensive teacher development framework in Sri Lanka.
Indonesia	Groups of Competencies for S1 PDSD (i) **Pedagogical:** • Able to develop the potentials of students of primary school. • Able to develop curriculum which will encourage student's participation (ii) **Personality:** • Able to present herself as a firm, stable, mature, and charismatic individual. • Able to present herself as an ethical, individual and act as precedent for students and members of community. (iii) **Professional**: • Able to develop curriculum of five subjects for primary school creatively and innovatively. • Able to assess and improve learning process through class-research (iv) **Social:** • Able to contribute in the development of education at local, regional, national and global level. • Able to use information and communication technology to communicate and develop herself. able to use English to expand knowledge.	Indonesia has been through standards setting in the primary and secondary student curriculum and also has developed professional standards for teachers (Depkiknas, 2006).

Vietnam	Three broad groups of teacher competencies: • Ideology and Personality • Knowledge • Pedagogical Skills	An interesting example of a nation which sets ideological professional standards for teachers is that of Vietnam. Three Strands of Competencies are listed below. The first competency listed under Ideology and personality has to do with support for the Socialist ideology. While some might critique Vietnam for bluntly stating direct statements concerning ideology, many scholars have pointed out that the *implicit* goals or competencies of almost all schools and teachers are to pass on to their children and young people the political and economic systems of their country. In other words, Vietnam is just more explicit in stating them. (see Annex 3 for further details)
USA	The **National Board for Professional Teaching Standards** in the United States (1999), formed as a result of the 1987 report of the Carnegie Corporation's Taskforce on Teaching, *A Nation Prepared: Teachers for the 21st Century*, developed five core propositions on *What Teachers Should Know And Be Able To Do:* • Teachers are committed to students and their learning • Teachers know the subjects they teach and how to teach those subjects • 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.	
England	**The Training and Development Agency (TDA)** for Schools in England is presently consulting on a revised set of professional standards for teachers with the intention that they will be implemented from September 2007. This framework of standards is grouped under three headings: • Professional attributes (9 categories) • Professional knowledge and understanding (12 categories) • Professional skills (12 categories).	

Australia/ State of New South Wales (NSW)	In New South Wales, Australia, **the Institute of Teachers** developed a set of Professional Teaching Standards in 2003 that then underwent extensive consultation. The standards for a beginning teacher have three domains, with each divided into elements. They are: • Professional knowledge (knowledge of subject/content and how to teach that content to students; knowledge of students and how they learn) • Professional practice (plan, assess and report for effective learning; communicate effectively with students; create and maintain safe and challenging learning environments through the use of classroom management skills) • Professional commitment (continually improve professional knowledge and practice; are actively engaged members of the profession and the wider society).	
Vietnam	Under the Primary Teacher Development Project in Vietnam (Griffin, Nguyen & Gillis, 2004), the project team developed a set of professional standards for primary teachers and trialled them with 25,000 teachers across 10 provinces. The professional standards ("profile" for short) comprise three strands: • Personality, Ideology and Politics (developed with 4 requirements, but now extended to 5) • Knowledge (5 requirements) • Pedagogical requirements (5 requirements).	(see Annex 3 for further details)
Philippines	**National Competency-Based Standards for Teachers**	(need to check for further details)

7. *How can professional standards be tailored to fit different situations?*

Although the above section presents a broad framework for the shape of professional standards for teachers, even within the one education system, modifications are likely to be required to fit particular circumstances. Four situations warrant particular comment.

- Different versions of the professional standards will be required for teachers at different levels (e.g. early childhood, primary, secondary). The teacher profile developed in Vietnam was initially prepared, trialled and refined with primary teachers. Parallel versions now have to be developed for teachers at other levels.
- Where teachers are involved in specialist subjects (mathematics, science, music, foreign language, IT, etc), modifications of the professional standards will be required to fit the specialization. For example, the National Board for Professional Teaching Standards (NBPTS) in the USA has developed sets of standards for 26 teaching areas/fields.
- Some professional standards have been developed solely for beginning teachers. These standards are appropriate for pre-service training institutions evaluating their graduates and for new teachers preparing for initial certification. However, several schemes provide a scale of developing performance so teachers can be assessed in line with their professional growth and career advancement. For example, the professional standards developed by the New South Wales Institute of Teachers distinguish four levels: graduate teacher, professional competence, professional accomplishment, and professional

leadership. The scheme developed by the Training and Development Agency (TDA) for Schools in England distinguishes Induction/main scale teachers (I), Post Threshold teachers (P), Excellent teachers (E), and Advanced skills teachers (A).

- Some systems have developed separate professional standards for educational leaders or managers while others have incorporated leadership roles into the uppermost level of professional standards for teachers.

8. ***Do professional standards need to be validated?***

Yes. Once draft standards have been developed, there needs to be extensive consultation with all stakeholders (including government and private sector education authorities that employ teachers, teacher organizations, parent organizations, and the public) and opportunities for feedback to be incorporated into revised versions of the standards. Widespread consensus needs to be achieved before the professional standards are adopted. In addition to consultation and accompanying communication strategies through professional publications and the public media, there needs to be cross-validation of professional standards through systematic surveys seeking views of stakeholder groups and through research linking performance on the standards to student achievement and other outcomes. Only then is it reasonable to assume that the standards can be applied confidently for key teacher management decisions in teacher training curricula, decisions on graduation from training institutions, teacher deployment, certification, on-the-job performance appraisal, identifying needs for professional development, and career progression.

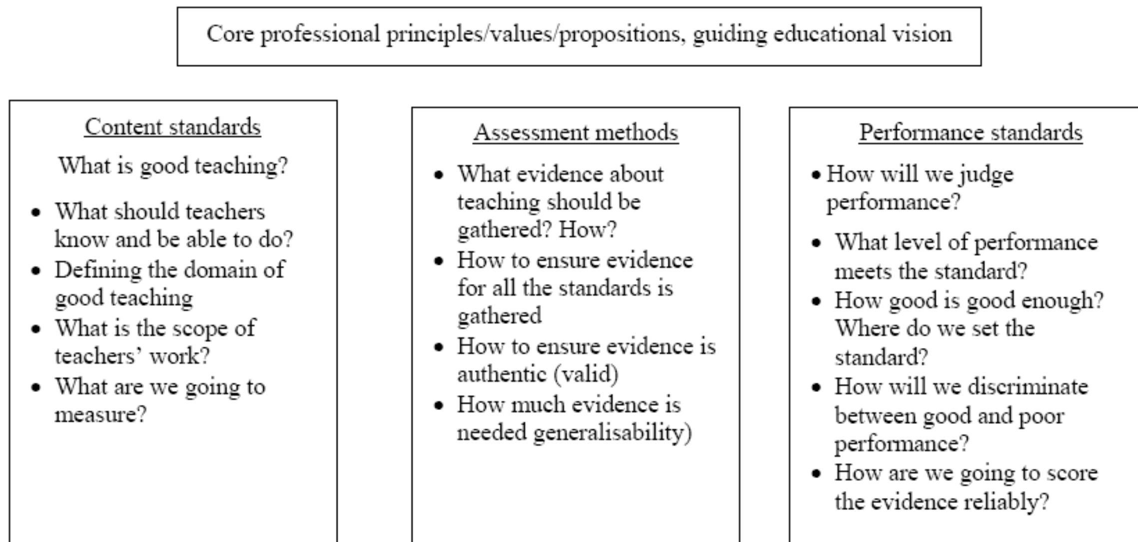
9. ***What is the process for developing teacher performance standards*?**

Setting teacher performance standards requires an analysis of the tasks that teachers should do and setting criteria for assessing the degree to which task accomplishment meets pre-determined performance standards. Achieving these standards is a central task of initial and on-going professional development. There tend to be three parts to the process of developing teaching standards.

- Defining what is to be assessed-the content standards;
- Developing methods to gather evidence about the quality of teaching;
- Setting the performance standards in the evaluation process.

Figure 1 from Ingvarson and Rowe (2007) provides questions which must be asked when dealing with the process of developing teacher performance standards. After detailing the core professional values, the teaching standards must involve content, assessment and performance.

Figure 1: Content, Assessment and Performance Standards



Source: Ingvarson and Rowe (2007)

10. __Should standards be the same across countries__?

The short answer to that is no. Teaching standards are necessarily culturally based. While there are a number of international standards such as assessment and professionalism that can be found in almost every setting, there are others that remain specific to each country.

11. __What key elements should be noted in implementing a system of performance appraisal?__

Practices in evaluating teachers have varied greatly over time, across countries, and depending on the local context. One variable that impacts on how teacher appraisal is conducted is the extent of decentralisation. Highly centralised systems are more likely to have prescriptive, regular assessment by education managers (school principal, or district manager, or external inspection team) while decentralised systems are more likely to rely on performance appraisals within the school, with teacher-initiated accountability and peer review often providing input to formal reporting. A second variable impacting on performance appraisal is the consequence of appraisal decisions. If performance appraisal involves "high stakes" decisions for salary or promotion, the appraisal will be more structured and formal than appraisals leading to regular annual increments on the salary scale, or peer support, or workload allocation.

However, in implementing any standards-based performance appraisal system, four aspects warrant consideration:

- What are the content standards? These have most likely been developed at a system level and they will include not only the domains and their sub-categories, but a standards-based description of performance at different levels.

- What evidence is available on the teacher's performance? Is there evidence for all domains? Is it authentic (valid)? Who has responsibility for collecting the evidence? In

most cases, the onus will be on the teacher to collect and collate the evidence (e.g. in a portfolio) but the system or the school should facilitate access to databases or other sources to assist in the collection of evidence. In some systems, teachers pay an external agency to document their knowledge and skills (e.g. via tests and observations) and hence to furnish evidence for appraisal.

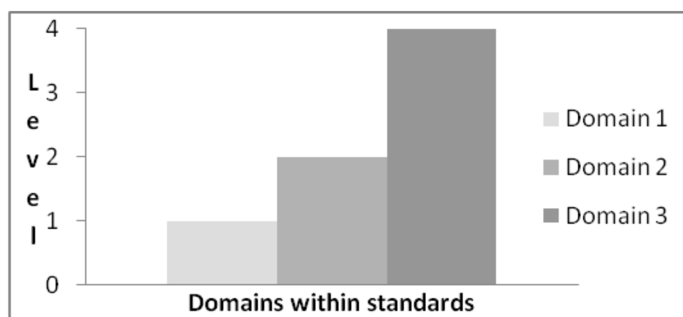
- Who makes judgments on the appraisal? Any evaluation involves a comparison of measurement data with a criterion. In this case of standards-based assessment, the criteria are specified in terms of statements about levels of a teacher's knowledge, skills and behaviours. Evaluative judgments need to be made and responsibility will reside with one party for making, recording and communicating final decisions. Although teacher self-assessment is likely to be part of the process, the school management or an external agency will be responsible for final assessment.

- As part of their policies on teacher appraisal, systems need to consider privacy provisions in storing and reporting performance appraisals and, in cases where "high stakes" decisions are involved, an appeals mechanism if the teacher's self appraisal and the formal system assessment differ markedly.

12. *What is profile reporting*?

The most common form of standards-based teacher appraisal will comprise three or more content domains, each with a number of levels. The benefit of profile reporting across domains is that it provides diagnostic feedback on areas of strength and weakness with implications for further professional development as required. For simplicity in recording and reporting, and for decision making about performance pay or progression on the salary scale, it will be tempting to aggregate across domains and to provide a single index of teacher performance. If this is done by quantifying assessments on each domain and then summing scores, some serious distortions can result. A preferable approach is to report results as a profile, as shown in Figure 2. If a single score or an overall judgment is required for decision making, then some ground rules can be applied to the profile pattern. For example, to be eligible for a bonus payment, a teacher might need to be at level 3 on at least two domains and not below level 2 on any domain.

Figure 2: Profile showing a teacher's achievement in each of three domains



13. *How can the results of standards-based performance appraisals be best used?*

This section mentions briefly some implications of using the results of performance appraisals of teachers. The section is deliberately brief since these topics will be explored in more depth in other policy notes.

Recruitment and retention*:* Attracting the best students into teaching as a career and retaining them is a major issue for education systems. The literature on teacher recruitment and retention (reviewed by Guarino, Santibanez, Daley & Brewer, 2004) has identified some key factors in recruitment: teaching is more attractive to females, less likely to attract minorities, less attractive to high ability students, less likely to attract science and maths graduates, and in some cases more likely to attract those with an altruistic desire to serve the society.

Factors related to attrition included low satisfaction in the early years of teaching, difficult school environments, higher salaries in other professions, and remote locations. In contrast, factors related to higher retention included favourable compensation policies (mostly salaries), mentoring and induction programs, and more autonomy and administrative support. Linking these findings to professional standards is a stretch, but if well-articulated professional standards were associated with teacher compensation and opportunities for enhanced career pathways, then a positive association with better recruitment and improved retention might be expected.

Initial teacher training*:* Initial teacher training has been the subject of numerous reviews across countries and in different education jurisdictions in recent years. For example, the Australian Government set up a *Review of Teaching and Teacher Education* in 2002 that focused on attracting and retaining talented people to teaching, particularly in the fields of science, technology and mathematics. In addressing ways to revitalise the teaching profession, the Review Committee (2003) paid particular attention to nationally consistent professional standards, believing they would "improve the public profile and standing of the teaching profession". Under the Primary Teacher Development Project in Vietnam, professional standards for primary teachers developed under the project became a basis, not only for the development of pre-service and in-service training modules, but also for the revision of pre-service and upgrading curricula in teacher training.

Induction and Certification*:* In recent years, defined competency standards have become an integral part of teacher certification. Many professions require a period of induction for new graduates prior to their certification within the profession. Induction programs for beginning teachers have commonly involved structured support and mentoring, sometimes with a reduced workload for the new teacher. However, assessment against a professional standard as a requirement of initial certification or licensure has been relatively recent. Practices vary across systems on who should undertake the performance appraisal and issue the certificate. Options include the employer, a designated government or quasi-government agency, or an agency representing the profession. Decisions on initial certification from the Better Employment and Redeployment, Management and Universal Teacher Upgrading (BERMUTU) project in Indonesia are very high stakes, resulting in a 100 percent increase in salary. The Philippines is also working on National Competency-Based Standards for Teachers that will be used as a means of accrediting teachers for work in public schools.

Professional development*:* In-service teacher training (INSET) is widely recognised as an integral part of any teacher's on-going professional growth. Professional development is provided for a variety of reasons. Two principal purposes warrant mention here[2]. From time to time, the education system will want to introduce new ideas or approaches (e.g. a new curriculum; or a new priority such as road safety or drugs education across the curriculum; or new developments in information technology) and this will require in-service training for teachers. A second possibility is the opportunities provided by the system to facilitate professional growth for

[2] Upgrading programs could be considered as a third option.

its teachers. Partly, this is to ensure teachers keep up-to-date but beyond this, teachers should be expected to develop professionally and to achieve increasing levels of competence leading to leadership roles within the profession.

Attendance at in-service courses can be documented as evidence of a teacher's professional growth but attendance alone may not achieve this outcome. If professional standards for teachers are used to record growth in professional competence, regular performance appraisal can lead to recommendations for required professional development activities or it can serve to document achievement against the standards resulting from participation in professional development.

Performance pay: Performance (or merit) pay has been experimented with in several countries, but difficulties in establishing professionally credible methods of assessing teaching performance have been problematic. More recently, in line with economic rationalist management models of education governance and their focus on measurable outcomes, there has been a renewed interest in performance pay for teachers. Performance pay has been linked directly to the debate on the production function of teachers and a market place approach to teaching and learning. Figlio and Kenny (2006) reported positive relationships between individual teacher performance incentives and student achievement data using United States data, although they caution about interpreting the findings as a causal link since the data were derived from cross sectional surveys and not from a controlled experiment. However, there is considerable scepticism that employers could use student achievement alone as the basis for incentive payments to teachers (Retel & Devai, 2007), even with adjustments for other variables such as home background, as occurs in "value-added" models (Millmann, 1997). Performance of teachers needs to include elements other than student achievement, as important as this is. Regular performance appraisal for teachers is essential and that it should be a key factor in a teacher's career progression. However, having an authentic measure of professional standards, with wide consultation and on-going validation, is a prerequisite to the introduction of any scheme for teacher compensation based on performance.

Career progression: What makes most sense is to provide incentives and reward teacher performance by having a salary scale with (say, three) steps (or barriers, depending on your point of view). Progression between steps would require, in addition to formal qualifications, demonstrated performance at a specified level, as measured on the professional standards. Within each step on the salary scale, a teacher would progress in annual increments, subject to satisfactory performance appraisal. To achieve this situation, a number of aspects need to be in place. Firstly, there would need to be an accepted system of regular performance appraisal of teachers. "Regular" could be defined as annual, or every three years, or certainly at least every five years. The appraisal would need to be conducted in line with an accepted professional standard. One possibility would be that annual appraisal, affecting only incremental progression within steps of the scale, might be conducted within the school whereas an appraisal that enabled progression to the next step might require an external evaluation. The external performance appraisal could be provided by appropriately trained inspectors, or district/provincial managers, or the principal of another school.

Teachers do need professional recognition for quality teaching. In addition, a compelling case can be made for additional compensation provided as individual teacher performance pay, reflecting achievement as measured by agreed professional standards. However, these outcomes can be better achieved by a rational system of career progression than by performance pay based only on student achievement. The latter would be subject to very substantial errors of measurement at an individual teacher level and would neglect many other components that comprise professional standards for teachers.

Public confidence in the system: Finally, a well-recognised system of performance appraisal for teachers, based on authentic (valid) professional standards, would attract considerable public confidence to the education system. This public confidence would be further enhanced if the performance appraisal extended across public and private sectors, was accompanied by an appropriate media communications strategy, and was transparent to parents in a local community. One might predict the benefits of enhanced public confidence in the delivery of education and in teacher quality would include attracting high quality graduates to teaching as a career, more capacity to leverage resources for local schools, greater cooperation between private and public sectors, encouragement for more teacher mobility, and enhanced learning outcomes for students.

Annex 1

Effective Teaching: What is ideal?

Effective teachers have different styles and personalities, and are considered effective for varying reasons. In many communities, teachers are considered effective if many of their students attain some of the following: sound academic achievement; an enjoyment of learning; and skills to continue to learn, solve problems, and functionally operate in and contribute to their societies. Effective teachers give students appropriate attention when needs arise.

Whatever other worthwhile results are achieved because of teachers' work, teacher effectiveness is usually expressed in terms of pupils' academic achievement, something that is more easily measured than some other valued outcomes of good education. The measurable gains in student progress are some of the strongest indicators of improvement in educational quality. Improving the learning environment will help raise student achievement.

Teachers who are able to develop sound academic achievement with their pupils tend to share many of the following characteristics. Effective teachers at a mature stage of development tend to:

- know their subject matter;
- use pedagogy appropriate for the content;
- use an appropriate language of instruction, and have mastery of that language;
- create and sustain an effective learning environment;
- find out about and respond to the needs and interests of their students and communities;
- reflect on their teaching and children's responses and make changes to the learning environment as necessary;
- have a strong sense of ethics;
- are committed to teaching; and
- care about their students.

The brief review that follows summarizes the most common elements of effective teaching. Some of this work has been excerpted from Heneveld and Craig (1996), which deals specifically with applying factors of school effectiveness and improvement to educational project design. Listed below are features related to the classrooms of effective teachers that need to be covered by teacher education programs and put in place in the larger education system.

A Capable Teaching Force: Among the conditions that define the capability of a school's teaching force are i) the teachers' mastery of the material they are supposed to teach (Huberman and Miles 1984; Lockheed and Verspoor 1991); ii) the amount of teaching experience they have (Haddad et al. 1990); iii) the length of time they have been in the school (Purkey and Smith 1983); and iv) the extent to which the teaching force is full time in the school (Fuller 1986). It is expected that teachers in developing countries will also be more effective if they know their subject matter, have experience, and are stable in their full-time work assignment.

Adequate Support: The research literature strongly indicates that ongoing, relevant staff development activities are necessary if a teaching force is to be effective (Blum 1990; Dalin et al. 1992; Farrell 1989; Levine 1991; Lockheed and Verspoor 1991). This research suggests that adequate time and resources need to be set aside for teacher development, that staff members need to have a say in the content of activities, that skills learned should be practiced over time with follow-up sessions implemented where necessary, and that staff members should be

encouraged to share ideas and work together. Changed attitudes and behaviors and new skills and strategies are the result of most inservice programs (Purkey and Smith 1983; Heneveld and Hasan 1989). In their study and review of educational systems in selected developing countries, Dalin et al. (1992), Farrell (1989), and Fuller (1989) found that local inservice training programs, particularly those that focused on pedagogical skills, were key determinants of teacher mastery and student achievement.

Positive Teacher Attitudes: Effective teachers tend to have confidence in their ability to teach, care about teaching and their students, and cooperate with each other (Chubb and Moe 1990; Duttweiler and Mutchler 1990; Huberman and Miles 1984; Joyce, Hersh, and McKibbin 1983; Levine 1990; Purkey and Smith 1983; Shann 1990). These characteristics are reflected in the teachers' comfort in using learning materials and in trying new ideas, low teacher absenteeism and tardiness, and a high level of group involvement in planning teaching and in resolving whole-school issues. However, classrooms where teachers lack general subject mastery and confidence in their ability to teach, the development of positive teacher attitudes is often hindered.

Time and Efficiency: Research has indicated the importance of the length of school study time on student learning, and achievement.

Children who spend more time studying in school tend to learn more (Farell 1989). A distinction needs to be made between the established number of days and hours per day, the actual time the school is in operation, and how the available hours are used. In some settings, the policy on the school calendar and daily hours may need to be revised to have schools in session more. In others, the policy may be adequate, but school may, nevertheless, remain closed often, or the school day may be shortened, e.g. a leaky roof, teacher absenteeism, or overcrowded double sessions. Research from a variety of countries has shown that both the amount of time available for instruction as well as how this time is used by students and teachers is consistently related to how much children learn at school (Lockheed and Verspoor 1991).

Effective teachers waste less class time in starting and ending instructional activities; they select materials that are appropriate to student abilities; they emphasize academic instruction and active learning strategies; and they provide immediate constructive feedback to students (Berliner and Casonova 1989; Blum 1990; Joyce, Hersh, and McKibbin 1983; Purkey and Smith 1983; Robinson 1985).

Classroom Management: The patterns that have emerged from studying schools reveal that high achieving schools have safe, orderly environments that are conducive to learning. Since order and discipline are an indication of the seriousness and purpose with which a school approaches improving student learning, effective teachers pay attention to developing well ordered classrooms, and constructively disciplined students. Classrooms and classes are well organized and facilities are clean and in good repair. School and classroom rules are clearly articulated, are agreed upon by both teaches and students, and are fairly and equitably maintained. Also, positive behavior is reinforced, and students and teachers attend classes regularly and according to an established timetable (Blum 1990; Frederick 1987; Joyce, Hersh, and McKibbin 1983; Lezotte and Bancroft 1985; Lockheed and Verspoor 1991; Purkey and Smith 1983; Robinson 1985; Scheerens and Creemers 1989; Steller 1988).

High Expectations: There is a great deal of evidence to indicate that low expectations are the norm in too many classrooms around the world. Educational researchers and anthropologists have pointed to the academic success of many newly industrialized Asian nations as examples of the importance of setting high standards for learning and expecting all students to achieve them.

There is particular evidence in the research literature that high staff expectations for all students to do well contribute to making a school effective (Brubaker and Partine 1986; Chubb and Moe 1990; Fredrick 1987; Levine 1990; Scheerens and Creemers 1989; Steller 1988). The concept of the school as a place of commitment to learning is communicated clearly by the principal and teachers, and student performance is monitored regularly in effective schools. Also, student assignments are sufficiently frequent and difficult to convey this high expectation and teachers' confidence in students' abilities, and confidence in students is reinforced by giving them many opportunities to take responsibility for school activities. These expectations translate into more positive self-concepts and greater self-reliance among students.

The few studies that have investigated whether head teachers and teachers in developing countries who expect high achievement receive stronger commitment and performance from students whole self-concepts are positive suggest confirmation of the findings from industrialized countries (Fuller 1986; Lockheed and Verspoor 1991). However, in all too many developing country classrooms, particularly in the early primary grades, there is an almost palpable expectation that up to half the students will desert or fail (Kraft 1996; Fair 1994). This has led many policymakers to push for automatic social promotion policies, but in the absence of appropriate remedial instructional programs, this has only helped to continue the lowering of educational quality. Neither automatic promotion in the absence of remediation, nor failure and retention policies have proven successful in most nations. The only policy we have observed that effectively maintains high expectations while providing all students with the possibility of mastering the curriculum is that of flexible promotion such as that practiced in the NEU of Guatemala and the Nueva Escuela of Colombia.

Student-Teacher Interactions: Effective teachers throughout the world genuinely care for their students, but the frustrations of large classes, students who need special care and attention, and the requirements of day-to-day existence often turn even the most caring teacher into a frustrated and, at times, punitive individual. Research has indicated the need for teachers to pay special attention to student interests, problems, and accomplishments (Emmer 1981; Evertson 1981; Rutter 1979).

Self-responsibility and self-reliance on the part of students are also emphasized in the research literature, but one again the lock step curriculum, whole-class instruction, and teacher-controlled classroom management that so dominate developing world classrooms prevent students from developing these skills. There are, of course, exceptions to this bleak picture, the most outstanding being the NEU schools in Guatemala and the Escuela Nueva in Colombia, where students are given exceptional levels of responsibility, and in fact, democratically administer much of what goes on in the school.

Organized Curriculum: The research shows that effective teachers and schools develop a well organized curriculum that emphasizes the acquisition of basic skills and is designed to ensure academic success by defining learning objectives that are matched to identified teaching strategies, available materials, and an integrated sequence of topics across grade levels (Blum 1990; Frederick 1987; Joyce, Hersh, and McKibbin 1983; Purkey and Smith 1983; Robinson 1985; Scheerens and Creemers 1989; Steller 1988; World Bank Policy Paper: Primary Education 1990). This organized curriculum is reflected in a written schedule of work that all teachers in a school use to adapt the curriculum and available materials to their students' needs and to produce local teaching and learning materials. Time lines for units and lessons have also been shown to be important for learning, although in many developing countries the curriculum often becomes a straitjacket, with teachers being pressured to move lockstep through the curriculum, whether or not students have mastered the previous skills or information.

Dalin et al. (1992) particularly emphasize the production of teaching and learning materials by the school. Lockheed and Verspoor (1991) support the importance of an organized curriculum, but they caution that textbooks do not constitute the curriculum. In developing counties, textbooks and other instructional materials are sometimes poorly designed, often have factual inaccuracies and problems with readability, and tend not to promote higher-order thinking skills. However, the evidence is strong that children in developing counties who have access to textbooks and other reading material learn more than those who do not (Farrell 1989; Heyneman, Farrell, and Sepulveda-Stuardo 1981; Heyneman and Loxley 1984; Lockheed and Verspoor 1991). Textbooks are the single most important instructional material, and are particularly effective where teachers use teaching guides with them. The provision and use of paper, pencils, chalkboards, chalk, posters, filmstrips, and audiotapes also facilitate student learning (Lockheed and Verspoor 1991).

While most curriculum guides in both the developing and industrialized countries contain a range of instructional resources and teaching activities, too often in the poorer nations teachers either have no access to the necessary materials, or they have not received sufficient training to make use of more active, creative pedagogies. Teachers often are frightened of straying from traditional teaching behavior or utilizing nontraditional activities for fear of school-director or supervisor criticism. Another major concern in rural, multigrade schools in developing countries is the utter impossibility of a teacher preparing separate lessons for each and every grade and subject area. Rural teachers complain that they spend several daily writing detailed lesson plans for each class and subject. The carefully designed student workbooks in Colombia (Escuela Nueva) and Guatemala (NEU) appear to be a way of maintaining high curricular integrity, while not forcing unrealistic planning on the teacher.

Clear and Focused Lessons: While the need for clear and focused lessons might sound obvious to individuals outside of the teaching profession, they are a key factor all too often overlooked, even by otherwise good teachers. Children need to be appraised of what is to come, both verbally and in writing, as appropriate. Given children's varying attention spans and ability to understand, it is critical to repeat instructions and key points. This repetition, however, should not necessarily be in the same words or with the same specific instructional activity. In too many observations of classrooms in developing countries, ethnographers have observed that the teacher has only mastered one approach to a lesson, topic, concept, or skill, and keeps repeating it over and over again without using different language, new approaches, or another attack on the topic to help all children understand. This becomes a key teacher education role, to provide the classroom teacher with sufficient underlying academic information to assist all children to understand the concept. "Trained" teachers are capable of delivering a particular lesson, but it is only as teachers gain sufficient academic knowledge and background experience that they are generally capable of approaching the same concept in new and creative ways to help each child master it. This is where "teacher education" rather than just teacher training comes into the picture.

A systematic approach to teaching that both increases student achievement and student engagement in the classroom is described in Rosenshine and Stevens (1986), who note the following characteristics of effective directed teaching lessons:

- Begin a lesson with a short review of previous prerequisite learning.
- Begin a lesson with a short statement of goals.
- Present new material in small steps with student practice after each step.
- Give clear and detailed instructions and explanations.
- Provide a high level of active practice for all students.

- Ask a large number of questions, check for student understanding, and obtain responses from all students.
- Guide students during initial practice.
- Provide systematic feedback and corrections.
- Provide explicit instruction, practice, and supervision for seatwork excercises.

Frequent Monitoring and Assessment: Frequent monitoring of student progress in conjunction with prompt constructive feedback are factors that enhance student motivation and achievement (Blum 1990; Brubaker and Partine 1986; Joyce, Hersh, and McKibbin 1983; Lezotte and Bancroft 1985; Scheerens and Creemers 1989; Steller 1988). Monitoring student work helps teachers diagnose what students know and where further instruction is needed. These regular evaluation procedures and feedback should be an integral aspect of the effectiveness of close monitoring of student work and prompt constructive feedback confirms these positive results elsewhere (Arriagada 1981; Lockheed and Komenan 1989).

Variety in Teaching Strategies: Student difference and learning needs can be better accommodated by teachers who employ a variety of teaching practices (Hathaway 1983; Joyce, Hersh, and McKibbin 1983; Levine 1990; Shann 1990). These teaching practices might include individual assignments with worksheets, class discussion, group work explaining, drill-and-practice, asking questions, and cross-age tutoring. When available, teachers may also make use of interactive radio or programmed materials. An emphasis on higher order thinking is important. In his review of five studies in developing countries, Fuller (1986) found confirming evidence in four of these that when a teacher spent more hours preparing for class, the preparation raised the quality of instruction and improved student achievement. Lockheed and Verspoor (1991) suggested that, while the use of worksheets and homework is also effective in developing countries, in many cases the preparation of these requires additional material and out-of-class time that is often not available. Instead, they suggest an emphasis on small, cooperative-group learning, cross-age peer tutoring, and the use of interactive radio, where possible, as cost-effective alternatives. They also note that instruction such as drill and practice, asking questions that stimulate student thinking, presenting information in small hierarchical steps, having students repeat information, and giving constructive feedback can raise academic performance.

Teachers have been encouraged to go beyond the usual drill and practice and checking for understanding and into the realm of creative problem solving. Stallings and Kashowitz's (1974) research on class rooms reported that student scores on group-administered tests of nonverbal problem-solving skills were higher where the structure allowed students to take more initiative. In these classrooms students asked more questions, worked more independently with manipulative materials, and worked more often on group tasks in cooperative activities. These findings were replicated in some of the research of Chesterfield and Rubio (1997) in the NEU project in Guatemala. When given the instructional training materials, teachers in even the most difficult of circumstances can provide students with a problem-solving, inquiry-based learning environment.

Reward and Incentive System: Rewards must be appropriate to the developmental level of the students. Effective teachers have also learned when to give rewards immediately and when to delay them in order to teach persistence. Effective teachers and schools also keep parents regularly informed about student progress, and seek parents's attempt to define excellence by objective standards, not by peer comparison. While research in psychology has presented overwhelming evidence of the importance of rewards, rather than punishment, classroom teachers throughout the world still apply an inordinate number of negative consequences for poor academic work or inappropriate student behavior. Sarcasm, labeling, corporal punishment,

shaming, grouping by "intelligence", and a wide array of other teacher behaviors still characterize thousand of classroom, despite preservice course work in educational psychology, and countless inservice programs on how to motivate students and maintain control in the classroom.

Rewards at the whole school level are also most important. When schools publicly honor and reward academic achievement and positive social behavior, this encourages all students to follow a similar pattern. Effective schools have clearly defined academic standards, and academic success is recognized through regular public rewards and incentives for achievement (Joyce, Hersh, and McKibbin 1983).

Conclusion

Teacher development is a process and, therefore, different training and support is needed at different stages of this continuum. The education that teachers receive has the potential to make a difference to children's learning and therefore warrants careful attention. The features listed above that are associated with effective teaching are critical when planning and implementing support for teachers. While only a few of these features might be addressed in the early stages of some teacher development programs, small first steps are important beginnings in the process of improving teacher quality.

(Reference, Craig, Kraft and DuPlessis 1998)

Annex 2

Development of Professional Standards in other Professions

Professional associations have established definitions of competent practice of their members. In one form or another, each profession has enunciated what it means by competency among its accepted members. A competent professional can be defined as a person who has the attributes necessary for job performance to the appropriate standard. This definition focuses on three elements: attributes, performance and standards.

- Attributes such as knowledge, skills and attitudes, in combination, underlie competence. A competency is a combination of attributes underlying some aspect of successful professional performance.

- Competencies can be relatively specific (where, for example, they involve a single attribute) or relatively complex (where they involve combinations of attributes). Competencies are observed and tested via performance on tasks or on wider domains or areas of professional practice.

Standards are the criteria against which performance is judged. Thus a competency-based standard is a level of achievement required for some area of professional practice. When such standards are specified for a selected range of areas the result is a set of competency-based standards for the profession.

There have been three broad approaches to analyzing and unraveling the competencies required in professional work. The first divides professional work into roles; (or, alternatively, domains), tasks and sub-tasks. This identifies major areas of practice and then divides them into the required to perform these roles and the sub-tasks required to perform the tasks. The pharmacy profession has made use of this approach particularly for its pre-registration year. Nursing has also used this approach for registration purposes. This approach has some advantages: it is useful for course design particularly where practical tasks are to be emphasized, it enables different levels of competence to be easily identified, (e.g. entry vs. expert level) and it enables decisions to be made easily on essential tasks (minimum competence level) versus desirable tasks (greater than minimum competence). However it has serious disadvantages: lengthy checklists of competencies make assessment difficult and the atomization of areas of practice into discrete units ignores the holistic way in which complex professional practice is performed.

The second approach to analyzing professional work focuses on the most general attributes of the practitioner that are crucial to effective professional performance. This approach seeks to specify competence in terms of the demonstration of these general attributes. Such an approach has a number of advantages. It concentrates on a relatively small number of competencies that are essential and allows for variety in performance of various areas of practice (or teaching). However this approach also has some limitations. Apart from the fact that specific competencies are neglected, the context of professional practice is ignored, i.e., *the general attributes assessed may not in fact indicate ability to employ them in a given professional context.*

The third approach seeks to integrate the roles and tasks of professional practice with the attributes of the practitioner. A matrix can be developed which has these areas on one axis and the attributes on the other. A third dimension can be added to the matrix to represent different contexts of critical practice, e.g. essentially well patients versus ill patients, adult patients versus children. Such an approach, while not yet highly developed, has the potential for overcoming

many of the problems of the other approaches to competency analysis. This would require a judicious selection from the three-dimensional matrix. Thus, the competency analyses already undertaken in areas such as nursing and pharmacy could be modified into this integrated schema. This approach has a number of advantages. It provides a balance between specific and higher level competencies and it enables manageable testing procedures to be developed.

Like any occupation, the professions need to establish criteria (standards) against which an individual's performance can be judged. The nature of professional work, however, means that standards can rarely be precise and unambiguous. This does not mean that standards need be arbitrary. But the issues that need to be considered in setting standards are complex. There is a need to agree on the combinations of tasks and attributes (areas of competency) for which standards need to be set, in addition to standards for specific competencies. Then, there is a need to spell out minimum competence in the determined areas. In doing this, it must be accepted that there are different levels of competence for each area. In deciding what level constitutes initial competence there is a need to balance factors which might lead to the level being set too high against those which might lead to it being set too low. Ultimately this means that professional judgment must be exercised. It would seem that the best way of setting standards is to develop a scale of competence.

Annex 3

Various examples of Performance Standards

1. National Board for Professional Teaching Standards (NBPST): *Source: National Board for Professional Teaching Standards. Website: WWW.nbpts.org*

NBPTS was created in 1987 after the Carnegie Forum on Education and the Economy's Task Force on Teaching as a Profession released **A Nation Prepared: Teachers for the 21st Century**. Shortly after its release, NBPTS issued its first policy statement: "What Teachers Should Know and Be Able to Do". This policy set forth their vision for accomplished teaching. The Five Core Propositions form the foundation and frame the rich amalgam of knowledge, skills, dispositions and beliefs that characterize National Board Certified Teachers (NBCTs).

The Five Propositions of Accomplished Teaching

The (USA) National Board for Professional Teaching Standards seeks to identify and recognize teachers who effectively enhance student learning and demonstrate the high level of knowledge, skills, abilities and commitments reflected in the following five core propositions.

1. **Teachers are committed to students and their learning.**
   Accomplished teachers are dedicated to making knowledge accessible to all students. They act in the belief that all students can learn. They treat students equitable, recognizing the individual differences that distinguish one student from another and taking account of these differences in their practice. They adjust their practice based on observation and knowledge of their students' relationships.

   Accomplished teachers understand how students develop and learn. They incorporate the prevailing theories of cognition and intelligence in their practice. They are aware of the influence of context and culture on behavior. They develop students' cognitive capacity and their respect for learning. Equally important, they foster students' self-esteem, motivating, character, civic responsibility and their respect for individual, cultural, religious and racial differences.

2. **Teachers know the subjects they teach and how to teach those subjects to students**
   Accomplished teachers have a rich understanding of the subjects they teach and appreciate how knowledge in their subject is created, organized, linked to other disciplines and applied to real-world settings. While faithfully representing the collective wisdom of our culture and upholding the value of disciplinary knowledge, they also develop the critical and analytical capacities of their students.

   Accomplished teachers command specialized knowledge of how to convey and reveal subject matter to students. They are aware of the preconceptions and background knowledge that students typically bring to each subject and of strategies and instructional materials that can be of assistance. They understand where difficulties are likely to arise and modify their practice accordingly. Their instructional repertoire allows them to create multiple paths to the subjects they teach, and they are adept at teaching students how to pose and solve their own problems.

3. **<u>Teachers are responsible for managing and monitoring student learning</u>**
   Accomplished teachers create, enrich, maintain and alter instructional settings to capture and sustain the interest of their students to make the most effective use of time. They also are adept at engaging students and adults to assist their teaching and at enlisting their colleagues' knowledge and expertise to complement their own.

   Accomplished teachers command a range of generic instructional techniques, know when each is appropriate and can implement them as needed. They are as aware of ineffectual or damaging practice as they are devoted to elegant practice.

   They know how to engage groups of students to ensure a disciplined learning environment, and how to organize instruction to allow the schools' goals for students to be met. They are adept at setting norms for social interaction among student and between students and teachers. They understand how to motivate students to learn and how to maintain their interest even in the face of temporary failure.

   Accomplished teachers can assess the progress of individual students as well as that of the class as a whole. They employ multiple methods for measuring growth and understanding and can clearly explain student performance to parents.

4. **<u>Teachers think systematically about their practice and learn from experience</u>**
   Accomplished teachers are models of educated persons, exemplifying the virtues they seek to inspire in students- curiosity, tolerance, honesty, fairness, respect for diversity and appreciation of cultural differences – and the capacities that are prerequisites for intellectual growth: the ability to reason and take multiple perspectives to be creative and take risks, and to adopt an experimental and problem-solving orientation.

   Accomplished teachers draw on their knowledge of human development, subject matter and instruction, and their understanding of their students to make principled judgments about sound practice. Their decisions are not only grounded in the literature, but also in their experience. They engage in lifelong learning which they seek to encourage in their students.

   Striving to strengthen their teaching, accomplished teachers critically examine their practice, seek to expand their repertoire, deepen their knowledge, sharpen their judgment and adapt their teaching to new finding, ideas and theories.

5. **<u>Teachers are members of learning communities</u>**
   Accomplished teachers contribute to be effectiveness of the school by working collaboratively with other professionals on instructional policy, curriculum development and staff development. They can evaluate school progress and the allocation of school resources in light of their understanding of state and local educational objectives. They are knowledgeable about specialized schools and community resources that can be engaged for their students' benefit, and are skilled at employing such resources as needed

   Accomplished teachers find ways to work collaboratively and creatively with parents, engaging them productively in the workshop of the schools

7. Vietnam National Teacher Standards

Development Requirement Level Descriptors and Nutshell Statements

<table>
<tr><th>Item</th><th>Log</th><th>Quality Indicator</th><th>Requirement Level Description</th><th>Nutshell</th></tr>
<tr><td>3.1.5.4</td><td>8.24</td><td>Consider individual learning differences in the development, selection and adaptation of learning materials and resources and justify selection for all pupils.</td><td rowspan="2">Consider individual learning differences in the development selection and adaptation of learning materials and resources and justify selection for all pupils. Select and implement appropriate learning strategies to facilitate pupils' self-learning</td><td rowspan="2">Tailored and individualized approach to teaching and learning</td></tr>
<tr><td>3.1.4.4</td><td>6.51</td><td>Lesson plans demonstrate innovative teaching methods to guide and facilitate pupils' self-learning methods</td></tr>
<tr><td>3.1.6.3</td><td>5.03</td><td>Lesson plans demonstrate creativeness and innovative approach in assessment of pupils' results</td><td rowspan="4">Develop lesson plans that demonstrate creativity, innovation and flexibility assessment and teaching practices. Select and use learning materials, aids and resources consistent with documented learning objectives, and that take into account the characteristics of pupils, learning environment and budgetary time factors</td><td rowspan="4">Creative approach into teaching and materials development</td></tr>
<tr><td>3.1.7.3</td><td>4.42</td><td>Lesson plans demonstrate flexible time allocation of teaching-learning activities that reflect situational constraints</td></tr>
<tr><td>3.1.2.3</td><td>4.39</td><td>Lesson plans sufficiently reflects objectives of the lesson in details for observation and evaluation</td></tr>
<tr><td>3.1.5.3</td><td>4.14</td><td>Identify, evaluate and select learning materials, aids and resources in line with the documented learning goals, pupils' characteristics, the learning environment and budgetary, time and other constraints.</td></tr>
<tr><td>3.1.3.3</td><td>2.39</td><td>Lesson plans sufficiently and correctly present the focus of the lesson</td><td rowspan="4">Develop detailed lesson plans that outline lesson focus, learning methods, assessment strategies and time allocation. Select additional support materials to gain a deep and broad knowledge and understanding of the curriculum area.</td><td rowspan="4">3. Develop lesson plans that cater for local context and children</td></tr>
<tr><td>3.1.4.3</td><td>2.21</td><td>Lesson plans present innovative teaching methods to facilitate pupils' self-learning methods</td></tr>
<tr><td>3.1.7.2</td><td>1.16</td><td>Lesson plans demonstrate appropriate time allocation of teaching-learning activities</td></tr>
<tr><td>3.1.6.2</td><td>0.97</td><td>Lesson pans demonstrate flexibility in applying assessment methods</td></tr>
</table>

3.1.5.2	0.79	Select, and seek additional support materials to assist with gaining a deeper and borad knowledge and understanding of the curriculum area		
3.1.1.2	0.05	Design the lesson plans with all components of the structure	Design lesson plans that outline all essential components such as learning objectives, content, teaching methods and time allocation	2. Attention to detail of lesson plans and objectives
3.1.4.2	0.03	Lesson plans reflect modification and selection of teaching methods within teaching guides to cater for the background characteristics of the pupils		
3.1.7.1	0.38	Lesson plans demonstrate time allocation of teaching-learning activities		
3.1.2.2	0.71	Lesson plans sufficiently reflect objectives of the lesson in term of knowledge, skill and attitude		
3.1.3.2	0.75	Lesson plans demonstrate sufficiently and correctly the content of the lesson		
3.1.6.1	4.25	Assessment methods are in accordance with the teacher guides	Attempt to develop, customize or use lesson plans in accordance with teaching guides	1. Use standard approach and teaching guides
3.1.1.1	4.72	Design the lesson plans in accordance with components of the structure		
3.1.5.1	4.91	Use learning materials and aids that are specified in the teaching plans and guides developed by the Ministry		
3.1.4.1	5.59	Lesson plans are consistent with teaching guides		
3.1.3.1	6.69	Correctly present the major content of the lesson		
3.1.2.1	7.13	Lesson plans developed in accordance with objectives of the lessons		

3. Performance Standards developed by the Educational Testing Service (USA)

High quality teaching is one that produces desired learning results. The following framework for results-oriented teaching describes those aspects of a teacher's responsibilities that have been documented through empirical studies and theoretical research as promoting improved student learning. Although not the only possible framework, these responsibilities seek to define what teachers should know and be able to do in order to be accountable for student achievement. In this framework, the complex activity of teaching is divided into 22 components clustered within four domains of teaching responsibility:

Domain 1: Planning and preparation;
Domain 2: Classroom environment;
Domain 3: Instruction;
Domain 4: Professional responsibilities

Each component comprises two to six "elements", which are sets of specific tasks in the role of a teacher. Each element, in turn, is used as an indicator of competence in executing tasks and a teacher's level of performance is rated "unsatisfactory", "basic", "proficient" or "distinguished". The Framework for Teaching emerged from a project launched in 1987 in the USA to develop a framework for state and local agencies for making teacher licensing decision. The resulting program is called "The Praxis Series: Professional Assessments for Beginning Teachers."

Domain 1: Planning and Preparation Component 1a: *Demonstrating Knowledge of Content and Pedagogy* • Knowledge of content • Knowledge of prerequisite relationships • Knowledge of content-related pedagogy Component 1b: *Demonstrating Knowledge of Students* • Knowledge of characteristics of age group • Knowledge of students' varied approaches to learning • Knowledge of students' skills and knowledge • Knowledge of students' interests and cultural heritage Component 1c: *Selecting Instructional Goals* • Value • Clarity • Suitability for diverse students • Balance	Component 1d: *Demonstrating Knowledge of Resources* • Resources for teaching • Resources for students Component 1e: *Designing Coherent Instruction* • Learning activities • Instructional materials and resources • Instructional groups • Lesson and unit structure Component 1f: *Assessing Student Learning* • Congruence with instructional goals • Criteria and standards
Domain 2: The Classroom Environment Component 2a: *Creating an Environment of Respect and Rapport* • Teacher interaction with students • Student interaction Component 2b: *Establishing a Culture for Learning* • Importance of the content • Student pride in work • Expectations for learning and achievement	Component 2c: *Managing Classroom Procedures* • Management of instructional groups • Management of transitions • Management of materials and supplies • Performance of no-instructional duties • Supervision of volunteers and paraprofessionals Component 2d: *Managing Student Behavior* • Expectations • Monitoring of student behavior • Response to student misbehavior Component 2e: *Organizing Physical Space* • Safety and arrangement of furniture • Accessibility to learning and use of physical resources

<table>
<tr>
<td>
Domain 3: Instruction
Component 3a: Communicating Clearly and Accurately
• Directions and procedures
• Oral and written language
Component 3b: Using Questioning and Discussion Techniques
• Quality of questions
• Discussion techniques
• Student participation
Component 3c: Engaging Students in Learning
• Representation of content
• Activities and assignments
• Grouping of students
• Instructional materials and resources
• Structure and pacing
</td>
<td>
Component 3d: Providing Feedback to Students
• Quality: accurate, substantive, constructive, and specific
• Timeliness

Component 3e: Demonstrating Flexibility and Responsiveness
• Lesson adjustment
• Response to students
• Persistence
</td>
</tr>
<tr>
<td>
Domain 4: Professional Responsibilities
Component 4a: Reflecting on Teaching
• Accuracy
• Use in future teaching
Component 4b: Maintaining Accurate Records
• Student completion of assignments
• Student progress in learning
• Non-instructional records
Component 4c: Communicating with Families
• Information about the instructional program
• Information about individual students
• Engagement of families
</td>
<td>
Component 4d: Contributing to the School and District
• Relationships with colleagues
• Service to the school
• Participation in school and district projects
Component 4e: Growing and Developing Professionally
• Enhancement of content knowledge and pedagogical skill
• Service to the profession
Component 4f: Showing Professionalism
• Service to students
• Advocacy
• Decision making
</td>
</tr>
</table>

Annex 4

Teacher Quality and Accountability

Teacher performance is at the heart of quality education and accountability for learning results. However, teacher performance varies according to the *type* of accountability demanded of a given educational system. In effect, there are three basic models of accountability systems that are sometimes applied simultaneously in education systems. These models are the following:

- compliance with regulations,
- adherence to professional norms, and
- results-driven.

The first model demands compliance with statutes and regulations such as those embodied in the British Office for Standards in Education. Anchored in an industrial model of education, compliance systems view the school as the embodiment of constant processes and allow for variation in results, generally attributed to the varying characteristics of students. In essence, in the compliance model of accountability, educators are accountable for adherence to rules and bureaucratic norms. See example from England below.

The second model is based upon adherence to professional norms. Although neither mandated nor required, the impact of widespread agreement on certain principles and practices has done much to elevate education as a profession. In the United States, the curriculum and evaluation standards for school mathematics (National Council of Teachers of Mathematics, 1989), the standards for educational and psychological testing (American Educational Research Association, 2000), and the program evaluation standards (Joint Committee on Standards for Educational Evaluation, 1994) exemplify the professional norm approach to accountability. Within this system, educators are accountable for adherence to standards and accountable to their peers.

The third accountability system is based upon results defined in terms of student learning. This system has emerged from increasing political involvement in education. The "No Child Left Behind" requirements in the United States[3] and the Australian National Education Performance Monitoring Task Force are examples of results-based systems. In these systems educators are accountable for student learning and accountable to the general public. The assumption is that all students are capable of learning with the right encouragement and support and that it is a teacher's responsibility to ensure that all students achieve minimum competency in prescribed knowledge and skills for each grade level.

Educators often find themselves responding to all three systems, attempting to balance the requirements of each. Professional norms complement both compliance and results systems. On the other hand, compliance and results systems often conflict. Part of this conflict stems from the fact that the emergence of results systems has been fostered by dissatisfaction with historic results; that is, those achieved under compliance systems. At present, accountability systems focus less on compliance and more on results.

[3] In 2002 legislation required all states to establish, no later than 2005-06 annual reading and mathematics test for all students in grades 3 through 8 and in grades 10 through 12. By 2013-14 all students must achieve state-determined "proficiency" in every test. Annual progress reports are required from every state.

Cou ntry	Intervention	Comments
England	The framework of professional standards for teachers will form part of a wider framework of standards for the whole workforce. The framework defines the characteristics of teachers at each career stage. It provides professional standards for: • The award of Qualified Teacher Status (QTS) **(Q)** • Teacher on the main scale (Core) **(C)** • Teachers on the upper pay scale (Post Threshold Teachers **(P)** • Excellent teachers **(E)** • Advanced Skills Teachers (ASTs) **(A)** Professional standards are statements of a teacher's professional attributes, professional knowledge and understanding of professional skills. They provide clarity of the expectations at each career stage. The framework of standards is arranged in three interrelated sections covering: • Professional attributes • Professional knowledge and understanding • Professional skills	
	Overview: Standards for School Mathematics: PreKindergarten through Grade 2 (USA) The Standards for school mathematics describe the mathematical understanding, knowledge and skills that students should acquire from prekindergarten through grade 12. Each Standard consists of two to four specific goals that apply across the grades. For the five Content Standards, each goal encompasses as many as seven specific expectations for the four grade bands considered in Principals and Standards: prekindergarten through grade 2, grades 3-5, grades 6-8, and grades 9-12. For each of the five Process Standards, the goals are described through examples that demonstrate what the Standard should look like in a grade ban and what the teacher's role should be in achieving the Standard. Although each of these Standards applies to all grades, the relative emphasis on particular Standards will vary across the grade bands.	
	No Child Left Behind ***The Education Blueprint involves***: Increase Accountability for Student Performance; Focus on What Works; Reduce Bureaucracy and Increase Flexibility; Empower Parents. ***Closing the Achievement Gap***: Accountability and High Standards; Annual Academic Assessments Consequences for Schools that Fail to Educate Disadvantaged Students. ***Improve Literacy by putting reading First***: Focus on Reading in Early Grades; Early Childhood Reading Instruction. ***Expanding flexibility, Reducing Bureaucracy***: Increased Funds to Schools for Technology; Reduction in Bureaucracy; New State and Local Flexibility Options. ***Rewarding Success and Sanctioning Failure*****:** Rewards for Closing the Achievement Gap; Accountability Bonus for States; "No Child Left Behind" School Rewards; Consequences for Failure. ***Promoting Informed Parental Choice:*** School Reports to Parents; Charter Schools: Innovative School Choice Programs and Research.	

	Improving Teacher Quality: All Students Taught by Quality Teachers; Funding What Works; Strengthening Math and Science Education. ***Making Schools Safer for the 21st Century:*** Teacher Protection; Promoting School Safety; Rescuing Students from Unsafe Schools; Supporting Character Education. ***Achieving Equality Through High Standards and Accountability***.	

References

Aarons, A. (2006). *Language, Literacy and Learning in Primary Schools: Implications for Teacher Development Programs.* Abuja: World Bank.

Alton-Lee, A. (2003). "Impact of Teaching and Schools on Variance in Outcomes". New Zealand Ministry of Education.

Anderson, J.A., (2005). "Accountability in Education," in *Education Policy Series.* Brussels and Paris: International Academy of Education and UNESCO International Institute for Educational Planning.

Arriagada, A.(1981). *Determinants of Sixth Grade Achievement in Peru.* Washington DC: World Bank.

Berliner, D., and U. Casanova (1989). "Effective Schools: Teachers make a Difference." *Instructor* 99 (3): 14-15

Blum, Robert E. (1990). *Effective Schooling Practices: A Research Synthesis.* Portland, Oregon: Northwest Regional Laboratory.

Brubaker, H., and R. Partine (1986). *Implementing Effective Schools Research: The Audit Process and High School Observations.* Paper presented at AERA Conference.

Chesterfield, R. and F.E. Rubio (1997). Impact Study of the BEST Teacher Effectiveness in Guatemala Primary Education. Washington DC USAID.

Chubb, John E., and Terry M. Moe (1990). *Politics, Markets and America's Schools.* Washington, DC: The Brookings Institute.

Craig, H., Kraft, R.J. and du Plessis, J. (1998). *Teacher Development: Making an Impact.* Washington, D.C. Academy for Educational Development and The World Bank.

Danielson, C. (1996). *Enhancing Professional Practice: A Framework for Teaching.* Alexandria, VA: Association for Curriculum and Development (ASCD).

Darling-Hammond, L. (1999). *Teacher Quality and Student Achievement: A Review of State Policy Evidence.* University of Washington, Center for the Study of Teaching and Policy.

Dalin, Per, in cooperation with Tekle Ayano, Anbesu Biazen, Mumtaz Jahan, Matthew Miles, and Carlos Rojas (1992). *How Schools Improve.* Draft International Report. Oslo, Norway: IMTEC.

Depdiknas - Directorate General of Higher Education (2006). *The Competency Standard of Primary School/MI Classroom Teachers.* Jakarta: Depdiknas.

Dutweiler, Patricia Cloud, and Sue E. Mutchler (1990), *Weaving a Paradigm: Steps to Organizing for Excellence.* Austin, Texas: Southwest Educational Development Laboratory.

Education Commission of the States. (July 2008). *From competing to leading: An international benchmarking blueprint.* ECS: Denver, CO

Emmer, E. T. (1981). *Teacher's Manual for the Junior High Classroom Management Improvement Study.* Austin: R&D Center for Teacher Education, University of Texas.

Evertson, C.M. et al. (1981). *Organizing and Managing the Elementary School Classroom.* Austin: Research and Development Center for Teacher Education, University of Texas.

Fair 1994

Farrell, Joseph P. (1989). International Lessons for School Effectiveness: The View from the Developing World. In *Educational Policy for Effective Schools:* Toronto, Canada: OISE Press.

Figlio, D & Kenny,L. (2006). ‘Individual Teacher Incentives and Student Performance”, Working Paper 12627, National Bureau of Economic Research. Retrieved June 10, 2007.

Frederick, J.M. (1987). *Measuring School Effectiveness: Guidelines for Educational Practitioners*.

Fullan, M.(2007). *The New Meaning of Educational Change.* New York: Teachers College Press.

Fuller, Bruce. (1986). *Raising School Quality in Developing Countries: What Investments Boost Learning.* Discussion Paper No. 2, Washington, DC: The World Bank.

Griffin, P., Cue. N., Gillis, S. (2004). *Developing and Validating Primary School Teacher Standards in Vietnam.* Melbourne: Paper presented at Australian Association for Research in Education.

Guarino, C. Santibanez, I., Daley, G & Brewer, D. (2004). *A. Review of the Research Literature on Teacher Recruitment and Retention.* Santa Monica, CA: RAND Corporation.

Goldstein, 2003

Haddad, W., M. Carnoy, R. Rinaldi, and O. Regal (1990). “Education and Development: Evidence for New Priorities.” Discussion Paper No. 95. Washington DC: The World Bank.

Hanushek, 1986

Hathaway, Walter, E. (1983). *Effective Teachers in Effective Schools.* Paper presented at the Annual Meeting of the American Educational Research Association, Montreal.

Heneveld, W. and Craig, H. (1996). *Schools Count: World Bank Project Designs and the Quality of Primary Education in Sub-Saharan Africa.* Technical paper No. 303. Washington DC: The World Bank.

Heneveld, W., and Oarveeb Gasab (1989). *Evaluation of Sind School Improvement Programme.* Report prepared for the Aga Khan Foundation. Geneva.

Hill, P. W. & Rowe, K. J. (1996). Multilevel modeling in school effectiveness research. *School Effectiveness and School Improvement,* & (1), 1-34.

Huberman, Michael, and Matthew B. Miles (1984). *Innovation Up Close: How School Improvement Works.* East Sussex: The Falmer Press.

Heyneman, S., J. Farrell, M.. Sepulveda-Stuardo (1981). "Textbooks and Achievement in Developing Countries: What We know". *Journal of Curriculum Studies 13 (3): 227-46.*

Heyneman, S., and W. Loxley (1984). The effect of Primary-School Quality on Academic Achievement across Twenty-nine High and Low-Income Countries. *The American Journal of Sociology 88 (6): 1162-94.*

Ingvarson, L. and Rowe, K. "Conceptualising and Evaluating Teacher Quality: Substantive and Methodological Issues. Paper presented at the Economics of Teacher Quality Conference. 5 February, 2007.

Joyce, B., R. Hersh, and M. McKibbin (1983). *The Structure of School Improvement.* New York: Longhorn.

Kraft, R. (1996). *Todo Cambia: Form Without Substance: Primary School Instruction in Niaragua.* Managua: Ministerio de Educacion Publica.

Levin, Daniel U. (1990). "Update on Effective Schools: Findings and Implications from Research and Practice." *Journal of Negro Education* 59(4): 577-84

Levin, Daniel U. (1991). "Creative Effective Schools: Findings and Implications from Research and Practice." *Phi Delta Kappan* 72 (5): 389-93.

Leigh, A. (2007). "Estimating Teacher Effectiveness from Two-Year Changes in Students" Test Scores". Paper presented at the *Economics of Teacher Quality* Conference, Australian National University, 5 February 2007.

Lezotte, Lawrence W., and Beverly A. Bancroft (1985). *School Improvement Based on Effective Schools Research: A Promising Approach for Economically Disadvantaged and Minority Students.*

Lockheed, M. E., and A. Komenan (1989). "Teaching Quality and Student Achievement in Africa: The case of Nigeria and Swaziland." *Teaching and Teacher Education* 5: 93-113.

Lockheed, M.E., and A. M. Verspoor (1991). *Improving Primary Education in Developing Countries.* Oxford: Published for World Bank by Oxford University Press.

McPherson, A. (1992). "Measuring added value in schools", National Commission on Education Briefing No. 1, February 1992, London.

Millmann, J. (ed.). (1997). *Grading teachers, grading schools: Is student achievement a valid evaluation measure?* Thousand Oaks, CA: Corwin Press Inc.

Mujis, D,, & Reynolds, D. (2001). *Effective teaching: Evidence and practice.* London: Paul Chapman Publishing.

National Board for Professional Teaching Standards. *(1999). What Teachers Should Know And Be Able To Do. NBPTS.*

Organization for Economic Cooperation and Development (OECD) report (2005) Teachers Matter.

Organization for Economic Cooperation and Development (OECD). (1994). *Quality in Teaching*. Centre for Education Research and Innovation, Paris: OCED.

Purkey, Stewart C., and Marshall S. Smith (1983). "Effective Schools: A Review." *The Elementary School Journal* 83 (4): 427-52

Retel & Devai, 2007

Reynolds, A. (1992). What is Competent Beginning Teaching? A Review of the Literature. *Review of Educational Research, 22 (2).*

Rice (2003)

Robinson, G. E. (1985). *Effective Schools Research: A Guide to School Improvement.* Arlington, VA: Educational Research Office.

Rutter, M., P. Mortimer, and B. Maugham (1979). *Fifteen Thousand Hours: Secondary Schools and their Effect on Children.* Cambridge: Harvard University Press.

Stallings, J.A. and D.Kashowitz (1974). *Follow Through Classroom Observation Evaluation.* Menlo Park, CA: Stanford Research Institute.

Schreerens, Jaap, and Bert Creemers (1989). "Towards a More Comprehensive Conceptualization of School Effectiveness." In *School Effectiveness and School Improvement.* Amsterdam: Swets and Zeitlinger.

Shann, M. (1990). *Making Schools More Effective: Indicators for Improvement.* Massachusetts: Boston University.

Shulman, L. (1987). Knowledge and Teaching: Foundatons of the New Reform. *Harvard Educational Review, 57 (1)*

Steller, Arthur W. (1988). *Effective Schools Research: Practice and Promise.* Fastback 276. Bloomington, Indiana: Phi Delta Kappa Educational Foundation.

The National Commission on Teaching & America's Future (1996). *What Matters Most: Teaching for America's Future.* New York, Teachers College Press.

Wayne, A. J. and Youngs, P. (2003). "Teacher Characteristics and Student Achievement Gains: A Review, *"Review of Education Research,* 73(1), pp. 89-122.

Wise, A.E., and Leibrand, J.A. (2000). "Standards and Teacher Quality: Entering the New Millennium". *Phi Delta Kappan.* 81 (8) p.612-21.

Wyatt, T. (1996). School effectiveness research: Dead end, damp squib or smouldering fuse? *Issues in Educational Research,* 6(1), 1996, 79-112.

World Bank (1990). *A World Bank Policy Paper: Primary Education*. Washington, DC

Web Sites:

Danielson, C. (1996) *Enhancing Professional Practice: A Framework for Teaching.* http://standards.nctm.org/document/chapter3/index/htm http://www.umatilla.k12.or.us/NCLB/Char_Danielson.htm

International Benchmarking. http://www.ecs.org/html/meetingsEvents/NF2008/resources/ECS-InternationalBenchmarking.pdf .

No Child Left Behind. http://www.whitehouse.gov/news/reports/no-child-left-behind.html

Outstanding teacher education programs featured in The National Commission on Teaching and America's Future (1996) *What Matters Most: Teaching for America's Future (Complete report, 1996).*http://www.nctaf.org/resources/archives/TeacherEducationProgramsFeaturedinWhatMattersMost.htm

Overview: Standards for School Mathematics: PreKindergarten through Grade 2. *Professional Standards for Teachers I England from September 2007* www.teachernet.gov.uk/teachingandlearning/resourcematerials/outsideclassroom/newsletters/professionalstandards/

William Lloyd Garrison School- P.S. 31 X (2005). *Comprehensive Educational Plan (CEP) 2005-2006.* http://www.garrisonschool.com/documents