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Teachers Matter: Attracting, Developing and Retaining Effective Teachers

Executive Summary

November 2004

Education and Training Policy Division
Directorate for Education
Organisation for Economic Co-operation and Development

The report *Teachers Matter: Attracting, Developing and Retaining Effective Teachers* is about school teachers – their preparation, recruitment, work and careers. Its specific concern is policies that contribute to attracting, developing and retaining effective teachers in schools. The report draws on the results of a major OECD study of teacher policy conducted over the 2002-04 period in collaboration with 25 countries around the world (see Box 1). The fact that so many countries took part indicates that teacher issues are a priority for public policy, and likely to become even more so in future years.

The report aims to provide a comprehensive international analysis of:

- Trends and developments in the teacher workforce.
- Evidence on the key factors in attracting, developing and retaining effective teachers.
- Innovative and successful teacher policies and practices.
- Teacher policy options for countries to consider.
- Priorities for future work at national and international levels.

Box 1: Methodology and Country Participation

The project was based on volunteer countries working collaboratively with each other and with the OECD Secretariat. It involved examining country-specific issues and policy responses in attracting, developing and retaining effective teachers, and placing these experiences within a broader, international framework to generate insights and findings relevant to countries as a whole.

The project involved two complementary approaches: an *Analytical Review strand*; and a *Country Review strand*. The Analytical Review strand used several means -- Country Background Reports, literature reviews, data analyses and commissioned papers -- to analyse the factors that shape attracting, developing and retaining effective teachers, and possible policy responses. All 25 participating countries were involved in this strand. In addition, nine countries also chose to host a Country Review, which involved external review teams undertaking an intensive case study visit whose conclusions were then reflected in a Country Note.

The countries taking part in the project were:

- *Analytical Review strand* (25 countries, involving 26 background reports): Australia; Austria; Belgium (Flemish community); Belgium (French community); Canada (Quebec); Chile; Denmark; Finland; France; Germany; Greece; Hungary; Ireland; Israel; Italy; Japan; Korea; Mexico; the Netherlands; Norway; the Slovak Republic; Spain; Sweden; Switzerland; the United Kingdom; and the United States.
- *Country Review strand* (9 countries involving 10 review visits): Austria; Belgium (Flemish community); Belgium (French community); Germany; Hungary; Italy; Korea; Spain; Sweden; and Switzerland.

The Importance of Teacher Policy

All countries are seeking to improve their schools, and to respond better to higher social and economic expectations. As the most significant and costly resource in schools, teachers are central to school improvement efforts. Improving the efficiency and equity of schooling depends, in large measure, on ensuring that competent people want to work as teachers, that their teaching is of high quality, and that all students have access to high quality teaching (see Box 2).

Box 2: Quality teaching is vital for improving student learning

Student learning is influenced by many factors, including: students' skills, expectations, motivation and behaviour; family resources, attitudes and support; peer group skills, attitudes and behaviour; school organisation, resources and climate; curriculum structure and content; and teacher skills, knowledge, attitudes and practices. Schools and classrooms are complex, dynamic environments, and identifying the effects of these varied factors, and how they influence and relate with each other – for different types of students and different types of learning -- has been, and continues to be, a major focus of educational research.

Three broad conclusions emerge from research on student learning. The first and most solidly based finding is that the largest source of variation in student learning is attributable to differences in what students bring to school – their abilities and attitudes, and family and community background. Such factors are difficult for policy makers to influence, at least in the short-run.

The second broad conclusion is that of those variables which are potentially open to policy influence, factors to do with teachers and teaching are the most important influences on student learning. In particular, the broad consensus is that “teacher quality” is the single most important school variable influencing student achievement.

The third broad conclusion from the research, which is somewhat more contentious, concerns the indicators or correlates of teacher quality. Most of the research has examined the relationship between measures of student performance, most commonly standardised test scores, and readily measurable teacher characteristics such as qualifications, teaching experience, and indicators of academic ability or subject-matter knowledge. Such research generally indicates that there is a positive relationship between these measured teacher characteristics and student performance, but perhaps to a lesser extent than may have been expected. A point of agreement among the various studies is that there are many important aspects of teacher quality that are not captured by the commonly used indicators such as qualifications, experience and tests of academic ability. The teacher characteristics that are harder to measure, but which can be vital to student learning include the ability to convey ideas in clear and convincing ways; to create effective learning environments for different types of students; to foster productive teacher-student relationships; to be enthusiastic and creative; and to work effectively with colleagues and parents.

The demands on schools and teachers are becoming more complex. Society now expects schools to deal effectively with different languages and student backgrounds, to be sensitive to culture and gender issues, to promote tolerance and social cohesion, to respond effectively to disadvantaged students and students with learning or behavioural problems, to use new technologies, and to keep pace with rapidly developing fields of knowledge and approaches to student assessment (see Box 3). Teachers need to be capable of preparing students for a society and an economy in which they will be expected to be self-directed learners, able and motivated to keep learning over a lifetime.

Box 3: Teachers' Roles are Changing

Teachers are now expected to have much broader roles, taking into account the individual development of children and young people, the management of learning processes in the classroom, the development of the entire school as a “learning community” and connections with the local community and the wider world. Some examples of areas of broadened teacher responsibility are as follows.

At the individual student level

- Initiating and managing learning processes
- Responding effectively to the learning needs of individual learners
- Integrating formative and summative assessment

At the classroom level

- Teaching in multi-cultural classrooms
- New cross-curricular emphases

- Integrating students with special needs

At the school level

- Working and planning in teams
- Evaluation and systematic improvement planning
- ICT use in teaching and administration
- Management and shared leadership

At the level of parents and the wider community

- Providing professional advice to parents
- Building community partnerships for learning

Teacher issues are also currently high on policy agendas because of concerns expressed by teachers themselves about the future of their profession – whether it is sufficiently attractive to talented new entrants, and whether teachers are sufficiently rewarded and supported in their work. As teachers are in daily contact with the students who potentially form the next generation of teachers, the enthusiasm and morale of the current teacher workforce are important influences on future teacher supply.

The current timing of the upsurge of interest in teacher policy issues is particularly important. The fact that the large numbers of teachers who were recruited during the great expansion period of the 1960s and 1970s are now close to retirement is both a major challenge and an unprecedented opportunity in most countries. Although large amounts of experience and skills need to be replaced as teachers retire, a number of countries now have a once-in-a-generation opportunity to shape and benefit from substantial changes in the teacher workforce.

A much larger number of new teachers will enter the profession in the next 5-10 years than in the past 20 years. The entry of substantial numbers of new teachers with up-to-date skills and fresh ideas has the potential to substantially renew the schools. As well, there is scope to free up resources for development as a younger teacher workforce implies fewer budgetary pressures. On the other hand, if teaching is not perceived as an attractive profession, and teaching does not change in fundamental ways, there is a risk that the quality of schools will decline and a downward spiral will be difficult to reverse.

Main Concerns

Although the information is often patchy, and there is a lack of long-term data, and not all countries are in the same position, a broad picture has emerged.

Concerns about the attractiveness of teaching as a career

- About half the countries report serious concerns about maintaining an adequate supply of good quality teachers, especially in high-demand subject areas (see Figure 1);
- There are widespread concerns about long-term trends in the composition of the teaching workforce e.g. fewer “high achievers”, and fewer males;
- There are concerns about the image and status of teaching, and teachers often feel that their work is undervalued;
- Teachers’ relative salaries are declining in most countries (see Figure 2).

Concerns about developing teachers' knowledge and skills

- Almost all countries report concerns about “qualitative” shortfalls: whether enough teachers have the knowledge and skills to meet school needs;
- There are major concerns about the limited connections between teacher education, teachers' professional development, and school needs;
- Many countries lack systemic induction programmes for beginning teachers.

Concerns about recruiting, selecting and employing teachers

- There are concerns in most countries about the inequitable distribution of teachers among schools, and whether students in disadvantaged areas have the quality teachers that they need;
- Schools often have little direct involvement in teacher appointments;
- Some countries have a large over-supply of qualified teachers, which raises its own policy challenges.

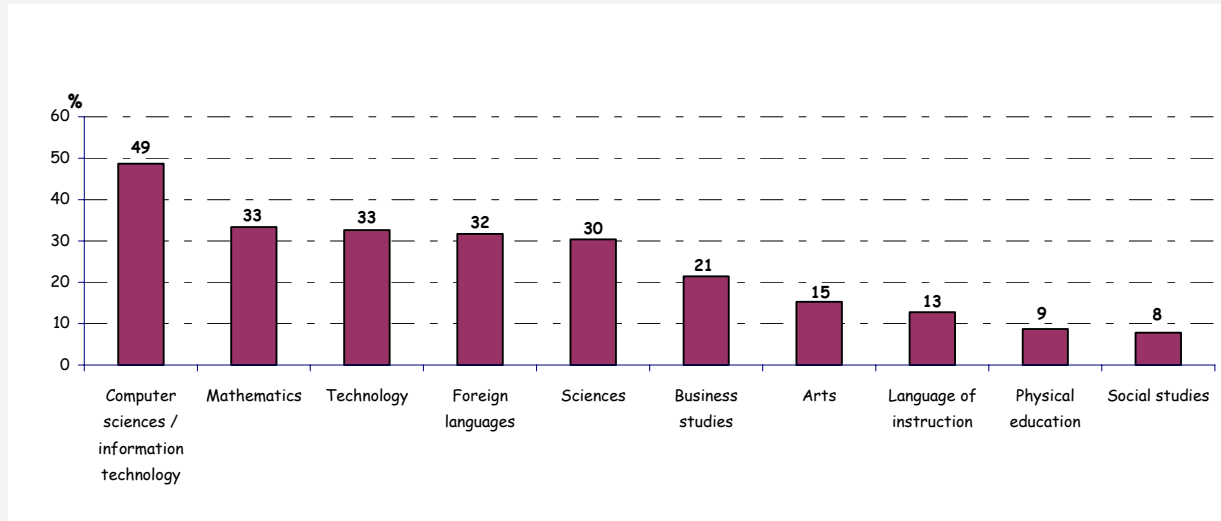
Concerns about retaining effective teachers in schools

- Some countries experience high rates of teacher attrition, especially among new teachers;
- Teachers express concerns about the effects of high workloads, stress and poor working environments on job satisfaction and teaching effectiveness;
- There are only limited means in most countries to recognise and reward teachers' work;
- Processes for responding to ineffective teaching are often cumbersome and slow.

The ageing of the teaching workforce is compounding many of the above concerns. On average, 25% of primary teachers and 30% of secondary teachers are aged over 50 years, and in some countries more than 40% of the teachers are in this age group (see Figure 3). Large numbers of retirements are likely in the next few years.

Figure 1 There are major difficulties in hiring qualified teachers in key subjects

Cross-country mean percentage of upper secondary students attending schools where the principal reported that hiring fully qualified teachers is difficult, 2001



Note: Proportions by study area are calculated for cross-country means. The countries which participated in the ISUSS survey were: Belgium (Fl.), Denmark, Finland, France, Hungary, Ireland, Italy, Korea, Mexico, the Netherlands, Norway, Portugal, Spain, Sweden and Switzerland. The Netherlands is not included in the calculation of cross-country means as it did not meet international sampling requirements.

Source: OECD International Survey of Upper Secondary Schools (ISUSS) database, 2003. Published in *Education at a Glance 2003*.

The analysis shows that teacher quantity and teacher quality issues are clearly inter-linked. School systems often respond to teacher shortages in the short-term by some combination of: lowering qualification requirements for entry to the profession; assigning teachers to teach in subject areas in which they are not fully qualified; increasing the number of classes that teachers are allocated; or by increasing class sizes. Such responses, which ensure that classrooms are not left without a teacher, and that a shortage is not readily evident, nevertheless raise concerns about the quality of teaching and learning.

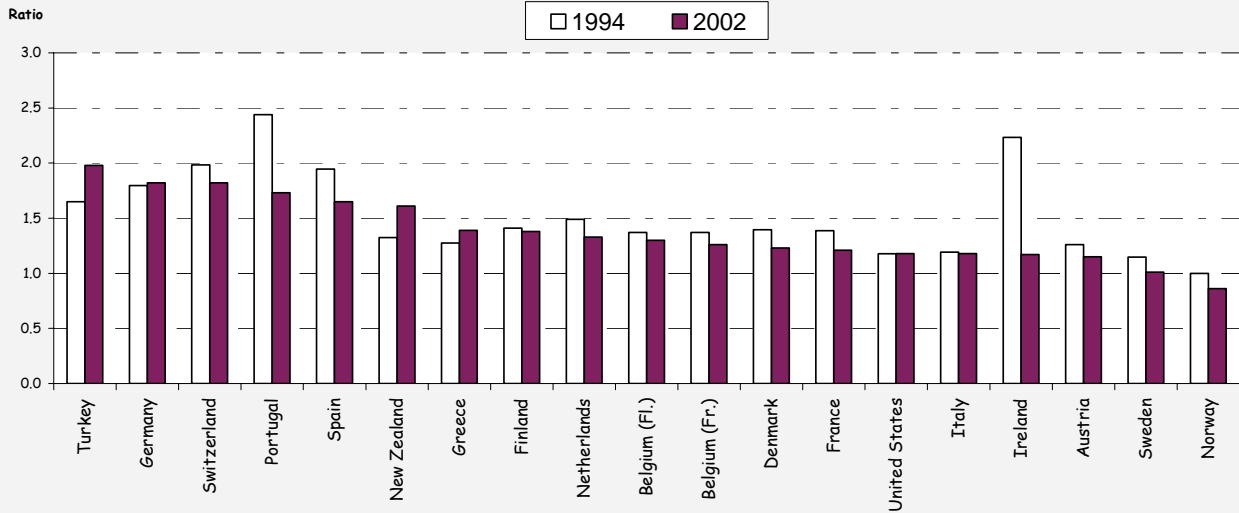
At another level, just because a country does not face a shortage of qualified teachers it does not necessarily mean that the quality of the teaching workforce is adequate – particularly if selection processes do not result in the best applicants securing work as teachers.

The findings and policy concerns could be taken as evidence that teaching is a profession in long-term decline. As societies have become wealthier and educational qualifications have increased and employment opportunities have expanded, teaching's appeal as a path to upward social mobility and job security does seem to have diminished. Widespread concerns about the difficulties faced by many schools, fuelled by often very negative media reporting, have damaged teaching's appeal. Expectations and demands on schools have been increasing, while in many countries resources have not kept pace.

But there are positive signs that policies can make a difference, as the examples provided in the report show. There are countries where teachers' social standing is high, and there are more qualified applicants than vacant posts. Even in countries where shortages have been a concern, there are recent signs of an upturn in interest in teaching, and policy initiatives appear to be having an effect.

Figure 2 Teachers' relative salaries are declining in most countries

Ratio of salary after 15 years of experience to GDP per capita
Public Institutions, Lower Secondary Education

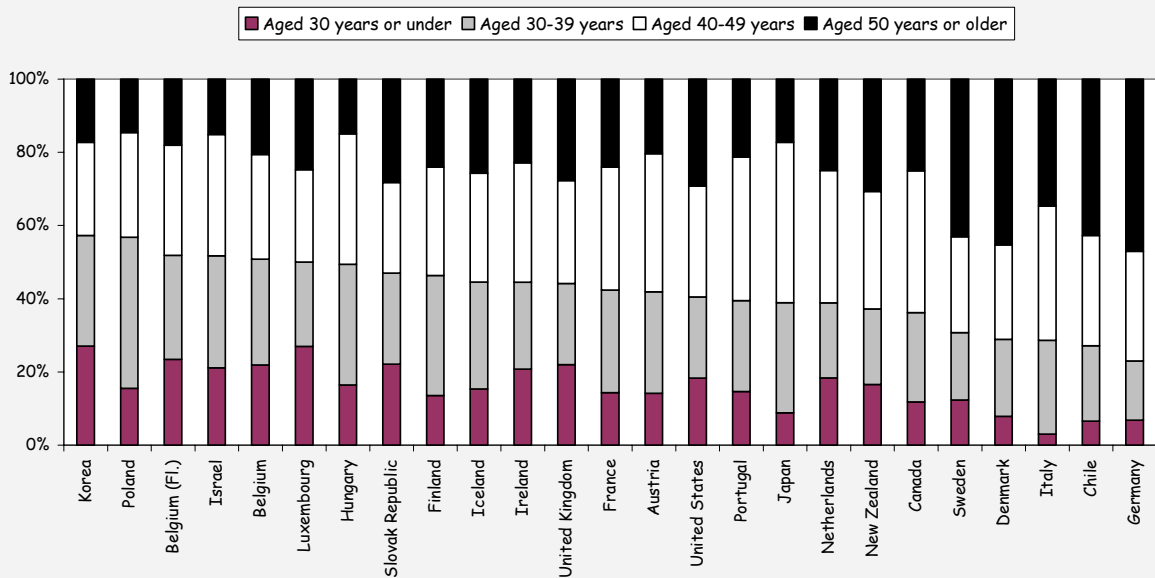


Note: All countries for which data are available for both years considered are shown. Data for Turkey refer to primary education and common data were used for both Belgian Communities for 1994. The indicator is limited because it is based on statutory rather than actual salaries, financial benefits other than salaries are not included, and the reference point, GDP per capita, does not reflect salary levels in comparable occupations. A more appropriate indicator would compare teachers' actual salaries and other benefits with workers in professions requiring similar qualifications and at similar age levels. Such data are not yet available at international level.

Source: OECD *Education at a Glance*, 2001 and 2004

Figure 3 The teaching workforce is ageing

Distribution of teachers in public and private institutions by age group, primary education, 2002



Notes: Countries are ranked in ascending order of the percentage of teachers aged 40 years or older. Data for Luxembourg include public institutions only. The reference year is 2001 for Canada and Poland.

Source: OECD Education Database, 2004.

Policy Implications at Two Levels

The quality of teaching is determined not just by the “quality” of the teachers – although that is clearly critical – but also by the environment in which they work. Able teachers are not necessarily going to reach their potential in settings that do not provide appropriate support or sufficient challenge and reward. Policies aimed at attracting and retaining effective teachers need both to recruit competent people into the profession, and also to provide support and incentives for professional development and on-going performance at high levels.

Policy initiatives are necessary at two levels. The first concerns the teaching profession as a whole and seeks to improve its status and labour market competitiveness, and to improve teacher development, and school work environments. The second set of strategies is more targeted, and focuses on attracting and retaining particular types of teachers, and attracting teachers to work in particular schools. Table 1 summarises the main policy directions according to whether they apply to the teaching profession as a whole, or are more targeted to particular types of teachers or schools.

Table 1: Policy Implications

Policy objective	Directed towards the teaching profession as whole	Targeted to particular types of teachers or schools
Making teaching an attractive career choice	<ul style="list-style-type: none"> -- Improving the image and status of teaching -- Improving teaching’s salary competitiveness -- Improving employment conditions -- Capitalising on an over-supply of teachers 	<ul style="list-style-type: none"> -- Expanding the supply pool of potential teachers -- Making reward mechanisms more flexible -- Improving entrance conditions for new teachers -- Rethinking the trade-off between the student-teacher ratio and average teacher salary
Developing teachers’ knowledge and skills	<ul style="list-style-type: none"> -- Developing teacher profiles -- Viewing teacher development as a continuum -- Making teacher education more flexible and responsive -- Accrediting teacher education programmes -- Integrating professional development throughout the career 	<ul style="list-style-type: none"> -- Improving selection into teacher education -- Improving practical field experiences -- Certifying new teachers -- Strengthening induction programmes
Recruiting, selecting and employing teachers	<ul style="list-style-type: none"> -- Using more flexible forms of employment -- Providing schools with more responsibility for teacher personnel management -- Meeting short-term staffing needs -- Improving information flows and the monitoring of the teacher labour market 	<ul style="list-style-type: none"> -- Broadening the criteria for teacher selection -- Making a probationary period mandatory -- Encouraging greater teacher mobility
Retaining effective teachers in schools	<ul style="list-style-type: none"> -- Evaluating and rewarding effective teaching -- Providing more opportunities for career variety and diversification -- Improving leadership and school climate -- Improving working conditions 	<ul style="list-style-type: none"> -- Responding to ineffective teachers -- Providing more support for beginning teachers -- Providing more flexible working hours and conditions
Developing and implementing teacher policy	<ul style="list-style-type: none"> -- Engaging teachers in policy development and implementation -- Developing professional learning communities -- Improving the knowledge base to support teacher policy 	

This is a challenging agenda, but tackling one area without appropriate policy attention to inter-related aspects will lead to only partial results. Nevertheless, it is difficult to address all areas simultaneously, and resource constraints mean that trade-offs are inevitable.

Implications for Different Types of Countries

Not all of the policy implications apply equally to all the 25 participating countries. In a number of cases many of the policy directions are already in place, while for other countries they may have less relevance because of different social, economic and educational structures and traditions.

Most teachers are employed in the public sector, but the basic models of public sector employment differ from country to country. There are two basic models that shape teacher employment, and which are evident in the participating countries: “career-based”; and “position-based”.

In career-based systems, teachers are generally expected to stay in the public service throughout their working life. Initial entry normally occurs at a young age, it is based on academic credentials and/or a civil service entry examination, and the entry criteria are usually demanding. Once recruited, teachers are normally allocated to posts according to internal rules. Promotion is based on a system of grades attached to the individual rather than to a specific position. Starting salaries are often relatively low, but there is a clear pathway to higher earnings, and pension schemes are usually relatively generous. France, Japan, Korea and Spain provide examples of countries with many of the characteristics of career-based public services. In the main, countries with career-based teaching services do not have major problems with teacher supply. Most have many more well-qualified applicants than available vacancies. Public sector employment in such countries tends to be quite different in character from private sector employment, and on a number of criteria (average salary, job security and pension benefits) is often judged to be superior.

The concerns in career-based systems tend to be more qualitative in nature, namely that teacher education is not well connected to school needs, the entry selection criteria do not always emphasise the competencies needed for effective teaching, teachers lack strong incentives to continue developing once tenure is obtained, and the strong emphasis on regulations limits the capacity and incentives for schools to respond to meet diverse local needs. There are also concerns in such systems that they lack appeal to those who are unsure whether they want to commit early to a lifetime teaching career, or who have gained experience in other careers. In response, therefore, the major policy priorities in such countries include forging stronger connections between teachers’ initial education, selection and professional development, introducing more flexible employment positions, opening up possibilities for external recruitment, providing local education authorities and school principals with more scope for personnel decisions, and instituting management by objectives.

Position-based public services tend to focus on selecting the best-suited candidate for each position, whether by external recruitment or internal promotion. Such systems generally allow more open access at a wide range of ages, and entry from other careers is relatively common, as is movement from teaching to other jobs, and later return to teaching. Although initial salaries are often attractive, they generally plateau relatively early in the career. Teacher advancement depends on successfully competing for vacancies, and the number of higher level vacancies is usually restricted. Personnel selection and management in such systems is often decentralised to schools or local authority offices. Canada, Sweden, Switzerland and the United Kingdom are examples of countries with many of the features of position-based public service employment.

A number of such systems face teacher recruitment problems, especially for teachers in areas like mathematics, science and ICT. Although the conditions of public sector employment in such countries tend

to be similar to private sector employment, the public sector often lacks the capacity and flexibility to compete on private sector terms. Such systems also often find it difficult to retain a core of experienced teachers beyond the 30-40 year-old age bracket. Schools in such countries therefore often have high staff turnover, especially in disadvantaged areas. Because position-based systems rely less on regulation than career-based systems in assigning staff to schools, they often have greater disparities among schools in terms of teacher qualifications and experience.

In response to such concerns, the policy priorities in countries with position-based teaching services include a greater emphasis on system-wide criteria for staff selection, performance evaluation, and building career pathways. Because local managers play such a critical role in personnel management, and tailoring school programmes to meet local needs, such countries also need to place comparatively greater emphasis on the selection and training of principals and other school leaders. Because the processes of teacher selection and management tend to be more market-like in position-based systems, schools in disadvantaged or unpopular locations need to be provided with significantly more resources to enable them to compete for quality teachers, and there needs to be much more differentiation in salaries and working conditions in order to attract the types of teachers that are in short supply. Uniform salaries and conditions are likely to result in an over-supply of some types of teachers, and shortages of others.

Common Policy Directions

Despite the major differences between the career-based and position-based public service traditions, they share some common policy directions.

Emphasising teacher quality over teacher quantity

There is now substantial research indicating that the quality of teachers and their teaching are the most important factors in student outcomes that are open to policy influence. There is also substantial evidence that teachers vary markedly in their effectiveness. Differences in student performance are often greater within schools than between schools. Teaching is a demanding job, and it is not possible for everyone to be an effective practitioner and to sustain that over the long-term. However, the general approach to teacher selection and employment has tended to regard teachers as largely inter-changeable and to focus on the numbers of teachers rather than the qualities that they have or could develop.

Key ingredients in a teacher quality agenda include more attention to the criteria for selection both into initial teacher education and teaching employment, on-going evaluation throughout the teaching career to identify areas for improvement, recognising and rewarding effective teaching, and ensuring that teachers have the resources and support they need to meet high expectations. A strong conclusion from the work is that teachers are highly motivated by the intrinsic benefits of teaching – working with children and young people, helping them to develop, and making a contribution to society – and that system structures and school workplaces need to ensure that teachers are able to focus on these tasks.

In its most radical form, a greater emphasis on teacher quality could see teachers' work being redesigned to focus more on its professional and knowledge-based components, with perhaps fewer teachers being employed, but with more other people being employed to do those parts of teachers' current work that do not require teachers' professional skills, and teachers being paid substantially more to attract and retain the best possible candidates.

Developing teacher profiles to align teacher development, performance and school needs

There is widespread recognition that countries need to have clear and concise statements of what teachers are expected to know and be able to do, and these teacher profiles need to be embedded throughout the school and teacher education systems. The profile of teacher competencies needs to derive from the

objectives for student learning, and provide profession-wide standards and a shared understanding of what counts as accomplished teaching.

The teacher profiles need to encompass strong subject matter knowledge, pedagogical skills, the capacity to work effectively with a wide range of students and colleagues, to contribute to the school and the profession, and the capacity to continue developing. The profile could express different levels of performance appropriate to beginning teachers, experienced teachers, and those with higher responsibilities. A clear, well structured and widely supported teacher profile can be a powerful mechanism for aligning the elements involved in developing teachers' knowledge and skills, and for providing a means of assessing whether teacher development programmes are making a difference.

Viewing teacher development as a continuum

The stages of initial teacher education, induction and professional development need to be much better interconnected to create a more coherent learning and development system for teachers. A statement of teacher competencies and performance standards at different stages of their career will provide a framework for the teacher development continuum. As part of this there needs to be a clear set of expectations about teachers' own responsibilities for their on-going development, and a structure of support to facilitate their growth.

A lifelong learning perspective for teachers implies that in most countries much more attention will need to be focused on supporting teachers in the early stage of their career, and in providing the incentives and resources for on-going professional development. In general, there would be better value from improving induction and teacher development throughout their career rather than increasing the length of pre-service education.

Making teacher education more flexible

In a number of countries people need to make decisions about becoming a teacher early in tertiary education. This can lock them into a specific career path despite the possibility that their interests change, and they may eventually find themselves teaching only after completing a programme of study that has prepared them for little else. Such structures can also deny opportunities to enter teaching to other tertiary students later in their studies, or to people from mid-career in other occupations but who decide they would find greater satisfaction as teachers.

A more flexible system of teacher education would provide more routes into the profession, including through: post-graduate study following an initial qualification in a subject matter field; opportunities for those who started in schools as paraprofessionals or teachers' aides to gain full qualifications that build on their experience in schools; possibilities for mid-career changers to combine reduced teaching loads and concurrent participation in teacher preparation programmes; and it would involve close linkages with schools, including providing more direct support to beginning teachers early in their career. Such changes, which are already being introduced in a number of countries, help to concentrate teacher education resources on the people who will put them to best use.

Transforming teaching into a knowledge-rich profession

One of the main challenges for policy makers facing the demands of a knowledge society is how to sustain teacher quality and ensure all teachers continue to engage in effective on-going professional learning. Research on the characteristics of effective professional development indicates that teachers need to be active agents in analysing their own practice in the light of professional standards, and their own students' progress in the light of standards for student learning. Here, teaching remains largely unchanged as other forms of work have been dramatically transformed. Many other professionals commence their working

lives with a sense that they are entering a role that has been shaped by past research and that will be transformed during their working lives by future research. That is an excitement that teaching has not yet offered. There are signs of change in some countries, with teachers developing a research role alongside their teaching role; with teachers engaging more actively with new knowledge; and with professional development focused on the evidence-base for improved practice.

Providing schools with more responsibility for teacher personnel management

Successful enterprises often say that personnel selection is the most important set of decisions that they make. In the case of teaching, the evidence suggests that all too often the selection process follows rules about qualifications and seniority that bear little relationship to the qualities needed to be an effective teacher. The sheer size of school systems in many countries means that the process of teacher selection is often highly impersonal and it is hard for teachers to build a sense of commitment to the schools where they are appointed – or for the schools to build a sense of commitment to them.

The school is emerging as the key agency within the educational system for improving student learning, which implies that schools need to have more responsibility – and accountability – for teacher selection, working conditions, and development. However, to exercise these responsibilities effectively, it is clear that many schools will need more skilled leadership teams and stronger support. In particular, schools serving disadvantaged communities, which often face major difficulties in attracting and retaining skilled teachers, will need substantially more resources to make working in such schools a viable career choice. To ensure that greater school involvement in personnel management does not worsen inequalities among public schools it is also important that there are externally determined performance standards.

Developing and Implementing Teacher Policy

The issues raised in the report go to the heart of teachers' work and careers, and the success of any reform requires that teachers themselves are actively involved in policy development and implementation. Unless teachers are actively involved in policy formulation, and feel a sense of "ownership" of reform, it is unlikely that substantial changes will be successfully implemented. On the other hand, stakeholder groups should not be able to exercise a veto over education reforms that are mandated through democratic political processes. To do so would be to risk losing the public support on which education so critically depends. It is difficult to find the right balance, but open and on-going systematic dialogue and consultation is fundamental to the process.

There are also institutional arrangements that can make a difference. Several countries have developed Teaching Councils that provide teachers and other stakeholder groups with both a forum for policy development and, critically, a mechanism for profession-led standard setting and quality assurance in teacher education, teacher induction, teacher performance and career development. Such organisations seek to obtain for teaching the combination of professional autonomy and public accountability that has long characterised other professions such as medicine, engineering and law. This would involve teachers having greater say in the criteria for entry to their profession, the standards for career advancement, and the basis on which ineffective teachers should leave the profession.

The need to more actively engage the teaching profession extends beyond reasons of politics and pragmatism. One of the main challenges for policy makers facing the demands of a knowledge society is how to sustain teacher quality and ensure all teachers continue to engage in effective modes of on-going professional learning. Research on the characteristics of effective professional development indicates that teachers need to be very active agents in analysing their own practice in the light of professional standards, and their own students' progress in the light of standards for student learning. Policy has a key role to play in helping teachers to develop professional learning communities within and beyond schools.

In many countries there are extensive research gaps concerning teachers, their preparation, work and careers. Such research is important not only for improving the knowledge base for teacher policy, but also as a way of introducing new information and ideas to schools and ensuring that teachers engage more actively with new knowledge. There is a particular lack of research which compares teachers' working conditions and careers with those in other professions. Much of the data and research used in teacher policy formulation is largely self-referential, and comparative information on other careers would help provide a perspective on trends and findings in regard to teachers – as well as ideas for change.

Policy formulation would also benefit from more extensive monitoring and evaluation of innovation and reform. Countries are finding that they can capitalise more on the diversity within their systems by testing policy reforms on a pilot basis, with volunteer schools and regions, before widespread implementation. Identifying the factors involved in successful innovations, and creating in other schools the conditions for their dissemination, mainstreaming and sustainability, are central to an effective implementation strategy.

Further Information

Ordering *Teachers Matter: Attracting, Developing and Retaining Effective Teachers* will be available in early 2005 from:

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