

WHAT MAKES SCHOOL SYSTEMS PERFORM?

SEEING SCHOOL SYSTEMS THROUGH
THE PRISM OF PISA

OECD

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT



FOREWORD

Are students well prepared to meet the challenges of the future? Are they able to analyse, reason and communicate their ideas effectively? Do they have the capacity to continue learning throughout life? Parents, students, the public and those who run education systems need to know the answers to these questions.

Many education systems monitor student learning in order to provide some answers to these questions. Comparative international analyses can extend and enrich the national picture by providing a larger context within which to interpret national results. They can provide countries with information to judge their areas of relative strength and weakness and to monitor progress. They can also stimulate countries to raise aspirations and they can provide evidence to direct national policy for schools' curriculum and instructional efforts, and for students' learning.

In response to the need for internationally comparable evidence on student performance, the OECD has launched the Programme for International Student Assessment (PISA). PISA represents a commitment by the governments of OECD countries to monitor the outcomes of education systems in terms of student performance on a regular basis and within a common framework that is internationally accepted.

First results from PISA were published in 2001, revealing wide differences among countries in the performance of 15-year-old students in key subject areas. For some countries, these results were deeply disappointing, showing that their students' average performance lagged considerably behind that of other countries, and sometimes despite high investments in schooling. Overall, however, the results from PISA 2000 also provided very encouraging insights. The results achieved by students in countries such as Finland and Korea revealed that excellence in schooling is attainable, and at reasonable cost. Similarly, the results from Canada, Finland, Japan, Korea and Sweden indicate that it is possible to combine high performance standards with a socially equitable distribution of learning outcomes. Finally, the results suggest that high performance standards can be achieved consistently across schools, with differences between schools in Finland and Sweden accounting for only around 10% of their students' overall performance variation among students in OECD.

These findings have moved the debate on the PISA results further, with participants seeking a better understanding of why some countries achieve stronger and more equitable learning outcomes than others. To this end, the OECD is publishing a series of international thematic reports that more extensively analyse the impact of some individual, school and system-level factors on student performance. Similarly, most countries are pursuing national research and analysis to better situate the findings from PISA in their national educational, social and economic context.

Nevertheless, an analysis of the results from PISA can explain differences in performance patterns only to a limited extent, as numerous factors – including the systemic design of educational provision, the broader educational reform and innovation strategies, and the general context in which education systems operate – remain difficult to quantify and have not been measured by PISA.

In this context, the German Federal Ministry of Education and Research launched and financed an innovative multilateral pilot study aimed at linking the results from PISA to qualitative evidence on important features of public policy, including strategies for educational reform and innovation; issues of governance and resource allocation; national approaches to standard-setting, assessment and system monitoring; the organisation of support systems; the professional development of teachers and career pathways; and national approaches to

addressing socio-economic differences in students' backgrounds, with particular attention to the integration of non-native students and students with foreign-born parents. Researchers and experts from Canada, England, Finland, France, Germany, the Netherlands and Sweden collaborated in this study within a common comparative analytical framework, under the direction of the German Institute for International Educational Research. Results were published in the report *Vertiefender Vergleich der Schulsysteme ausgewählter PISA-Teilnehmerstaaten* (German Federal Ministry of Education and Research, 2003).

The research approach and the findings were also presented to the PISA Board of Participating Countries and to the OECD Education Committee/CERI Governing Board in October 2003. Furthermore, the countries covered by this study reviewed and commented on the description of their school systems. This led to the report *What Makes School Systems Perform? Seeing School Systems through the Prism of PISA* that presents key results from the multilateral study.

Although the multilateral study, and therefore this report, can only be seen as a first step towards integrating findings from quantitative and qualitative cross-national educational research, it sets an important milestone and will broaden the basis for policy dialogue and collaboration among countries aimed at defining and operationalising educational goals in innovative ways that make effective use of the rich source of evidence that cross-national comparisons provide. Together with the international PISA thematic reports, this report can support the ongoing shift in policy focus from *educational inputs* to *learning outcomes* and assist countries in bringing about improvements in schooling and better preparation for young people as they enter an adult life of rapid change and deepening global interdependence.

PISA is a collaborative effort, bringing together scientific expertise from the participating countries, steered jointly by their governments on the basis of shared, policy-driven interests. Participating countries take responsibility for the project at the policy level through a Board of Participating Countries. Experts from participating countries serve on working groups that are charged with linking the PISA policy objectives with the best available substantive and technical expertise in the field of international comparative assessment of educational outcomes. Through participating in these expert groups, countries ensure that the PISA assessment instruments are internationally valid and take into account the cultural and curricular contexts of OECD Member countries, that they provide a realistic basis for measurement, and that they place an emphasis on authenticity and educational validity. The frameworks and assessment instruments for PISA 2000 are the product of a multi-year development process and were adopted by OECD Member countries in December 1999.

The report was prepared by the OECD Secretariat, under the direction of Andreas Schleicher and Claire Shewbridge. The multilateral study co-ordinated by the German Institute for International Educational Research, on which the report is based, was a collaborative effort between educational scientists from seven countries: David N. Wilson and Tony C.M. Lam (Toronto, Canada); Pamela Sammons, Karen Elliot, Brenda Taggart and Wesley Welcomme (London, UK); Pirjo Linnakylä (Jyväskylä, Finland); Jean-Claude Emin, Jaqueline Levasseur et al. (Paris, France); Jaap Scheerens and Bob Witziers (Enschede, Netherlands); Holger Daun, Florian Waldow and Kah Slenning (Stockholm, Sweden) and Hans Döbert, Isabell van Ackeren, Wilfried Bos, Klaus Klemm, Eckhard Klieme, Rainer H. Lehmann, Botho von Kopp, Knut Schwippert, Wendelin Sroka and Manfred Weiß (Germany), with a number of other authors supporting the preparation of the report.

The report is published on the responsibility of the Secretary-General of the OECD.

TABLE OF CONTENTS

| | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Foreword | 3 |
| Chapter 1: Introduction | 7 |
| Chapter 2: Strategies for innovation and reform in the school system | 11 |
| Reform efforts in the six reference countries | 12 |
| Commonalities and differences in reform efforts | 15 |
| Chapter 3: Devolution of responsibilities to schools..... | 19 |
| Devolution strategies..... | 20 |
| Examples of devolution efforts | 20 |
| Commonalities and differences in devolution strategies | 22 |
| Chapter 4: System monitoring | 23 |
| System monitoring in the reference countries | 24 |
| Commonalities and differences in system monitoring..... | 26 |
| Chapter 5: Organisation of support systems | 29 |
| Support systems in the reference countries | 30 |
| Commonalities and differences in support systems | 33 |
| Chapter 6: Understanding and application of standards | 35 |
| Use of standards in the reference countries | 36 |
| Commonalities and differences in formulation of standards..... | 38 |
| Chapter 7: Organisation of educational processes within the schools | 39 |
| Organisation of educational processes in the reference countries | 40 |
| Commonalities and differences in the organisation of educational processes | 42 |
| Chapter 8: Integration of non-native students and students with foreign-born parents | 45 |
| Efforts to educate non-native students and students with foreign-born parents | 47 |
| Commonalities and differences in strategies and support structures for non-native students and students with foreign-born parents | 49 |
| Chapter 9: How countries cope with differences between target student performance and its achievement | 51 |
| Strategies for coping with under-achievement..... | 52 |
| Commonalities and differences in compensating for social inequity in basic education..... | 54 |
| Chapter 10: Professional development of teachers | 57 |
| Strategies for teacher professional development..... | 58 |
| Commonalities and differences in organisation of teacher training..... | 60 |
| Chapter 11: Conclusions..... | 63 |
| The educational culture and coping with heterogeneity..... | 64 |
| Structure of the school system and support services | 65 |
| Governance of the school system | 66 |
| Annex A: Analytical framework used for the country reports in the multilateral study co-ordinated by the German Institute for International Educational Research ... | 69 |

Chapter

1

INTRODUCTION

In recent years, PISA – the OECD Programme for International Student Assessment – has heavily influenced educational discourse in a number of countries by raising the following question: Which factors of education systems and which cultural and socio-economic factors are responsible for the variation in the “productivity” of education systems? To pursue this question and related issues, the German Federal Ministry for Education and Research commissioned a working group of researchers led by the German Institute for International Educational Research (DIPF) to carry out a study. This study did not look mainly at PISA results directly, since these may provide clues to differences in educational “productivity” but do not readily explain differences. It used a working group of country-based experts in six countries deemed to be relatively strong in PISA 2000 results to identify important characteristics of their systems, especially those features that are driving change. The full report of the study has been published in German and presents full details of the methodology used.¹ Annex A of this report shows the analytical framework of the original study.

In the present synthesis, the OECD summarises key features of the six education systems studied in the report. Above all, these are features of evolving and relatively successful education systems that have allowed these countries to work steadily to improve their systems and outcomes in recent years. All of the countries have been committed to change, and have identified a common set of issues aimed at ensuring that all students fulfil their potential within the school system.

An exercise such as this cannot identify clear-cut cause-and-effect relationships between certain factors and educational outcomes, especially in relation to the classroom and the processes of teaching and learning that take place there. However, it can identify which factors appear empirically to be “universal” features supporting good quality learning at school and which are specific to particular cultures or systems. Moreover, analysis of what has happened in these countries can give some pointers on the specific kinds of reform strategies that produce successful education systems.

The countries in the study were selected Western industrial countries that performed successfully in PISA 2000, and which employ a variety of education reform, innovation and evaluation strategies. They are:

- Canada, chosen as a country with a federal structure in which each province and territory has responsibility for its own education system, and also because of its specific experience in implementing innovative practices in education.
- England, chosen particularly because of its system evaluations, and its experiences in dealing with innovation strategies as a response to comparative studies.²
- Finland, because of its major success in PISA and long-term experience with reform strategies.
- France, because of its experience in using system evaluations and innovation strategies.
- The Netherlands, because of its experience in dealing with evaluations and innovation strategies in the school sector.
- Sweden, because of its successful PISA performance and experience in handling long-term reform strategies.

The analysis in chapters 2 to 10 below looks at how each of these countries addresses a series of inter-related themes, and at common and contrasting aspects of their approaches. Chapter 2 gives an overview of broad reform strategies. The more specific themes that follow are based around strategies for enhancing performance of the education system, whether by monitoring for weaknesses to see what needs improvement; by giving support to schools, teachers and students where it is most needed; by formulating standards and expectations or by empowering actors at the local level by devolving responsibility for achieving specified goals. In these respects, all systems are characterised by a level of focus and commitment to improvement, both in terms of raising performance overall and by ensuring that the most disadvantaged groups have access to sufficient learning opportunities. Adequate processes and opportunities for individuals are not enough; these countries' objectives relate to actual outcomes achieved, and in particular to the aim of raising all students at least to a given level of performance and qualification. Chapter 11 concludes by pulling together some key messages that emerge from this analysis.

Notes

1. The original report (Vertiefender Vergleich der Schulsysteme ausgewählter PISA-Staaten) was co-ordinated by the German Institute for International Educational Research (DIPF) and can be downloaded from the website of the Federal Ministry of Education and Research (BMBF): <http://www.bmbf.de/pub/pisa-vergleichsstudie.pdf>.
2. Whereas PISA and OECD data usually cover the United Kingdom, the comparative analysis focused, for pragmatic reasons, primarily on England. This study makes reference to both the United Kingdom and England.

Chapter

2

STRATEGIES FOR INNOVATION
AND REFORM IN THE
SCHOOL SYSTEM

Reform efforts in the six reference countries

Student performance in PISA is the result of a wide range of influences from both within and outside the education system. It is impossible to give a comprehensive account of all of these factors to explain exactly how well a country is doing in PISA. However, one common factor in relatively high-performing countries is strong efforts by authorities to improve the education system, rather than taking its quality and contemporary relevance for granted. In each of the six countries in this study, education enjoys – largely independently of the political orientation of the current government – high political priority. This is reflected in considerable efforts to reform the education system over the past two decades.

Such reforms have not removed all weaknesses in education systems, but appear to have helped to contain them. For example, countries have sought to address social differences in educational outcomes and have managed, to varying degrees, to limit the extent of such differences. In Canada, Finland and Sweden there is relatively high equality of outcome among different social groups. In the United Kingdom, on the other hand, social differences are substantially above average, and in France only moderately above the average for all OECD countries.

Despite the many social and cultural differences which make each country's reform strategy unique, it is possible to discern some commonalities in the various approaches. These commonalities are outlined below, after the following summary of some key features of recent reform efforts in each of the six countries in the study.

In **Canada**, the education system and educational reform are matters for each individual province and territory. However, a general discontentedness in many provinces led to widespread reform in the 1990s. These reforms involved in particular:

- Change in governance: school boards merged to improve efficiency; school councils were established to improve parental involvement.
- Abolition of course streaming up to year 9 or 10.
- Better control of educational expenditure.
- An optional national science framework co-ordinated by the council representing the provinces' education minister, covering most of the country.
- Development of "indicators" to assess provincial school systems, supported by national testing of students.

Ontario is an example of a province that has planned change in a particularly systematic way, with close monitoring of student performance, of school quality and of teacher competences against professional standards. Nationally, the emphasis has been on using student testing to check whether the intended learning outcomes prescribed in provincial curricula have been attained, notwithstanding some questioning of whether better test results do actually reflect learning improvements. There has also been an attempt to improve early childhood education as an essential foundation, both by extending access among three- to five-year-olds and by giving attention to early development of cognitive, mathematical and mother-tongue language skills.

In **England**, reforms introduced in the 1980s and early 1990s by the Conservative government revolved around the introduction of a national curriculum, standardised performance tests, greater autonomy for schools in management and funding, incentives to compete with other schools for students and financial support for lower-income students to attend private schools. The succeeding Labour government (elected in 1997) has reinforced some of these policies and altered others:

- *Resources* to state education have been increased, partly by making education a top funding priority and partly by diverting the subsidy for private schools into state education particularly to improve resourcing of early-years education.
- *Standards* have been emphasised, for both learning outcomes and teaching quality, through a central Standards and Effectiveness Unit and other mechanisms.
- *Best practice* is disseminated from successful schools, teachers and educational concepts.
- *Weak schools* are given support, but also sanctions up to and including closure if they continue to under-perform.
- “*Diversity*” is being promoted in tandem with improvement. By allowing schools to take on special characteristics (at the secondary level) and encouraging links with outside bodies including churches, companies and community organisations, the government aims to strengthen schools as organisations and allow them to thrive as places of learning.
- A new emphasis on *early-years* education, and in particular in extending access to quality pre-school experiences to less advantaged three- and four-year-olds.

Underlying this approach is a determined focus on performance, of both schools and individual teachers, with student testing giving comparative information that informs this strategy. Schools are given specific action plans to improve their performance in relation to similar schools. Recognition of successful teachers and improvement in in-service teacher training aim to raise standards in the teaching profession. These reforms accord with national and international research findings that emphasise the value of performance review in working towards agreed objectives and encouraging teachers and schools to take responsibility for performance.

In **Finland**, reform over three decades has revolved around the desire to promote equal educational opportunities as well as the principle of lifelong learning. Efforts have included the introduction of comprehensive schools in the 1970s to replace a tracked school system, the reform of vocational training in the 1980s and the establishment of polytechnics in the 1990s. With comprehensive education came greater central planning and control, particularly over the curriculum; however, during the 1990s schools were given more freedom over optional subjects and were allowed greater diversity through concepts such as specialised schools. Every four years the government details its priorities for education in a development plan. Priorities in the 1999-2003 plan included:

- Focusing on ICT, mathematics and science.
- Promoting high levels of foreign language competence.
- Requiring educational institutions and local authorities to carry out evaluations in order to raise quality.

- Improving co-operation between schools and the world of work.
- Establishing standards in pre-service and in-service teacher training.

A present debate in Finland is the degree to which central guidelines, for example emphasising the teaching of basic subjects, should be re-established. In 2003, a national Evaluation Council was established to co-ordinate assessment and evaluation procedures. The PISA 2000 results raised debate about various areas for further improvement, including reducing the gap between boys and girls. Streaming was abolished in the 1980s partly because lower streams comprised primarily boys and students from low socio-economic backgrounds. In PISA 2000, Finnish reading differences were among the lowest in the OECD when comparing socio-economic groups, but the highest when comparing boys and girls.

In **France**, like in Finland, reform since the 1980s has been geared towards reducing the influence of social inequalities on access to educational opportunities. Also like Finland, a reform goal was a more integrated style of secondary schooling, achieved through the introduction of a comprehensive lower secondary school, the *collège*, in the 1970s. From the 1980s, a further emphasis of reform has been decentralisation, which for example has given local authorities more funding responsibilities, regional administrators more decision-making powers and secondary schools more freedom to adapt educational objectives to their local situations. Current reform efforts attempt to marry traditional elements of central control with pressures to decentralise. Tension between central requirements and individual implementation has been seen, for example, in the adoption of “preferential” zones of educational priority (ZEP), which receive extra resources. In the 1990s, a systematic effort to bring at least 80% of each year-group to *baccalauréat* standard by the end of secondary school was reinforced by:

- Stronger system monitoring at the national level, using diagnostic testing of students.
- Consolidation of initial teacher training, with a stronger practical orientation as well as monitoring of academic standards.
- Expansion of pre-school provision (early 1990s) with commensurate high attendance rates among three-year-old children.
- Introduction of “cycles” – which cover several grades with common final objectives – particularly at the primary level.
- Reform of the *collège* structure to produce a better introduction to secondary education, greater differentiation according to student needs, and orientation to upper secondary pathways.
- Improvement in individual help for students in the first year of *lycée* (upper secondary school).
- Establishment of a National Council for School Evaluation (in 2002).

Recent criticism of these reform plans is based partly on a failure to meet the basic target: 70% rather than 80% of students were at *baccalauréat* level by 2000. There is also the question of the students’ ability to master basic skills at the primary level. Reforms are seen as having postponed rather than removed inequalities among students, and the *collège* in particular is the subject of ongoing criticism. The decisive task of current education policy is to overcome differences in the quality of educational institutions, which continue to be associated with regional differences.

In the **Netherlands**, education policy has traditionally been based on decisions made by government in collaboration with national organisations such as teacher unions and school-maintaining bodies. In recent years, reforms have strengthened local autonomy and transferred downwards responsibility for educational quality. In particular:

- Government now restricts itself mainly to decisions affecting the basic framework of education.
- Schools manage financial resources and personnel policy.
- Financing of education has been more linked to performance.
- Self-evaluation by institutions has been combined with external quality evaluation, particularly through school inspection.

The 1990s saw a set of reforms aiming to improve teaching and learning, such as reducing class sizes in primary schools and adapting secondary education to the needs of the labour market. Improvement in equity has also been an important objective, achieved for example by deploying extra resources to schools with socially disadvantaged students. However, evaluations have indicated that social inequalities persist in the Netherlands' highly segmented secondary school system. Reforms creating greater integration of lower secondary education have not ended the separation of students, even though different types of schooling are frequently found within the same building or school centre.

In **Sweden**, equal educational opportunities have high priority. Reforms since the late 1980s have also emphasised decentralisation, a principle that has survived changes in government. The initial reforms involved devolution of funding responsibilities and a loosening of regulations concerning educational content, as well as the financing of independent schools to promote school choice. Further measures during the 1990s included:

- A shifting of some aspects of evaluation to the local level, requiring individual schools and local authorities to write annual reports.
- Reform of the marking system from a norm-referenced system to an objective-based grading system.
- An increase in the freedom of schools to interpret and contextualise the national curriculum.
- An increase in local authorities' ability to allocate resources as they see fit.

In 2003 the National Agency for Education was divided into two agencies: the “new” National Agency for Education, responsible for quality control consisting of follow-up, evaluation and inspection, and the National Agency for School Improvement. New efforts are being made to support and guarantee pre-school education, which was transferred from Social Affairs to Education in 1998.

Commonalities and differences in reform efforts

Similarities in these approaches can be seen both in common reform objectives across countries and in parallel strategies used to achieve them. In particular:

- *Countries are making efforts to reduce the effects of socio-economic induced disparities while promoting quality.* In particular, the challenge is to reduce differences in student prospects associated

with the social composition of the schools they attend. Some countries such as Canada, Finland and Sweden have already had some success in combining high quality of performance with relatively high educational opportunities. Among the efforts to promote this result in the countries studies are:

- Better support for poorly performing students.
- Changes in management structures and practice.
- Differentiated resources (for example in France) according to the socio-economic status of a school's catchment area.
- Competition and sanctions for schools to promote better performance (in England).
- Differentiation of courses available to students with different needs (in Finland and France).

While no one measure can on its own be seen as the key to success, these countries have shown that some powerful tools are available to promote equity in combination with educational quality.

- ***There has been an overall move towards decentralisation, but this has not meant the central state disengaging from an interest in educational outcomes.***

As described more fully in chapter 3, school systems are being run and governed at a more devolved level than in the past, with management and finance in particular being passed to schools and local authorities from the central state. Yet in most countries, schools still operate under certain restrictions or remain excluded from full self-responsibility. In England, for example, central government has taken a strong role in governing action programmes and sanctions for under-performing schools. Finland and the Netherlands have seen, periodically, a return to traditional centralised formulation of plans, with closer definition of educational objectives. In principle, there is typically a division between a central state that defines broad objectives and monitors outcomes, and local governance and control over school processes. While this is clearly the overall direction of reform in successful education systems, the dichotomy is not always clear-cut and there are many grey areas.

- ***A focus on improving school quality, particularly in terms of improved student performance, is closely aligned with school autonomy.***

In all the reference countries, efforts to improve learning, and hence student outcomes, are being driven from the centre but implemented by schools. An ethos of schools' self-responsibility for performance is reinforced by self-evaluation, as well as by accountability for results of external evaluations that are made public. In all countries except France, performance standards have been formulated or existing ones extended within the scope of reform efforts. These standards are generally an integral part of a compulsory or core curriculum. National standards can be defined not only for students, but also for teachers (for example in England). External evaluation mechanisms include testing programmes, inspections/supervisions producing reports on institutions and final examinations. Information that is gathered is used not just for accountability but also to support targeted measures to develop schools. An essential aspect of such responses is the enhancement of flexibility of the school system, with principals seeking appropriate responses for individual schools.

In all six countries, special attention is given to measures aiming to achieve an integrated improvement in teaching and learning, beginning at the primary level and including the acquisition of competence in the mother-tongue language (reading and writing), mathematics, and the natural sciences/information

technology (except Sweden). A second set of measures targets improvement in pre-school education, either by expanding provision of pre-school education nationwide for all children between the ages of three and five (*e.g.* in France) or by creating pre-school places for all four-year-olds in socially disadvantaged areas (in England); these efforts ensure that all children begin their schooling on an equal footing.

Chapter

3

DEVOLUTION OF RESPONSIBILITIES TO SCHOOLS

Devolution strategies

Since the early 1980s, countries have been increasing autonomy for schools over a wide range of institutional operations, aiming to raise performance levels by devolving responsibility to the front line and encouraging responsiveness to local needs. In most of the countries that performed well in PISA 2000, local authorities and schools now have substantial freedom to adapt and implement educational content and/or to allocate and manage resources. The survey also shows that in all OECD countries, most schools have some responsibility for student admissions and on how money is spent, and are in charge of student discipline and assessment. With the exception of Germany, Italy and Switzerland, the majority of 15-year-olds are also enrolled in schools that play a role in deciding on the courses offered.

In other areas, the picture is more mixed. For example, schools in some countries (including the Netherlands and the United Kingdom from this study) have relatively high degrees of freedom in budget formulation, while Austria and Germany report little involvement of schools in this task. Schools in most countries have little say in setting teachers' salaries or in hiring or firing them.

Does the distribution of decision-making responsibilities affect student performance? Within certain countries students in schools with more autonomy tend to perform better, but this relationship is less discernible in countries like England where a single central administration determines to a large extent the degree of autonomy that all schools enjoy, so there is less variation. In PISA countries, there is a clear positive relationship between certain aspects of autonomy and performance, most notably the choice of which courses are offered, and to a lesser extent autonomy over budget allocation.

In PISA countries, devolution has been implemented in many different ways with emphasis given to different aspects of autonomy according to the country – in some cases freedom to develop educational content and in others, management and administration of schools. As a result, some countries in this study have kept close central control over some areas of education, while devolving others.

Examples of devolution efforts

Canada has a federal system, with only an indirect role for the federal government and a general centralised model of educational governance within each province or territory. Provincial ministries determine the framework for providing educational services, set educational standards and have a hand in evaluation and planning. Approximately 80% of the curriculum content is centrally determined. Local authorities, however, are responsible for school administration, employing teachers, and in some cases, raising educational funds. In the 1990s, some provinces recentralised certain core competences such as curriculum development, which had been given to local authorities in the 1960s.

However, in some provinces there are considerable efforts to give responsibility to local authorities and schools. For example, schools and municipalities may be required to conduct self-evaluations and subsequently draw up action plans for improving quality in schooling. In Ontario, schools are required to develop improvement plans based on indicators such as results of province-wide assessment of student performance.

England has in recent years undergone a “revolution” in the distribution of responsibilities, which moved away from the model centred on local education authorities responsible for the delivery of schooling and the formulation of the curriculum in each area. The new system established in the 1990s transferred competences both downwards to schools as autonomous “suppliers” and upwards to central authorities

responsible for setting standards. At the heart of today's system is the national curriculum, which determines highly detailed "standards" as well as performance targets measured through regular national testing of students. With local management and governance of schools, and most funding allocated to schools in proportion to student enrolments, each school has a high degree of operational autonomy.

Local education authorities are responsible mainly for governing the system as a whole, establishing local plans and contributing to school financing through local taxes. Central agencies have a number of instruments for maintaining standards, including the specification of subjects and details of what is taught in the national curriculum, the setting of standard attainment tests, and direct inspection of each school. A special instrument used to achieve the intended quality improvement of the school system involves publicly awarding certain schools "beacon" status, for which they must prove outstandingly high performance levels.

In the 1980s and 1990s **Finland** transferred competences for a formerly state-run school administration to local municipalities. Schools themselves can now make their own decisions on operational activities, but since these are based on national objectives, the position and importance of assessment and evaluation has been strengthened. The Ministry of Education and the National Board of Education set a core curriculum comprising common subjects to be studied and national targets for learning, as well as specifying the number of lessons and assessment criteria in core subjects at the primary and lower secondary levels ("basic education"). The state also finances schools, with public and private institutions being treated equally.

However, municipalities determine local education targets and syllabuses in basic education, with the schools themselves playing a greater role in this respect at the upper-secondary level. Local authorities are principally responsible for recruiting teachers, and assess the quality of individual schools by means of external and internal evaluation.

In **France**, the national Ministry of Education is the key body responsible for ensuring equal opportunities for students, offering uniform educational standards throughout the country. In recent years, more responsibility has been assigned to regional and local authorities. This means, for example, that *Academies* administering schools at regional and sub-regional levels can now allocate teachers to individual schools. Local authorities have also acquired a role in raising funds for education; they contribute 20%. The central governing instrument of the French state, the national curriculum, has not been affected by decentralisation. The evaluation process also involves the national or subordinate regional bodies responsible for disciplinary and specialist supervision. Inspectors reporting to the Ministry of Education are responsible for the constant supervision of the education system, and the Ministry of Education continues to hire and pay teachers.

In the **Netherlands**, schools are maintained either by municipalities or by private religious or pedagogically driven organisations, all of which receive equal funding from the state. Over the past few years, responsibilities have been transferred from the government to school-maintaining bodies and to schools. With the government's role focusing on provision of a framework for good quality education, schools have gained greater autonomy in spending and operations, but remain accountable to the national level for performance. The Ministry of Education sets general curriculum guidelines and learning objectives as well as examination programmes; primary schools and secondary schools (lower secondary curriculum only) have greater autonomy to manage their curricula. For the upper secondary curriculum, secondary schools need to closely follow the centrally set examination programme, which defines the required knowledge and skills. Municipalities are responsible for school construction projects and advisory services, as well

as redistributing money to balance inequalities, for non-public as well as municipal schools in their area. School budgets are set according to the number of students, and are not conditional on performance.

Sweden has three levels of decision-making, within which extensive devolution took place in 1991. At the national level, Parliament, the Ministry of Education and the National Agency for Education set general guidelines. Municipalities decide how the objectives encapsulated in these guidelines will be implemented, and are fully responsible for administration and funding. They are responsible for using long-term planning to ensure the maintenance of appropriate standards of educational provision. Schools are responsible for interpreting and implementing the curriculum to meet national goals. Central to this system are individualised (local) working plans drawn up by the schools and school plans drawn up by the municipalities. However, in practice the extent to which municipalities govern school administration varies, some taking a more top-down and others a much more hands-off approach.

Commonalities and differences in devolution strategies

Although the general trend has been in the direction of decentralisation, there is no common model in terms of what powers are held at different levels of the governance system. Even those countries that have clearly devolved decision making have done so in different ways. In Sweden, responsibilities have been ceded to the municipalities as school-maintaining bodies. In Finland they have similarly been given to such bodies but, to a greater extent than in Sweden, also to individual schools. In the Netherlands administration has been devolved to both public and private school-maintaining bodies, a move that corresponds with the Dutch tradition of giving parents considerable freedom to choose which school their children will attend. In England, a market-oriented governance regime has given more decisions to schools while reducing the strong degree of educational oversight and decision-making previously held by local authorities.

One common feature appears to be some degree of central direction of the curriculum; in practice, this works out very differently across countries. Whereas the French state has retained tight control over the curriculum, in Finland, the Netherlands and Sweden responsibility is centralised only to the extent of determining the general criteria that must be fulfilled at the decentralised level. This is a change from detailed curriculum objectives and content being set centrally. In Finland and Sweden, schools are in no way allowed to modify the national curriculum, but enjoy full autonomy in the courses they offer. However, in the Netherlands each school is free to make its own determinations on curricula, except for having to comply with a set number of teaching hours per respective subject.

When looking at the practical administration of schools and the governance of curricula, it is evident that England must be characterised as a special case. In England, administration of the individual school has been almost entirely transferred from the decentralised level of the school-maintaining bodies to the educational institutions themselves. However, governance of the curriculum has been withdrawn from the individual schools and, together with responsibility for regular external assessment, transferred to the central government. The philosophy that underpins this system is that of a market, in which suppliers' behaviour is constrained by central rules and, in particular, a prescriptive curriculum.

The structures used to supervise compliance with the performance objectives laid down in these countries' framework curricula also differ. In Finland inspections rest mainly on schools and the school-maintaining bodies conducting self-evaluations. In England and the Netherlands, powerful state inspection systems are responsible for supervision, a situation that again modifies the principle of market-guided systems of governance that exists in these countries where finance is based on per-student budgets for each school.

Chapter

4

SYSTEM MONITORING

Performance standards can only work if they are consistently implemented and assessed. Assessments of student performance are now common in many OECD countries – and often the results are widely reported and used in public debate as well as by those concerned with school improvement. Moreover, countries are increasingly monitoring performance against international norms, through various cross-national assessments including PISA, and the International Association for the Evaluation of Educational Achievement's (IEA) Trends in International Mathematics and Science Study (TIMSS) and Progress in International Reading Literacy Study (PIRLS). However, the rationale for national assessments and the nature of the instruments used vary greatly within and across countries. Methods employed in OECD countries include different forms of external assessment, external evaluation or inspection and schools' own quality assurance and self-evaluation efforts.

Opinions vary on how results from evaluation and assessment can and should be used. Some see them primarily as tools to reveal best practices and identify shared problems in order to encourage teachers and schools to improve and develop more supportive and productive learning environments. Others extend their purpose to support contestability of public services or market-mechanisms in the allocation of resources, for example by making comparative results of schools publicly available to facilitate parental choice or by having funds follow students.

The type of performance benchmarks used and reported thus has important implications for the various stakeholders involved, including parents, teachers, schools and students. The following are some of the principal methods of system monitoring observed each of the six countries in this study.

System monitoring in the reference countries

In **Canada**, comparative studies of schools in recent years have followed a rise in public interest in the quality of the school system. Canada has a fairly long tradition of participating in international comparative studies, and sometimes extends them to provide better cross-provincial comparisons, as with TIMSS, or to track students over time, as with Canada's Youth in Transition Survey following up on PISA.

Within Canada, large-scale comparative studies of schools have been generally welcomed by the public, but opposed by many teacher unions, fearing that they will be used to judge individual teachers' performance and narrow the curriculum. Since the 1990s, various provinces have been testing children at different ages, but the orientation of the tests varies. In Alberta, for example, they are geared to the current curriculum, whereas Ontario's main test addresses basic skills. Results of provincial evaluations can be reported back at the province, district, school and student levels, with different provinces publishing them in various forms. For example the Toronto District School Board annually publishes test results alongside demographic data for 459 primary schools. A national School Achievement Indicators Programme looks at performance of a sample of students in mathematics, science or reading/writing, with each of these subject areas tested every four years on a rolling cycle. This is not fed back to individual schools because of the random nature of the sampling.

In **England**, the 1990s saw the development of school-level inspections, student testing based on the national curriculum and the systematic publication of test and exam results of individual schools. System monitoring through participation in various international studies has a longer tradition, dating back to the first international mathematics and science studies run by the IEA.

Responsibility for national monitoring lies largely with the Qualifications and Curriculum Authority, responsible for defining and monitoring nationally prescribed standards, and the Office for Standards in Education (OFSTED), which supervises regular inspections of each school. The Teacher Training Agency also has responsibility for developing standards among teachers. Annual feedback on the whole system comes with an annual OFSTED report based on school inspections. Annual publication of individual school test and examination results have a substantial impact on schools and the public's perception of them.

Findings of school inspection results are also used to promote particularly effective techniques for teaching reading comprehension and mathematical skills. This has influenced significantly the work of teachers in the classroom. National evaluations are also related to international research on school effectiveness and to international studies such as PISA. A particular point affecting the development of England's system from international studies is the desire to reduce the country's relatively high gap in educational outcomes between students from different social backgrounds.

In **Finland**, studies and evaluations aim to ensure adherence to guidelines and decisions established by the political administration and/or the national curriculum. Those entrusted with this task must determine whether policy is actually implemented. Test results indicate whether students are achieving performance expectations to a uniform standard. A particular object of study is performance differences between schools, in order to target poorly performing schools for support. Teachers and principals are also involved in the evaluations, which repeatedly change emphasis by focusing successively on different topics. Thus the evaluation system is seen as a tool oriented towards helping schools improve, rather than simply publicising weak performance.

Finland has also participated in a range of international empirical tests. National evaluations have partly confirmed these results, but tend to find greater weaknesses for example in writing, linguistic knowledge and mathematics, than implied by Finland's recent strong performance internationally. Even though PISA showed that relatively few Finnish students were under-performing, the country is attempting to respond to its pessimistic view of Finnish students' attitude towards learning assessment and towards themselves.

In **France**, administrative and teaching decisions are based on the findings of empirical studies. A key distinction is made between diagnostic and system-monitoring studies. Since 1989, diagnostic tests have permitted teachers to assess students individually and informed their professional teaching practice. Here, it is possible to analyse the way students answer questions, correctly and incorrectly, when making an assessment. In contrast, system-monitoring studies conducted by the Ministry of Education aim to assess the whole education system. They are used to develop the system over time, and evaluate the success of innovations. The results of various international studies in which France participates also feed into this process.

A database of diagnostic testing materials is made available to French teachers on the Internet, as are the aggregate results of diagnostic national studies. Recently, public interest in such results and in information relating to the effectiveness of the school system has led to the media publishing rankings of the results of individual upper schools (*lycées*). Such information has been criticised for reporting neither how many students drop out before completion nor contextual information about students' backgrounds. This is why school-level social background information is reported by the Ministry.

In the **Netherlands**, a government institution – the school inspectorate – has explicit responsibility for monitoring the education system. Inspectors report on different aspects of the education system in

an annual report to the parliament on the state of education. The inspectorate also monitors individual schools. A wide range of stakeholders is consulted in these inspections, from parents and teachers to experts and representatives of educational organisations. Regular monitoring of individual schools' performance and quality of teaching is based on a wide range of stated criteria and indicators, such as student performance and drop-out rates, aspects of teaching and pupil support systems. In publishing these reports on schools, the inspectorate also gives contextual information on students' socio-economic backgrounds. Each school is urged to inform parents about the school and the performance level it has achieved.

Growing interest in the quality of education has led to inspections increasingly being grouped together and repeated regularly. For example, the PRIMA research project – a longitudinal multi-cohort study in primary schools – investigates student performance in the context of social environment and students' attitudes.

International studies such as the International Association for the Evaluation of Educational Achievement's Trends in International Mathematics and Science Study (TIMSS) and PISA are also taken seriously in the Netherlands when monitoring its system. The strong performance of Dutch students in TIMSS is, among other things, attributed to the fact that students were well prepared for the test by instruction based on constructivist approaches to pedagogy and so were able to solve problem-oriented tasks particularly well.

In **Sweden**, every educational survey takes into account the core aim of policy: to offer all children the same educational opportunities regardless of their sex, place of residence or economic circumstances. Sweden has a long tradition of participating in international system-monitoring studies and conducting comparative country studies. Today these are complemented with a recently introduced inspection system, a national test system and national system of evaluation, including follow-up; the National Agency for Education is responsible for these instruments.

Results of national inspections as well as grades, test results and other information from national monitoring are published annually. Specific statistics are prepared for individual schools and published on a web site.

Response to poor results focuses on helping weaker students to reach national standards; such students receive special attention under the Swedish policy of equal opportunity.

Commonalities and differences in system monitoring

Each of the countries in this study places considerable importance on monitoring standards against national and international benchmarks as part of their strategy for securing strong performance. There are differences as well as similarities across countries in their approaches towards system monitoring – in terms of their purposes, the monitoring tools used and the way findings are published or disseminated.

Countries have multiple motives for monitoring performance. All countries seek to use the findings of assessments to maintain or improve the quality of their education systems and to obtain empirically supported reference frameworks against which the performance of individuals, schools and the whole system can be judged. However, beyond this, various possible functions for performance monitoring assume different levels of emphasis in different countries. In a federal country with autonomous school systems like Canada, studies carried out nationally offer comparisons across provinces. In Finland and Sweden, policy makers focus primarily on using assessments to ensure that students are receiving equal educational opportunities regardless of their backgrounds. In France, empirical tests are carried out to ensure that students perform to the expected level and that teachers provide the necessary quality of support. In England

and the Netherlands, government inspectorates give schools information that can help them improve but also put considerable emphasis on making their findings accessible to stakeholders and therefore making schools more widely accountable.

The countries presented here deploy a range of different monitoring tools. All reference countries have considerable experience with studies that compare student performance across systems, and most are currently participating in at least three large ongoing studies: PISA and the TIMSS study on mathematics and science and PIRLS study on reading literacy. Alongside these comparative studies, all countries have in place systems to conduct large-scale assessments within their borders. In Canada, these take place both within provinces as well as across the whole country. Different countries combine diagnostic and system-monitoring functions in different ways. In Finland and Sweden, where responsibilities have been decentralised but national agencies have a brief to maintain equal opportunities across the system, these agencies emphasise not just the assessment process but also measures to cope constructively with any problems that they identify. Inspection systems in England and the Netherlands are used not just to hold schools accountable for their standards, but also to give information that allows them to improve themselves, and such inspections try to relate to research on school effectiveness. France has a distinctive approach; it separates out diagnostic testing and system monitoring. On the one hand teachers get tools for recognising students' specific strengths and weaknesses and for recognising the potential for developing their own teaching. On the other, separate studies with publicly available findings record institutions' performance levels.

All of the countries publish the results of evaluations of school systems, but they differ in how they do this, partly because of differences in the design of evaluation instruments. In Canada, for example, provinces report back results at a range of levels, from province down to individual student (in random sample surveys the student level and sometimes the school level are not appropriate). England and France both publish findings of tests in as accessible a form as possible as a means of putting pressure on the school system to improve, but in France much of the emphasis has been on the whole-system level (though this is changing) whereas in England, individual school results are particularly prominent. Regardless of the extent to which findings are made accessible to the public, a general pattern across the countries examined is to develop mechanisms for individualised feedback to schools to help them think about improvement.

Chapter

5

ORGANISATION OF SUPPORT SYSTEMS

In order for schools to become “learning organisations”, they require strong support systems – institutionalised services aimed at improving school quality. Such systems can support the efforts of individual students and teachers, whole schools and their managers and school systems and school-maintaining organisations. One can distinguish support systems for individual students, including those with particular disadvantages or special needs, from those relating to the needs of schools and teachers and those relating to the whole school system. In this report, chapter 7 below looks at the organisation of educational processes within schools and chapter 8 at the integration of immigrant students. This chapter focuses on support structures for individual schools and for school staff, specifically:

- External counselling of schools, including the roles of school inspectorates and of school networks.
- In-service training of teachers, including its organisation and finance, specific training for managers, and the major challenges that in-service training faces today.
- The relationship between support systems and school quality.

Support systems in the reference countries

In **Canada**, local and provincial school authorities normally finance professional services, while municipal school advisory boards bring together local stakeholders.

In the framework of Canada’s school improvement initiatives, test results help to provide schools not only with information to monitor their own development, but also with evidence of outcomes of best practice elsewhere. School development programmes are often supported financially and conceptually by provincial governments, and involve the participation of managers, teachers, municipal representatives and parents. In some cases school development teams operate within a school district, bringing together a range of stakeholders, and aiming their advice at school management.

Provincial and municipal authorities throughout Canada devote considerable priority and resources to teacher professional development, focusing particularly on teachers’ self-directed learning. Universities as well as school authorities are closely involved in providing this training. “Professional development days” scheduled into the school year are used not just to train individual school staff but for a range of school development activities. Facilities to train newly qualified staff are especially well developed, with induction committees designing provision based on assessed needs. Another setting for staff development is university summer schools, often under contract with education ministries. Incentives to participate in such training can involve salary upgrades.

Many education reforms within Canada are based on “measurement-driven instruction”, with test results shaping planning for school development. However, no studies appear to report on the overall effects of such initiatives on performance, or on the effects of advisory organisations on school quality.

In **England**, the quest by the national government to set high and challenging targets for quality and standards for each school relies on strong support systems. These are closely linked to governance and inspection systems. At the national level, the Department for Education and Skills (DfES) and the Office for Standards in Education (OFSTED), and at the local level, local education bodies and school governing board, have all been charged with support duties. The growing importance of cross-school networking and spreading of expertise has been boosted recently by the expansion of secondary schools with specialist profiles.

DFES and OFSTED develop central external mechanisms using results from individual school inspections and from instruments designed to promote specific areas of student competence, including the National Literacy Strategy and National Numeracy Strategy. Local education authorities offer support for schools before and after inspection, and the governing body develops a post-inspection action plan to make improvements in areas of weakness. The emergence of specialist secondary schools is facilitating the creation of school networks through which school managers and teaching staff exchange experience and expertise. Schools showing poor educational performance are subjected by the central government to special support measures backed by sanctions if the required improvement fails to appear.

In-service training is based largely at individual schools, where it is embedded in quality assurance systems elaborated by the schools. Activities range from training days for all staff focused on planning school development, to subject-related counselling and team-teaching. Individual teachers may be coached by advanced skills teachers certified with excellent teaching abilities, who are released from teaching duties for up to one day each week. Professional qualifications for senior and middle managers have also been developed in response to research showing the importance of their influence on school quality.

In **Finland's** new model of school governance – “governance by information” – institutions responsible for evaluation are assigned an essential support function. These range from the National Board of Education's development of a model allowing schools to evaluate themselves to municipal-level evaluation and support.

In-service training involves municipalities, provincial government bodies, the National Board of Education, universities and teacher organisations. Courses partly take place during the summer vacation, but teachers are sometimes deterred because they must incur personal costs to attend. According to a recent survey, teachers would like more training than they presently receive. Young teachers in particular appear to feel insufficiently supported in their problems early in their careers, and teachers especially want better strategies for dealing with low-performing students. A focal point of in-service training is diagnostic competence to identify the potential of different learners.

In **France**, support structures are integrated into the regional educational administration (*académies*) through school inspectors, who are mainly responsible for advising schools and especially teachers. The *académies* and teacher training colleges also provide further support services. Individual schools are also supported through the *Zones d'Education Prioritaires* (ZEPs) (in deprived areas) and through regional support networks.

The inspection system serves predominantly to control the work of teaching staff, with regional inspectors counselling teachers. One inspector per 300 teachers at the primary level and 750 at the secondary level observe classroom instruction to assess teacher performance. This is followed by staff development decisions, although many teachers believe that in practice inspectors cannot properly fulfil their counselling role. In the ZEPs, a further layer of support is more oriented to whole-school development. A *Conseil de zone* comprising teachers, parents and local and national government representatives contributes to the profiling of individual schools. However, discussion about weaknesses of this approach points to lack of support by teams of teachers.

The *académies* and the teacher training colleges carry out courses for continuing teacher development. Teachers participate voluntarily and are relieved of teaching duties during course time. About 60% have gone on at least a week-long course in the past five years. Traditionally, such training has been school

subject oriented but new courses dealing with educational innovation, heterogeneity and ICTs have been introduced. There have been problems delivering a satisfactory training programme recently, due to spending cutbacks and administrative disagreements over course organisation. Nevertheless, the management of such training has improved with reforms to educational administration.

In maintaining school quality, France employs a “user-friendly” style of feedback to schools from evaluation results. However, there is dissatisfaction with the current system, in which inspectors write opinions about teachers as part of the support function.

The **Netherlands**’ highly developed school support systems are clearly separated from school inspection. They include: regional “school advisory services” serving primary and special needs schools; national centres for school advice for Protestant, Catholic and non denominational school structures; teacher in-service training providers maintained by many bodies including central state institutions and a state-run Education Council providing advice on basic issues of the education system. Since the late 1990s advisory services are funded at the municipal level to make them more sensitive to what local schools need, and to help municipalities plan local development.

The national advice centres provide secondary schools with system advice focused on implementing innovation and on organisational development. They also offer individual counselling for schools and teachers. National advice centres are partly funded by the state and sell their services to schools while the school inspectorate is not officially regarded as a support structure, in practice it is now expected to provide advice to school management, staff and local authorities. Schools can draw on advisory services to implement inspectors’ recommendations, even though there is no institutionalised link between inspectors and advisers.

In the 1990s the Netherlands moved from a directly state-funded set of teacher training institutions to a system of multiple providers with schools selecting courses using earmarked funding assigned by municipalities to the school-maintaining bodies. However, current provision is seen as insufficient, hampered partly by teachers’ workload and partly by a perception among teachers that course quality is low. One source of growing demand for development is among managers, who have acquired a range of new roles in Dutch schools including budgeting.

There is no evidence of strong links between the Netherlands’ well-developed support structures and school quality. One particular Dutch school effectiveness study suggests that only about 1% of performance variations can be attributed to features of this support.

In **Sweden** devolution from the state to the municipal level has resulted in municipalities acquiring responsibility for most school support, with school boards and teacher and training organisations playing key roles.

Schools are required to co-operate with school-maintaining bodies in matters such as finance and the monitoring of quality. Advisory councils give parents a say in school affairs.

In-service training is based on a market model with a wide range of providers. Municipalities are required and funded to supply adequate training opportunities, but participation is arranged between teacher and principal. Many teachers participate in in-service training courses, but participation rates vary considerably among schools and municipalities. Teacher unions take a strong interest in training and have negotiated

framework agreements to make training time available. The continuing training of school leaders is considered vitally important in Sweden, given management's increased strategic role, with the result that the National Agency for School Improvement organises courses even though training is meant to be a matter for the municipalities.

Commonalities and differences in support systems

As educational delivery becomes more decentralised while heterogeneous students create new educational challenges, these countries are recognising the importance of strong support systems for schools. Often, support has been closely associated with control and evaluation, whether through student tests, inspection or self-evaluation. Each country assigns particular value to certain areas of support, creating similarities and differences across countries.

These six countries differ considerably in their concept of how individual schools and teachers should be supported, and in the resulting arrangements. The Netherlands has a tradition of professionalised support structures for teachers independent of inspection or administrative control, but countries such as Canada, England and Finland tend to integrate such services into school administration and inspection. In England, for example, support is explicitly seen as a corollary of the findings of evaluation and inspection.

External counselling can draw from independent advice or from local networks, and its functions can overlap with those of administrative control. In all countries, certain organisations seek to improve educational outcomes by providing professional advice to schools. In the Netherlands, such advice is provided largely by school advisory services; in France and Sweden by administrative bodies; and in England by inspectors. Canada and Sweden underline the counselling competence of direct stakeholders rather than just external organisations – of parents and representatives of school-maintaining bodies. In some countries, this competence from within the system can come from other schools, which makes particular sense where different schools are developing areas of specialist expertise, as is the case in England's secondary sector.

One feature of support for schools, related to the discussion of monitoring above, is the reference to results of evaluation and especially to student test results as a basis for development planning. So far, however, teachers have often tended to resist this link between assessment and development, to the extent that they see testing as an instrument of control rather than support.

In-service teacher training takes a wide range of forms. Since the 1990s, education policy in all countries has intensified efforts to increase the efficiency of teachers' professional development. Countries have to varying degrees replaced direct training provision with a market-based model. In Canada and England, development is oriented towards activities within schools, sometimes on "training days"; in Finland, France and Sweden, teachers have greater leeway on whether to participate in courses, which are often offered externally. England's school-level approach makes much use of on-site mentors, whereas elsewhere universities have become more important. Across countries, there is a view that in-service training remains inadequate, in content and resourcing levels.

One strong priority is to improve teachers' ability to diagnose and address individual students' needs in a heterogeneous classroom environment. Another is to give appropriate training to school leaders, whose roles in a decentralised environment are vital. In England, the Netherlands and Sweden, for example, leadership training is being taken seriously. With the exception of England, the main focus is on training for existing leaders rather than pre-service qualification.

Chapter

6

UNDERSTANDING AND APPLICATION OF STANDARDS

The term “educational standards” has come to be used in many countries in relation to a desired improvement of outcomes, while in other countries, debates about student attainment and the school curriculum are used for similar purposes. This study looked at how countries define, specify and aim to deliver “standards”. Overall, this investigation was based on the idea that standards define, in a normative and binding way, *the achievements that students should have attained by the end of a certain educational level*.

Use of standards in the reference countries

In **Canada**, as in the United States, it is now accepted that school development and teaching and learning processes are oriented towards achieving desired and measurable student outcomes. But “standards” are interpreted in at least three different ways:

- To describe a certain learning outcome that students should have achieved in a particular school year – for example to be able to “apply mathematics in order to solve common real-world problems”;
- To specify a target or acceptable level of achievement, for example answering at least 80% of items right on a test, and sometimes the percentage of a student population who should be able to do this;
- To describe graded categories of performance rather than just a threshold, and thus distinguish several competence and achievement levels. This third interpretation, based on competences, represents an ideal, but in practice only test-based minimal performance standards tend to be found.

Standards are set in most Canadian provinces, with Ontario coming closest to the third, competence-based approach by setting more complex, partly practical assessments requiring problem-solving abilities. A national test programme, the School Achievement Indicators Programme, has five performance levels relating to reading, writing, mathematics and science. To specify the expected result according to the second definition of standards above, the Council of Ministers of Education convened a panel of 85 practising teachers, curriculum experts, parents, student representatives, scientists and members of other interest groups. The panel established, for example, that 95% of 13-year-olds should reach at least Level 1 on the reading scale, and 5% should reach at least Level 5.

In **England**, the term “standard” pervades public discourse on education. But here, the term does not always refer to a normative assumption about a specific expectation of performance levels reached: typically, it is used to describe the level at which school or education system performs (*e.g.* “high standards are achieved”). Thus the country’s inspection body is called the Office for Standards in Education, and the Department for Education and Skills’ Key Standards and Effectiveness Unit is charged with “improving and sustaining standards of attainment by all pupils”.

Performance or competence expectations are defined within the scope of the national curriculum, which refers to “expected attainment levels” with regard to the core subjects. Each of the core areas of the curriculum has eight levels describing broad levels of competence. Students are expected to move to a higher level about once every two years. At ages 7, 11 and 14 they sit curriculum-based tests. At each age there is an “expected” performance level (2, 4 and 5/6 respectively) and a range within which a majority of the age group is expected to perform (1-2, 2-5 and 3-7). A policy aim is to raise the profile of achievement at each stage. For example, in English the expected standard of level 4 was met by 63% of 11-year-olds in 1997, and the government aimed to raise this to 80% by 2002 (in the event, it was 75%).

To pursue such targets for raising achieved standards, the government has aimed to strengthen staff development, invest extra resources and introduce new teaching strategies in reading and mathematics. In the late 1990s these efforts were focused on the 7- to-11 age group in particular, and achievement increased in that cohort, but slower improvement at the lower secondary level led to the introduction of a “Key Stage 3” (ages 11 to 14) strategy in 2001.

In England, standards are formulated for teaching as well as student performance, and the inspectorate will measure these benchmarks with reference to “characteristics of successful teaching”.

In **Finland**, the term “standards” is avoided; strictly formulated test standards are not acceptable in the Nordic philosophy of school development. Yet clear performance targets have been identified in terms of “minimum competences to be achieved”. Since 1999, binding criteria for the final grading of students at the end of compulsory schooling has aimed to enforce a principle of fairness, both in selection for future educational stages and in achieving equal learning opportunities.

The National Board of Education publishes recommendations on the knowledge and skills students must achieve to be marked as “good” in these tests. These recommendations are regarded as evaluation criteria for schools, and they are the basis for the national performance assessment.

France has a long tradition of strict central governance of learning content, through prescribed curricula and final examinations. This has created a central expectation of students and teachers without specifically defining required performance standards. Results of final examinations and comparative school performance assessment are interpreted not with reference to pre-set models of student competence but comparatively by describing schools within their social context.

In the past few years, France has started to move towards defining skills and competences to be mastered, alongside learning content. For example, at the lower secondary level the Ministry of Education is specifying oral-expression, information-finding and other language-related skills that students should master. This is not yet an expected target, but rather part of a definition of teaching objectives, *i.e.* a guideline rather than a competence requirement.

The **Netherlands** has traditionally emphasised pedagogic freedom for schools and teachers. The state has not so far established central performance expectations in the sense of minimum standards. Rather, standards are indirectly promoted through performance measurements and final examinations based on national learning targets. The National Council for Education has also suggested that it will in the future formulate minimum targets for primary and secondary schools and check their attainment; this is a striking change in education strategy.

Teaching objectives, describing the knowledge and skills students are expected to achieve, have already been defined in relation to the completion of primary, lower secondary and upper secondary schooling. These are subject specific. Such objectives are important for classroom instruction because they form the basis of performance assessments and examinations. Results feed in to “quality cards” on schools published by the inspectorate.

Moreover, standards play an important role in relation to teaching and the ways it is assessed in inspection. The inspectorate has set 13 standards, 11 sub-standards and 99 indicators to assess primary schools. These

include the comprehensiveness of taught content, the goal orientation of the lessons, active engagement of students, and learning results.

In **Sweden** the term “standards” is not used to describe performance requirements, yet in practice standards are defined by the national curriculum syllabuses and grading criteria as well as by the evaluation criteria for national tests conducted in Years 5 and 9.

The curriculum specifies both general qualitative educational goals for teaching and learning (“goals to strive for”) and the minimum level of performance that students should reach in different subjects by the time they leave school (“goals to attain”). The curriculum itself is concisely specified, with generalised guidelines, but the content of the tests turn these guidelines into clear performance standards.

Commonalities and differences in formulation of standards

While not all countries in this study employ the term “standards” in public discourse, all have some form of performance expectations and most are trying to establish a clearer formulation of those expectations. These expectations can be established somewhere on a continuum between general educational targets and the specification that all students should perform within a certain range on a concrete test. If standards are to be understood by the general public, they need to be both precise and concisely formulated. This seems to point to the need to avoid stating standards in terms of particular detailed targets relating to the content of taught subjects, and to focus on basic features of how a subject is taught and achieving competence in certain basic areas. In Finland, Sweden and some Canadian provinces, this is the case. In England, France and the Netherlands, existing guidelines have been criticised for specifying too much detail, and these countries are discussing the idea of concentrating on pre-set targets in essential core areas and basic competences.

In practice, however, all of the countries employ to some extent a “standards” model that combines national curriculum performance expectations with nationally applied test procedures. The standard can either take the form of a minimum expectation of all or most students, or as a criterion for good achievement. The direct coupling of curricula and tests can work if the curricula themselves relate to levels of competence that should be achieved. Finland and Sweden have established minimum standards. The Netherlands is considering doing the same. Such minimum thresholds can be seen as an essential ingredient in maintaining educational quality, especially for disadvantaged populations who have not hitherto tended to reach any measured minimum level of achievement.

Chapter

7

ORGANISATION OF
EDUCATIONAL PROCESSES
WITHIN THE SCHOOLS

Student performance as measured in PISA is influenced by factors both inside and outside schools, and the processes of education play an important role in this regard. This chapter looks at three particular aspects of school processes: how schools deal with curricula, carry out assessment and address the heterogeneity of the student body.

Organisation of educational processes in the reference countries

In **Canada**, with the exception of Saskatchewan, all provinces have core curricula. On average, 80% of content is defined at the provincial level and 20% at the local level. However, there is a wide variation across provinces in the degree of detail in which the curriculum is defined. Some provinces such as Alberta have very detailed specification. In some provinces, cross-curricular competences have been incorporated. The curriculum of the primary school focuses on core subjects, while the secondary school starts with mainly compulsory subjects and offers increasing options in higher grades. Individual schools are permitted to deploy resources independently and to provide any teaching and learning opportunity accepted by the municipality in order to teach the required knowledge and skills to reach defined standards.

The curriculum implicitly requires student performance to be assessed, and in principle, the class teacher is responsible for this work. Reform of the curriculum has considerably increased work demands on students and teachers.

Students with learning impairments and those who are specially gifted have access to special provision, although they are also integrated into standard courses as much as possible.

In **England**, a national curriculum sets out the basic content of compulsory education (ages 5 to 16), and curriculum guidance also specifies early learning goals in the pre-school years for children in government-funded settings. The national curriculum has 10 subjects, with English, mathematics and science at the core, in which teaching objectives and educational targets are specified. Topics crossing subject boundaries aim to promote, for example, the transfer of values, understanding of economic processes, health and civic education. Minimum subject requirements take the form of descriptions of what students should have attained by the end of each stage – at ages 7, 11, 14 and 16. Schools, however, decide how subjects are taught, how much time to give to each, whether and how to group subjects and how to arrange learning over each multi-year curriculum stage.

Standardised, nationwide tests are carried out in the core subjects at the end of each of the first three curriculum stages. Teachers are also responsible for regularly assessing their students' work. At the end of the final stage of compulsory education, students sit a centrally set final examination in multiple subjects, while an advanced-level certificate two years later, also based mainly on examinations, is normally needed for access to higher education.

Most of England's schools are "comprehensive", accepting the full range of abilities; they also aim to teach all children together within the schools. Some government stakeholders believe that this practice restricts the attainment of prescribed standards. Schools are expected to adopt grouping strategies that work best for students, where necessary teaching those of similar abilities together. Additional resources are systematically provided for students with special learning needs, who are principally integrated into normal classes. However, students who do not attain the expected level at the end of primary school may have to attend a summer school before being allowed to move to lower secondary education.

In **Finland**, the core curriculum starts in the voluntary year of pre-school education, now received by 90% of the population, where it emphasises children's individuality and their ability to participate as a member of a group. In compulsory education, the core curriculum establishes educational targets, the core content of subjects and hours of instruction for each subject. Municipalities and schools develop their curricula on the basis of the specified core. While the core includes a wide range of subjects, 20% of teaching time is reserved for optional subjects, which play an important role and are very popular.

Finland's assessment system relies heavily on self-assessment and other mechanisms that put relatively little emphasis on tests. Homework is of great importance in Finnish schools, and it serves as a means of monitoring student commitment. Learning progress is monitored on individual student report sheets, and discussed with each student. Students are encouraged to undertake self-observation and self-assessment; marking is based on teacher assessment. There is no final examination at the end of compulsory schooling.

Finnish schools tend to group students more according to their interest in certain subjects than to their intellectual potential. Only 2.5% of children attend special schools, and Finnish classrooms are heterogeneous in terms of students' abilities and backgrounds. This demands efficient learning in small groups, with teachers ready to arrange new groups where necessary. Research appears to indicate that in Finland mixed ability classes have greatly advantaged lower-achieving students, while higher-achieving students are not greatly affected by changes in the composition of a learning group. Teachers are trained early to deal with heterogeneity, using a broad spectrum of methods. An extended counselling system supports students in selecting courses for their further education and in their career planning. Students with learning difficulties attend individual tuition or tuition in small groups once or twice a week, in addition to receiving support from special-needs teachers inside and outside their classrooms.

In **France**, a national syllabus for pre-school institutions for two- to five-year-olds aims to develop children's speaking and listening skills, memory skills and understanding of numbers and letters. National syllabuses outline detailed targets for the work of schools at all levels, from pre-school to secondary. They basically outline educational goals, subjects and their contents, lesson activities and methods as well as the knowledge and skills to be acquired. Teachers have some flexibility in terms of choosing teaching materials and distributing teaching time within specified bounds.

A central premise in dealing with diversity within French schools is that teaching methods and activities tailored to meet the different needs of individual students and groups within a class will produce learning outcomes that are as equal as possible. This involves individual student support programmes in primary schools, and also forms of individual support on entry to each of the stages of secondary education. However, many teaching staff do not themselves consider offers of individual support to students to be part of their duties. Thus, for example, three-hour learning modules during the first year of upper secondary school that are meant to concentrate on further developing skills in core subjects for individual learners are in reality often used as more general lessons for exercising students in these subject areas.

In the **Netherlands**, primary schools are obliged to adopt nationally prescribed qualification targets. Secondary schools follow the first two or three years of the curriculum for basic education, which consists of attainment targets and 15 subjects with a specified number of hours. The curriculum for basic education is seen as overloaded and fragmented, leaving little room for schools to vary what is taught. However, some extra flexibility over qualification targets and subject teaching was introduced in 2002, which allows schools to exempt certain groups of students in certain subject areas. The new lower secondary school core curriculum introduced in 2004 covers two-thirds of the required instruction time, leaving substantial scope for options.

Just before completing primary school, students sit a test assessing their skills in Dutch language, numeracy, working with data and environmental studies. A national final test that was to have been carried out at the end of lower secondary education has been abolished in view of difficulties in implementing the core curriculum.

During their practical training, teachers are primed to meet the needs of heterogeneous groups of students through differentiated teaching methods. Inspectors report that most are able to create a supportive learning atmosphere in the classroom, but only 25-30% are capable of individualising their teaching approach to the extent needed if students are to meet their potential. Schools are trying therefore to improve teacher competence in this respect through staff development courses. Students with special needs are integrated into mainstream schools as far as possible, and supported by special needs teachers and other specialists.

In **Sweden** the national curriculum sets objectives to be attained in 18 compulsory subjects, fixing a minimum number of learning hours in the nine compulsory school years. However, municipalities and schools decide how to distribute this learning time. Students have freedom to choose which subjects to study for about 6% of the time. In practice, schools focus on Swedish, English and mathematics, the core subjects. Based on the national curriculum schools create their own individual plans, defining how objectives will be achieved, including learning methods and responsibilities of students – who themselves participate in drawing up the plans.

Students only receive grades from Year 8, and a school-leaving certificate in Year 9. Responsibility for grading lies entirely with the teaching staff; there is no external control.

Most Swedish schools have a heterogeneous student body, influenced by the principle that all students have a right to an equal education regardless of background. Within each school, there is a double objective of individualisation (by adapting teaching methods to meet the different abilities and needs of individuals) and integration (through commonly shared experience). In practice, the way in which teachers deal with mixed-ability groups varies significantly between schools and teachers. Some make much more use than others of specially qualified teachers and teaching assistants to support their teaching. In some cases students with difficulties attend classes with specialised teachers outside their lessons.

Commonalities and differences in the organisation of educational processes

The six reference countries demonstrate no common pattern for determining curriculum. Although core curricula, teaching programmes or educational standards are applied in all six countries, they show no uniform pattern in the process of setting curricular preconditions or assessing learning outcomes. They differ in the degree to which content is laid down and how much is left to schools – a variation that occurs even within a federal country such as Canada. In some countries such as Finland and the Netherlands, educational objectives and core subjects, and the number and volume of lessons are centrally defined, but a relatively high proportion of time is reserved for compulsory elective subjects. In the Netherlands, freedom has increased since 2002 outside a core area covering two-thirds of the teaching time in secondary education. In contrast, French syllabus provisions leave teachers less opportunity for choice, although primary school teachers can use their time flexibly, and are only bound to the minimum hours for reading and writing. Finland and Sweden give schools comparatively greater freedom in setting learning content; in Sweden, the allocation of the number of lessons in each subject is left to municipalities and individual schools.

All six countries have both internal and external assessment methods for students and schools. Apart from Finland, all the countries have forms of standardised, countrywide performance assessment. These can take the shape of continuous assessments during normal school life or final examinations. The Netherlands, France and England all have final examinations at the end of compulsory schooling, as well as the national examinations in England and France at the end of the upper secondary stage. In Finland, by contrast, progress to higher levels of the education system depends on achieving course targets as recorded in report books and discussed with students, who are instructed to conduct self-assessment of their learning progress and outcomes. In Sweden students are graded in Year 8 and 9 based on all the assessments made by their teachers, and in Year 9, in addition, their national test results in Swedish, English and mathematics. Individual learning progress is discussed with the students, against the background of existing individual learning development plans. Despite these variations, in every country performance assessment and grading that accompanies instruction are up to the teaching staff in all the countries concerned.

Teaching staff in the countries studied encounter a broad diversity of students differentiated by ability, mother tongue and ethnic and social origin. In general, this heterogeneity is judged positively in all the countries, albeit less so in France. In general, education systems employ a high degree of individualisation in teaching and learning processes, but a low degree of selection of students according to their performance (although less so in France and the Netherlands). This means developing learning plans for individual students, and integrating those with special needs into mainstream schools and classes wherever possible. However, mixed-ability teaching is not followed in England in cases where schools consider that defined standards can be more effectively achieved in classes grouped by ability. In contrast, Finland and Sweden associate mixed-ability groupings with equality of educational opportunity. Yet, in practice this is not always easy. Dutch teachers say it is very difficult to tailor lessons to the individual needs of different kinds of student within one class. One approach is to ensure that teachers are well trained to deal with heterogeneity of students, and Finnish teachers have this emphasised right from the start of their practical training. Extra lessons with specially qualified teachers, sometimes outside the classroom, also play an important role for students with special needs, for example in Finland and Sweden.

Chapter

8

INTEGRATION OF NON-NATIVE
STUDENTS AND STUDENTS WITH
FOREIGN-BORN PARENTS

The results of the PISA study show that foreign-born students are generally more likely to perform poorly at school than their peers. This is also true for those with foreign-born parents, although to a lesser degree, and the effect is more pronounced when both parents were born abroad. A significant influence on educational success proves to be command of the language of instruction. Some countries are more successful than others at dealing with the relationship between ethnic origin and acquired skills, acknowledged at the international level. This poses the question of how the appropriate measures taken by these nations can help explain the gap between non-native and native-born students in other countries.

Various strategies aim to combat disadvantages of immigrant students and to deal with a heterogeneous student body. To some extent, these overlap with other strategies to help disadvantaged students, such as those from disadvantaged social backgrounds and with learning disabilities.

Table 1 shows, for the six countries studied, the degree to which foreign-born and first-generation students tended to under-perform relative to native students in PISA. In Canada, the gap is much smaller than the OECD on average. In the United Kingdom, it is larger for foreign-born students, but close to average for native-born students. In the other countries the gap is generally above average, although close to average for first-generation Swedish students. In France and the Netherlands the gap appears to be particularly acute for foreign-born students.

It is important to note, however, that the characteristics of immigrant populations vary greatly in different countries, so these differences cannot just be attributed to educational policies. In Canada about 20% of students were either themselves born abroad or both their parents were born abroad. In Finland the figure is only 1.3%. In the other countries, it is 10-12%. The PISA data do not allow us to compare similar groups of immigrants. How-

Table 1
Performance of native-born and foreign-born students in PISA

| Country | Literacy domain | Mean score for native-born students with at least one native-born parent | Difference in points for native-born students with foreign-born parents | Difference in points for foreign-born students with foreign-born parents |
|--------------------------|-----------------|--------------------------------------------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------------|
| Canada | Reading | 538 | +1 | -27 |
| | Mathematics | 536 | -6 | -14 |
| | Science | 535 | -14 | -32 |
| Finland | Reading | 548 | * | -80 |
| | Mathematics | 537 | * | * |
| | Science | 539 | * | -80 |
| France | Reading | 512 | -41 | -78 |
| | Mathematics | 523 | -36 | -82 |
| | Science | 510 | -59 | -102 |
| Netherlands ¹ | Reading | 542 | -72 | -89 |
| | Mathematics | 575 | -81 | -105 |
| | Science | 541 | -100 | -104 |
| Sweden | Reading | 523 | -38 | -73 |
| | Mathematics | 517 | -51 | -71 |
| | Science | 518 | -32 | -79 |
| United Kingdom | Reading | 528 | -18 | -72 |
| | Mathematics | 534 | -29 | -51 |
| | Science | 537 | -18 | -80 |
| OECD average | Reading | 506 | -39 | -60 |
| | Mathematics | 504 | -30 | -48 |
| | Science | 504 | -42 | -60 |

*Due to the small sample size of non-native Finnish students, meaningful data cannot be presented.

1. Response rate too low to ensure comparability.

Source: OECD PISA database, 2001.

ever, all these countries do face similar problems associated with the educational situation of immigrant groups: low school performance, lower completion rates and higher incidence of students repeating courses or years. In some countries such as England, the Netherlands and Sweden, problems of ethnic segregation have become more evident with the abolition of school districts and the strengthening of school choice.

All six of these education systems have introduced compensatory measures aiming to integrate immigrant students speedily and comprehensively, ensuring equality of educational opportunity while preserving cultural identity.

Efforts to educate non-native students and students with foreign-born parents

Canada has a long and distinct history of multicultural diversity, and high recent immigration means that one in five students is either foreign-born or a first-generation immigrant. About 9% of the PISA sample does not speak the language of instruction at home. Canada is also the one country where the children of immigrants perform on average about the same as students with native-born parents. While foreign-born students do not do quite as well, their performance is still above average for all students in OECD countries.

In the 1970s, Canada's immigration policy dropped the objective of "assimilation", and now the aim is to support the multicultural character of society. The education system supports cultural diversity. Where there are sufficient numbers of immigrant students, schools offer special lessons in their native languages. However, budget constraints threaten the ongoing viability of such programmes.

To help integrate immigrant students, most local authorities offer courses in English and/or French as a second language. Toronto has set up 41 "parenting centres" aiming to support learning at home, and 13 "outdoor education centres" offering residential programmes aiming to advance social integration in an extra-curricular environment. Despite such measures, some commentators consider that teachers are still not getting sufficient practical skills in handling culturally heterogeneous groups.

In **England**, PISA showed no statistically significant difference between the reading abilities of native-born students with immigrant parents and those with native-born parents, and only a small difference in mathematics and science. However, those born abroad were on average about one reading proficiency level behind the rest, with a comparable deficit in science performance, but a smaller one in mathematics.

Efforts to help support immigrant students in England in the 1990s were associated with those helping socially disadvantaged groups, given that the correlation between social background and educational outcomes is particularly strong. For example, in deprived areas, "Education Action Zones" have received extra funds and are required to prepare action plans for their specific needs. On the other hand, the introduction of market forces into the education system has in some cities appeared to increase social and ethnic segregation. The provision of faith-based schools has tended to strengthen this effect.

Support for ethnic minorities has been strengthened recently by: stronger integration between home environment and that of school and pre-school settings (as in the "Sure Start" programme); target setting for both schools and individual students; use of test results to provide better individual feedback and to shape curricula and extra instruction, for example in lunch breaks or through remedial education outside school hours. An "Ethnic Minority Achievement Grant" is operated through the Standards Fund, and the government aims to ensure that the needs of minority and ethnic and bilingual pupils are a mainstream issue throughout the education system.

In **Finland**, the proportion of immigrants is very low – just over 1% of the population. The country’s basic education system is designed to teach students, including those from different social and ethnic backgrounds, to a common level of performance. Teacher training aims to prepare teachers with the understanding and practical skills required to achieve this. However, this is growing more difficult in light of growing diversity, and the system is increasingly looking to other countries for ideas about how to respond.

Students arriving in Finland during the compulsory education period receive six months of “preparatory instruction” to prepare them for the comprehensive school. Small groups from common backgrounds are prepared both by advancing their mother tongue and cultural identity and by familiarising them with the Finnish culture. Such “functional bilingualism” is now a fundamental concept. During this preparatory phase, students participate in some artistic and practical subjects with their eventual classmates, and there is co-operation between teachers in the preparatory and ordinary classes.

Once they are transferred to regular classroom instruction, students may also have the chance to advance their mother tongue through extra-curricular classes, as well as to attend “Finnish as a second language” courses, which include knowledge about Finnish culture.

In **France**, even though students overall perform around the OECD average in PISA, students not born in the country perform least well among the countries in this study, across all domains. In reading, for example, they are on average near the bottom of Level 2, whereas native students are at Level 3.

France’s approach to equal opportunity tends to create measures that are intended to provide additional resources and specific processes in disadvantaged schools or areas. In particular, the *Zones d’Education Prioritaire* (ZEPs) have for the past 20 years used “positive discrimination” to address special needs of students in disadvantaged areas, which include a high proportion of immigrant students. Additional funds support smaller classes, extra lessons and financial incentives for teachers. There are also, more generally throughout the country, special arrangements aimed at quickly integrating new immigrant students into school life; schools provide French language but not mother-tongue support.

It is hard to determine the effect of the ZEPs overall, but ZEP schools that have succeeded in raising the achievement potential of their students are characterised by the mutual co-operation of the staff, by the coherence of their activities, by a strong and dynamic school management, by emphasising school performance and by a relatively constant group of students which enhances pedagogic continuity.

In the **Netherlands**, wide differences between the performance of native-born and foreign-born students have been shown to exceed what would be expected purely on the basis of the lower social background of immigrants. Moreover, of the countries considered in this study, immigrants’ under-achievement rates diminish least when one looks at the first generation (children of immigrants), as shown in Table 1 above. However these results must be taken as indicative rather than definitive, due to the Netherlands’ low response rate in PISA.

Schools receive extra funding for each disadvantaged student. Other compensatory measures to support disadvantaged students are not institutionalised, but depend on action by the municipal authorities. The needs of immigrant students figure prominently in these measures. Authorities draw up action plans, which may give extra funding to disadvantaged schools based on the number of students from immigrant backgrounds. Since the end of the 1980s, “headstart” projects have focused on pre-school children from ethnic minority communities. This and other projects focus on the family, aiming to motivate parents to

support their children's development in the early years. Evaluation of two such programmes, *Kaleidoskop* and *Piramide*, show that they result in improved test scores for those who participate, including non-native students. However, many municipalities cannot afford their considerable cost.

Lessons in mother tongue are part of the optional support provision available within the Dutch education system offered to all language groups outside school hours. They aim to strengthen students' self-perception so that they are ready to participate in and shape Dutch society.

In **Sweden**, there is a huge difference between some rural municipalities with few immigrants and some districts of Stockholm where 80-90% of students have immigrant backgrounds.

The long-standing Swedish aim of providing equal opportunities to all groups is reflected in policies to integrate new immigrants, without forcing children to give up their own cultures. Such policies do not just react to existing problems but serve as preventative measures. Children of immigrant families have traditionally been offered extra mother tongue or "Swedish as a second language" classes. However, students often do not take advantage of mother-tongue instruction, and Sweden currently sees the need for a better-targeted strategy for educational integration of these students.

Commonalities and differences in strategies and support structures for non-native students and students with foreign-born parents

Countries have different approaches to the issue of transition and integration, and offer various degrees of integration of support structures for non-native students. In some countries, students are integrated into the "mainstream" as quickly as possible while others put greater emphasis on support outside ordinary classes. Finland and France use short-term transitional programmes to prepare students for regular schools. However, in Canada, the Netherlands and Sweden, special support is offered mainly to students while they are attending regular schools. Extra support for schools in deprived areas, many with high immigrant populations, is important in England and France. Both of these countries use targeted support to help overcome disadvantages among deprived groups.

All six of the countries today acknowledge cultural plurality, and accord it respect as a starting point for integrating immigrant populations. Therefore, all countries except France recognise mother-tongue support as an important element for integration and education. Most countries provide a combination of support in the mother tongue language and the language of instruction. France, on the other hand, stresses the acquisition of French as the key prerequisite for educational success. In Canada, "inter-cultural education" is part of the school curriculum.

All six countries recognise the importance of family support for learning, particularly in the pre-school years. These countries are striving for the integration of parents into the educational system, because of the importance to students of domestic support, especially in the early years of learning. This is exemplified in the "parenting centres" working with immigrant communities in Toronto, Canada. Pre-school support can have educational and preventative functions. Such measures aim to have a pedagogical quality capable of supporting children's development.

Chapter

9

HOW COUNTRIES COPE WITH
DIFFERENCES BETWEEN TARGET
STUDENT PERFORMANCE AND ITS
ACHIEVEMENT

While the countries in this study are active in setting standards and measuring outcomes, they do not always achieve the desired results. They are particularly concerned when certain groups of students – for example those with socio-economic disadvantage – are at high risk of under-achieving. So all have adopted strategies to try to increase performance to an acceptable level.

Strategies for coping with under-achievement

In **Canada**, between 93% and 99% of students in different provinces remain in school until the end of compulsory schooling, but on average around 10% leave school without a secondary qualification. Acknowledging the risks for young people without such a qualification, the provinces have made strenuous efforts to improve completion rates. “Second chance” opportunities including adult education and additional training reduce the unqualified proportion of an age cohort to 15%. The group of students who gain the equivalent of a high school diploma after leaving school but before reaching age 20 typically continues into vocational training; about a half of them attend community colleges. Women are more likely both to complete high school in the first place and to participate in this second chance education.

The upper secondary school system allows some flexibility in terms of moving between differentiated courses. Some provinces offer vocational options from Year 9, and students are able for example to shift from a general to a vocational track.

Provisions for students with special needs are integrated into normal classes as much as possible. Support measures for children in pre-school settings can cover children as young as 30 months old.

In **England**, a central approach to heterogeneous learning outcomes is to tackle the differences among schools. Since 1988, this has been achieved by giving individual schools more autonomy to design their educational offerings, while ensuring that they comply with nationwide standards by setting tests at the end of each curriculum stage. The PISA results demonstrate that the United Kingdom has succeeded through this approach in improving overall performance and reducing under-achievement, yet within the existing differences, there remains a steeper social gradient than in most other OECD countries.

In aiming to overcome these socially based differences in outcomes, a crucial strategy has been to give children an equal start in life by giving comprehensive access to pre-school education. Pre-school institutions, now attended by 98% of four-year-olds, put a strong emphasis on early cognitive and social development. This helps prepare children for the first key stage of the national curriculum (ages 5 to 7), which focuses on language and literacy development, mathematics and the world of knowledge. The present government plans to focus extra resources for pre-school provision on disadvantaged children, in parallel with help for their families.

Despite the continuation of social disparities, England has noticeably reduced social diversification in primary education. However, particularly at the secondary level, the free choice of school potentially contributes to social polarisation of schools, since better-off parents are more likely to send children to schools outside their local area. The creation of secondary schools with particular specialist profiles is intended to counter this unintended social diversification.

At the upper secondary level, there has been a growth in the establishment of academic A-levels and their vocational equivalents, and a shrinking number of students leave school with no qualifications. A widening of participation at this level has started to address England’s serious problem of low attainment among

a significant minority, but the number not getting a full upper secondary qualification remains high by OECD standards.

In **Finland**, comprehensive schools have been widely accepted since their introduction in the 1970s. These schools have to cope with any shortfalls in the achievement of expected standards. They succeed in combining very high average performance with a low social gradient. It therefore seems that Finland has developed particularly successful strategies for ensuring that students of diverse abilities are able to follow the educational careers expected of them.

Most Finnish students (93%) take part in a free pre-school programme, whose curriculum emphasises individuality, co-operation and the acquisition of social and cognitive abilities in a playful environment. Rather than formally evaluating children, educators intensely monitor their progress. Such close nurturing of children is also conducted by class teachers, who continue to have charge of school children until age 13, when specialised tuition begins.

In **France**, differences between the socio-cultural capital and educational achievement of different groups of students is seen primarily as a product of local and regional differences, so the establishment of support for disadvantaged areas plays a central role in solutions. More generally across the country, efforts have been made to produce more uniform outcomes by improving various parts of the schooling system. An important aspect is pre-school preparation, and France has achieved near universal participation in the *école maternelle*.

In the secondary school system, student differentiation has been delayed, with all students in common learning groups until at least age 14, when they start having choices between general and vocational branches. At upper secondary school, several branches with theoretically equal status indisputably enjoy different levels of esteem with a general baccalaureate being preferred to the vocational and technical options. Another source of disparity is in school difference resulting from some degree of choice, and particularly a comparatively broad private sector.

As a result of a common complaint of French teachers that the heterogeneity of students is an obstacle to successful teaching, there have been various strategies to try to reduce ability differences within classes. The practice of students repeating a class before they can progress is deeply rooted in France; in addition, regulations applying to lower secondary schools now explicitly recommend the grouping of students according to chosen domains of interest and study.

In the **Netherlands**, students are separated into ability groups and divided into a wide variety of tracks at secondary school. Pre-school provision is available for children with special needs from age three, and a relatively large number of school students (5%) attend special schools, from which transference to and from mainstream education is straightforward.

Dutch education policy uses differentiation to try to reduce the disadvantages associated with student background, in particular by testing students at the end of primary education to see what kind of secondary school best meets their needs. The idea is to prevent students from going into inappropriate forms of learning that reduce motivation. However, since 1993 a common curriculum for the first three years of secondary school has forestalled differentiation.

Nine per cent of students leave school with no qualification, mainly leaving at lower secondary level. One criticism of the differentiated Dutch secondary school system is the relative impermeability of tracks, meaning it is hard in many cases to make transitions to more advanced study. A high proportion of students drop out, especially from long-term studies at university (50%).

Sweden has to a considerable extent succeeded in reducing social disparities and evening performance, although differentiation occurs as with other systems, at the upper secondary level.

Sweden's strong and well-supported system of pre-school education and its acceptance by the population have played an important part in social inclusion, especially through the integration of children with disabilities into regular schools. On the other hand, strengthening parents' right to choose schools has contributed to segregation.

In the transition from lower to upper secondary education, 10 to 11% of Swedish students do not attain the required grades in basic subjects, but they may participate in catch-up programmes to qualify for one of the 17 programmes in upper secondary schools. All tracks/programmes in upper secondary schools in Sweden are three years and give general qualifications to apply for tertiary education. These schools give a wide set of choices to meet diverse needs. However, at this level, entry criteria for tertiary education contribute to an achievement-based orientation, which, according to some, conflicts with Sweden's ethos of open access to study.

Commonalities and differences in compensating for social inequity in basic education

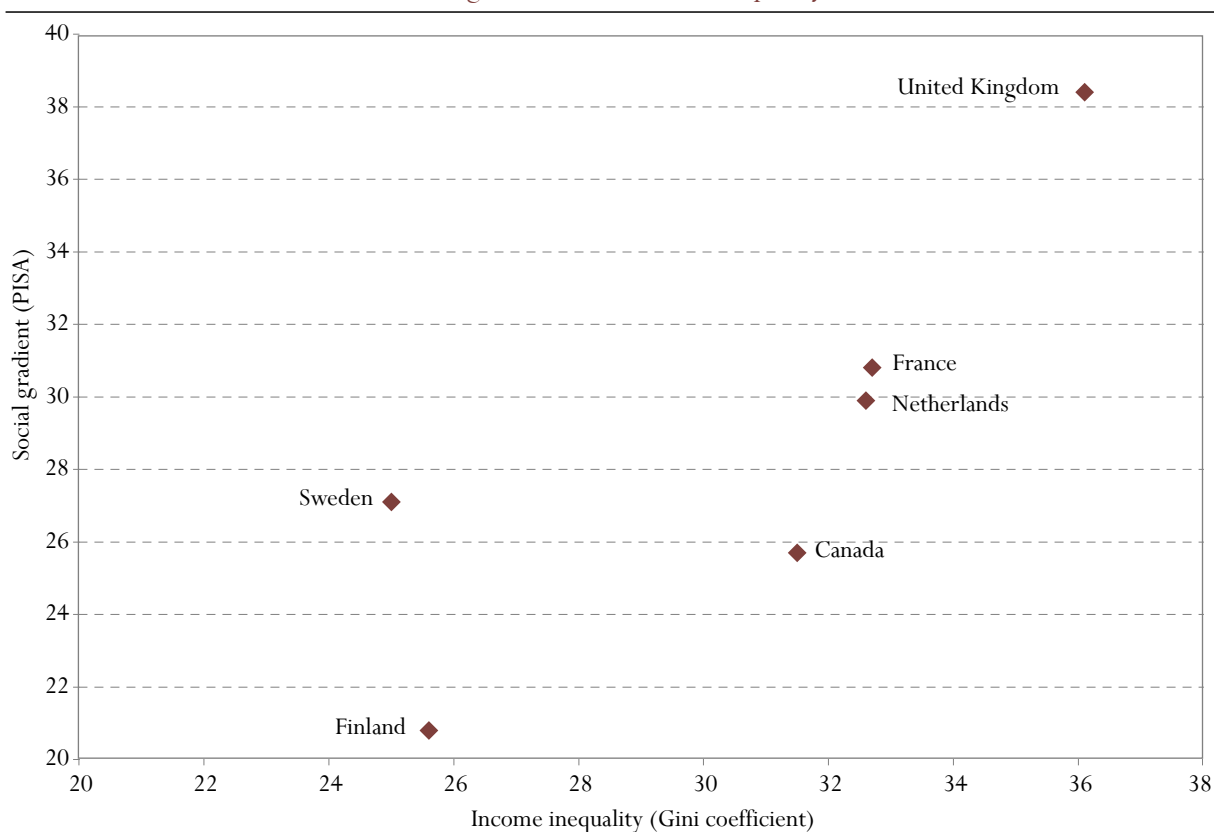
Countries' approaches to students' under-achievement are closely linked to the issue of social inequality. This takes a different context in different countries, because each country starts with different levels of social inequity. Figure 1 shows that the slope of the "social gradient" – the difference between the expected performance of two individuals separated by a given amount of socio-economic status – is higher in countries with greater inequality overall. Of the countries studied, it is notable that England is the only one whose strong overall performance in PISA is undermined by an above-average social gradient, and that it is also the country with a particularly high level of income inequality.

The countries all use similar compensatory strategies to even social inequities in basic education. One of the most important elements is preparation in early childhood to ensure that regardless of background, students are ready for school. Within primary and lower secondary education, countries deliver a common, more or less uniform curriculum, with students principally being taught together. Perhaps the most important exceptions are England and France, where there are substantial private school sectors; in France this sector is required by law to follow the national curriculum.

A common approach among the countries is to start responding to student heterogeneity by separating students into different tracks at secondary level. The Netherlands does so earlier, but now has a common lower-secondary curriculum. At the upper-secondary level the introduction of specific achievement requirements linked to the right of admission to tertiary study creates the risk of individual failure for many students. A hierarchical ordering of students at this level is also linked to their access to more or less prestigious study tracks. To this extent, PISA's measurement of outcomes at age 15 tells an incomplete story of the extent to which students perform at a satisfactory level, since it is in the following few years that they will be most decisively tested.

Figure 1

Social gradient and income inequality



Gini coefficient shows values between 0 for equal distribution and 100 for maximum inequality.

Source: World Bank (2001), *World Development Report: Attacking Poverty*, Oxford, Oxford University Press, Table 5, pp. 282-283.

Social gradient shows changes in points on the PISA scale for reading literacy per 16.3 ISEI-units.

Source: OECD (2002), *Education at a Glance: OECD Indicators 2002*, Paris, Table A9.1, p. 112.

Adult education measures offer a means of limiting differences between intended and actual school achievement of young people, allowing individuals to reach goals that they did not initially attain. Canada in particular reports highly successful second chance programmes, which also exist in the Netherlands and Sweden. One concern, however, is that such catch-up programmes can take a long time to complete.

Chapter

10

PROFESSIONAL DEVELOPMENT OF TEACHERS

Teachers represent a critical vehicle for transporting changes into individual schools. Their initial training and professional development are therefore decisive factors in achieving system goals. Chapter 5 examined the organisation and financing of in-service training as part of the educational process. This chapter looks more particularly at the role of training and professionals standards in teachers' careers – from initial admission to training, to qualification and quality assurance models, to the conception and status of the teaching profession.

Strategies for teacher professional development

In **Canada**, the number of teacher training institutions has been limited in recent years. In Ontario, however, two universities opened new facilities in 2002 to try to correct this. Four- or five-year degree courses are oriented either academically (B.A.) or vocationally (B.Ed.). Universities also offer extension graduate programmes covering specific topics such as school management and educational administration. Entry-level teachers are assessed by experienced teachers at their school, who help them plan further programmes to develop their professionalism. As they progress, promotions are in some cases contingent on continuing training. Two key aspects of teacher training content are dealing with cultural diversity and diagnostic skills. In particular, teachers are learning to use sophisticated assessment tools to check on students' progress.

Quality assurance involves setting teaching standards, which differ across provinces. Other conditions are continued participation in professional development and the ability of teachers to work in teams and to assess students effectively.

In recent years, several factors have contributed to the rise in status of Canadian teachers by reinforcing professionalism. These include selective admission to teacher training, development of professional teaching standards, tougher supervision (in some cases by school authorities) and extra time allowed for in-service training.

In **England**, students need minimum linguistic skills to enter teacher training, and may take either a full undergraduate university course or, if already university graduates, a one-year qualification. In the past decade teacher training has become much more school-based and practical. Today, it is based on the skills teachers need for teaching specific subjects and on techniques required for imparting knowledge. Those who fulfil required standards in initial training move on to gain Qualified Teacher Status. In 2001, 82 schools were given the status of training schools, and are rewarded for this role in relation to the results of assessments. The more pragmatic orientation of teacher training in England is thought by some to have gone too far, by basing teaching on mechanistic processes rather than a broader theoretical understanding, and by undermining academic autonomy.

During initial training, a key feature of gaining accreditation is assessment of performance in practice classes. To become qualified teachers, students must meet all required standards. Quality assurance continues throughout a teacher's career, especially in relation to the school inspections that take place at least once every six years and look at performance in individual classrooms. Moreover, pay increases are being linked to teacher performance, which requires educators to demonstrate consistently effective teaching.

A more active inspection of teachers' work in recent years has made professional standards more transparent. Although this can build confidence in specified standards, negative messages from school inspections can cause public disquiet. One problem is that the pressure can harm the attractiveness of the teaching

profession, and although English teachers are relatively well-paid compared to other countries in this study, there are serious problems with recruitment and retention. Special programmes have been devised to encourage more people into teaching, particularly in under-represented minority groups. A General Teaching Council set up in 2000 aims to improve standards of teaching and learning and of professional conduct, as well as advising the government on professional matters.

In **Finland**, only 10% of applicants successfully pass the rigorous selection procedure to enter teacher training, which includes an aptitude test and other forms of assessment. The universities operate a unified training system requiring students to undertake an initial B.A. degree and then a Masters. Educational components are dominant for primary school teachers, but are only a small part of secondary courses. Provisions for continuing training include in-service training days and an expectation that schools will spend around 1% of their payroll for training. Surveys show clearly that Finnish teachers consider continuing development to be a major factor contributing to the development of the whole education system.

At the end of pre-service training, teachers must take tests in which they either “pass” or are required to do further work. However, once in-service, formal evaluation of individual teachers is not used; evaluation studies focus instead on working conditions and desire to receive further training.

Teaching appears to have lost some status in the past 30 years in Finland, but remains one of the most popular careers for university graduates, which teachers say is partly due to their continued high esteem. Teacher pay is relatively low, but workloads are moderate, with 15-23 hours of teaching a week, and a high ratio of staff to students.

In **France**, individuals wishing to enter teacher training must have a first university degree. Applicants may also have to take an admission test. The training lasts for two years with a competitive examination at the end of the first year. The academic status of initial training for primary teachers improved in the 1990s when all institutions were linked to universities. There are also greater linkages between those studying for primary and secondary teaching. The second year of training is mostly spent on practical training, and students are assessed in practice classes. Most further training after entry into the profession is voluntary and out of working hours.

Teaching in France follows other public sector professions in using competitive exams (*concours*) to match entrants with available posts. Although the tests set a quality threshold, the level of the standard set varies with supply and demand. Additionally, inspections are not necessarily a reliable means of maintaining standards, as there is no transparency in the criteria used to assess classes and there is no clear consequence for teachers of such inspections.

Teachers’ status appears to be dropping in France because teachers do not always meet the public’s high expectations and there is a general decrease in respect for academic performance. The public also appears to believe that teachers work short hours because schools are open only during specific times, but a new survey indicates that the average workload of teachers corresponds to a 40-hour working week, more than the legislated standard of 35 hours elsewhere in the French workforce. French teachers retain one traditional aspect of their professionalism – a narrow conception of their duties, pertaining strictly to teaching in the classroom. Even functions such as supervision of students outside the class are delegated to specialised personnel.

In the **Netherlands**, there is no selection for admission to teacher training courses. Due to a shortage of teachers, some positions are open to applicants who have not completed their teacher training, but such applicants are required to sit a short aptitude test and to obtain a teaching qualification within two years. Teaching may take place in colleges of education or universities. Both give qualifications to teach a specific subject, but at colleges the courses last four years whereas universities enable graduates to gain a teaching qualification in one year after having completed their four-year course in another discipline. Recently, courses have become more practically oriented, with half of the university-based study year involving practical training. In-service training is acquired mainly from educational advisory centres. The number of teachers who participate in such training has not increased recently, because teachers are short of time and do not find that the courses match their needs well enough; such training is not a priority for their principals.

Specified job profiles now form the basis for models of competence in Dutch teacher training. These profiles can be useful tools for reforming courses to adapt to change, as well as allowing teacher performance to be evaluated and helping to legitimate teacher professionalism. Nevertheless, surveys show that esteem for Dutch teachers has diminished among the public, who no longer rank teaching among the 10 most sought-after professions. The government hopes to address this issue through publicity campaigns, by making salaries better match performance and job profiles and by reducing workloads.

In **Sweden**, there is a shortage of people applying to be teachers in some subjects (most apparent in mathematics and science), exacerbated by the current demographic profile, which is seeing many Swedish teachers reaching retirement age. In the past 15 years, teacher training has become primarily university- or college-based rather than located at special academies for teaching grades 1 to 6. Training is divided into educational studies, the teaching of specific subjects and practical training. An extensive research programme has been launched to ensure that learning from educational studies is reflected in the practice of classes and schools. Further training of teachers takes place regardless of any government activities. Nor does the government provide quality checks on in-service training.

Teachers in Sweden today are no longer subject to centralised authority, but rather receive their contracts from subordinate local committees. About 25% of the teachers in Sweden do not have a formal teacher qualification. Their work is measured by working hours, not teaching hours. Evaluation of their performance by employers needs to be made completely transparent. Teachers can negotiate to get better pay, whether individually or as part of a team. Today's teachers work in local teams to negotiate relationships with local employers and communities rather than acting as part of a national profession under a central education board.

Swedish teachers are expected to undertake responsibility not only for comprehensively organising students' learning but also for ensuring optimal conditions for learning, which involves them in various social support functions.

Commonalities and differences in organisation of teacher training

Although initial teacher training is important in all countries, organisational models differ. Some countries, such as England, Canada and Finland, are in principle selective in who is allowed onto teacher training programmes, but only in Finland is supply sufficient to be able to assume that places will be filled. In the Netherlands and Sweden such courses are too undersubscribed to apply any selection criteria at all.

Thus countries are looking for ways to attract more applicants, but no well-evaluated methods of doing so appear to exist.

Student teachers are subject to different forms of assessment in different countries, with for example subject knowledge dominating in France, general competence in England and aptitude for the profession in Finland. All countries combine theoretical with practical studies, but the latter has become dominant in England. Among other countries, Finland has the highest level of organisational integration of different elements of teacher education and of education for teaching at different levels. In Canada, England and the Netherlands, training modes are diverse and can be in a single phase or a two-phase model with practical experience following theoretical training. The content of university-based teacher training in Finland and Sweden combines subject knowledge and teaching methods, whereas in England teaching know-how tends to be taught on-the-job or through continuing professional development.

In-service training is more systematic in Canada, England, Finland and the Netherlands than in France or Sweden. In the former countries, participation in training is not just left to individual teachers but forms part of school-level development, including in many cases school in-service development days.

Teacher quality assurance has been introduced during training in some countries. In the 1990s in three of the study countries, development of standards formed the core of efforts to reform the professional development of the teaching profession. Standards can relate to tests and regular assessment of teachers as well as to the content and process of professional development. The Dutch practice of compiling job profiles is a particularly noteworthy example of how teacher standards are formulated. The Canadian and English experiences are interesting examples of standards-based assessment. Such standard-setting is particularly important where a shortage of teacher supply causes easy access to courses.

The status of the teaching profession remains tenuous. While it is impossible objectively to compare the status of the teaching profession across countries, experts from all countries (apart from Canada) point to a decline in this status over time. Implementing rigorous and transparent quality standards can, in principle, counter this trend, although in some cases it might undermine the profession by reducing its self-determination. In England, where that effect is apparent, the establishment of a General Teaching Council has to some degree restored control to the profession.

One aspect of the development of the teaching profession is the degree to which teachers are engaged in classroom or much wider activities. Here there is a stark contrast between French teachers, whose responsibilities remain firmly in the classroom, and Swedish teachers, who are expected to take responsibility for activities ranging from developmental counselling to preparing a conducive school environment.

Chapter

11

CONCLUSIONS

A brief summary of the findings of this report can be grouped under three headings. The first relates to the educational culture created in each country, and particularly how it copes with a student population that is heterogeneous both in background and in ability, as well as with regional and local differences. The second area concerns the structures of the school system and of educational support systems (teacher training, school inspection and counselling). The third area relates to the strategies and instruments used to govern the school system and individual schools, with a focus on quality assurance and quality development.

The educational culture and coping with heterogeneity

This comparative analysis of the cultural framework of education systems shows the importance of each country's "culture of achievement". This culture is primarily evident in the expectations that society and parents have in relation to learning outcomes. Although varying in detail, the countries studied nearly all stress that their societies value education highly.

The school systems of the study countries are marked by regional and social disparities, which must be addressed by decision makers. However, the countries differ in their responses to these challenges. Some favour decentralisation and local support schemes (*e.g.*, additional resources and smaller classes in schools with a high population of students from a disadvantaged socio-economic background); others favour strengthening the mandatory curriculum. Overall, however, the principle of comprehensive instruction for heterogeneous groups of students is increasingly complemented by a tailoring of instruction and learning processes to the needs of these diverse groups.

Strategies to cope with student heterogeneity pose particular challenges for providers of initial teacher training and in-service training, who need to ensure that teachers are well equipped to deal with difference within their classes. In individual schools and classroom instruction, the following elements could be necessary: central (core) curricula that allow schools flexibility to determine lessons and subjects, as well as learning content; a student-to-teaching-staff ratio that, as a rule, accords with the OECD average yet allows for a ratio that is above the average for younger students; and assessments of performance that are process-oriented and supplemented by reports about the status of learning (mostly in combination with central final examinations).

Country responses to social disparities relate not only to the lower secondary level, which was mainly surveyed by PISA, but also to the upper secondary level and entry into tertiary education. Here, the study countries have clear-cut systems of selection based on performance criteria. In many cases, central examinations have been introduced at the end of the lower or upper secondary levels. For some students, the outcomes of these selection methods can mean they are unable to embark on a planned or desired educational career. However, the majority of the reference countries have decided not to allow an unlimited expansion of the university sector, but rather to establish non-university institutions within the tertiary system, a process that is occurring at a rapid rate. At the same time, these education systems, which at the lower secondary level have proved successful by international standards, have introduced highly effective – and presumably also socially selective – mechanisms for university entrance.

All of the countries pay special attention to the situation of non-native students and students with foreign-born parents. Across the countries, this group has lower ratios of school graduation and lower performance levels than students who, along with their parents, were born in the country where they are attending school. Only some of the countries provide special induction courses for these groups, so any support that these students receive is generally within the regular classes. Such support is guided by the principles of

appreciation of cultural pluralism, promotion of both the mother tongue and the target language (with the exception of France), and strong co-operation with parents.

In general, observing these education systems allows us to conclude that *countries with successful PISA performance place social and cultural disparities at the centre of educational innovation strategies*. Assessing and supporting the performance of individual students and expanding all-day school provision are instrumental in this respect. However, the comparison does not provide details as to which educational strategy best suits each target group. The findings seem to demonstrate the importance of flexible solutions, designed at the local level and oriented toward mandatory objectives. At a more general cultural level, it is equally important to note the high value that the countries place on education, viewing it as central to the sound functioning of their societies.

Structure of the school system and support services

All the study countries have school systems that are designed to permit students to learn together for a substantial period of their school career (normally at least eight school years) without being tracked based on their educational achievement until relatively late in their schooling. Moreover, it seems that tracking is done cautiously. While this finding cannot provide proof (and certainly not proof based on empirical research) that school systems organised along social integration lines are superior – in terms of outcomes – to systems based on tracking students early in their schooling, it does provide circumstantial support for this hypothesis.

Work in individual schools, especially work with heterogeneous student populations, needs support from outside. The study countries, as a rule, have school inspection systems based on results of profound (systematic and regular) evaluation, and also send counselling teams (except for Sweden) to the schools not only on a regular basis but also whenever counselling is required.

Teacher training receives special attention in these countries. It is apparent that more rigorous selection procedures at the beginning of teacher training could enhance teacher qualification as well as the status of the teaching profession. Teacher training is generally provided by a single and powerful organisation, which uses standards of teacher competency to create training programmes. Differences of social status within the teaching profession are comparatively low. Also, persons working at the pre-school (“kindergarten”) level of the education system obtain educational training that provides them with a social status higher than that in some other countries.

The study countries all regard in-service training as a natural and ongoing task of every teacher. This training can be mandatory and/or a condition for professional advancement. In-service training is predominantly organised within individual schools. In addition to state institutes, independent providers play an increasing role. For new teachers, continuous programmes like the mentoring programme in England seem to be of major relevance. Considerable weight is also given to the training and in-service training of management personnel in schools. Some countries report differentiation of the various management functions within individual schools.

In summary, these findings point to the conclusion that *strong basic education systems tend to succeed by providing good quality support for students, teachers and schools in the context of an integrated rather than differentiated school structure* (the Netherlands’ differentiated school system being an exception). Within schools and pre-schools with integrated classes, this requires teachers to differentiate

and support individual needs. To perform these tasks successfully, they need high-level, high-quality pre-service training, ongoing and mandatory in-service training, special training for school management tasks and counselling and support from teams of experts based on evaluation by external agencies.

Governance of the school system

No later than the 1990s, and in some instances much earlier, governments in the study countries began to elaborate and implement diverse educational reforms, accompanied by systematic and empirical monitoring. As a rule, these reforms were accompanied by intensive public debate, a situation that now seems to have begun in other countries as well, including Germany, following the publication of the PISA 2000 results.

One basic principle underlying the reform strategies in all six countries is the move away from governance by input towards assessing (by institutions outside the schools) the quality of outcomes of schoolwork – in particular learning outcomes. Decentralisation (under the catchphrase “school autonomy”) and external evaluation are not, as is sometimes claimed, diametric opposites, but rather an interrelated part of governance of the school system.

In the study countries, decentralisation, in the sense of a downward shift of levels of decision making, takes various shapes. It can mean a strengthening of the roles and influence of the actors within each school (*i.e.*, school management, teachers, students and parents). It can also mean a strengthening of regional or local public administration (as in Finland and Sweden), or it can heighten the influence of those who demand education (in the case of the primary and secondary levels, the influence of parents in particular, as in England and the Netherlands). In general, while decentralisation is a common aim of all these countries, the extent to which it is implemented has so far varied. Whereas decentralisation is still a work in progress in France, countries such as Finland and some Canadian provinces are now facing calls for an increase in central measures to avoid the disintegration of quality standards feared as the outcome of an overly decentralised system.

Another common feature of the study countries is that student achievement is measured across each country according to consistent and compulsory standards. This means developing national assessment systems based on these standards. Even the federal system of Canada has in place this form of assessment in basic educational target areas. (France, which for many years has used tests mainly to collect empirical data about the system, has recently begun to determine standards.) Essentially, schools within each country are increasingly accountable to the central authority, and this seems to be a condition for ensuring the success of the increased autonomy of individual schools.

All of the study countries now conduct regular system monitoring – in the form of assessments of student achievement that take place on a regular basis – are centrally planned and analysed, may involve a random sample, are organised at a national level or are part of international assessment studies. The countries see participation in an evaluation and the subsequent feedback as opportunities to strengthen development of the schools. Some countries (notably England, the Netherlands, some provinces and territories in Canada and, increasingly, Sweden) expect publication of assessment results for individual schools, a practice that is deemed to enhance competition between schools, with a positive impact on quality development. This practice is linked not only with market-based mechanisms, but especially with the fact that it allows ready identification of low-performing schools. It also allows these schools to receive well-targeted counselling interventions designed to identify and rectify problem areas.

In all countries a precondition for these changes in educational policy was that, over a number of years, professional agencies would be established to develop assessment instruments to carry out tests related to core curricula and educational standards. Experience shows that neither schools nor school administrators can adequately undertake these tasks. Furthermore, a common feature in all countries is that student assessment programmes do not test exclusively for cognitive performance but also record contextual factors (*e.g.*, socio-economic status, school size) as well as aspects of process quality. These studies are also used as instruments to measure results accompanying development projects in individual schools and in school systems.

The conclusion that can be drawn from these findings is that *those countries with the more successful PISA results have tackled educational reforms and implemented new models of school-system governance at an early stage, and have conducted this process systematically and continuously*. It is evident from the country reports that the constituent elements of this process involve: specification of educational standards (related in part to a nationally subscribed core curriculum); greater school autonomy; expansion of a differentiated system of educational provision within individual schools; establishment of highly professional national evaluation agencies; centrally organised empirical tests and school evaluations; and development of differentiated resource allocation based on evaluation outcomes and aligned with targeted support for the actors in the education process. (Of the study countries, only France is at an early stage of these processes, but it has conducted evaluation for many years.)

In essence, the comparison brings into focus a model of a flexible school system that offers schools a high level of individual responsibility while simultaneously ensuring their accountability and maintenance of standards, through a system of output-oriented external assessments and targeted and intensive intervention where problems are greatest.

Annex



ANALYTICAL FRAMEWORK USED
FOR THE COUNTRY REPORTS IN
THE MULTILATERAL STUDY
CO-ORDINATED BY THE GERMAN
INSTITUTE FOR INTERNATIONAL
EDUCATIONAL RESEARCH

The analytical framework used for the country reports in the multilateral study co-ordinated by the German Institute for International Educational Research was structured according to categories highlighted in school effectiveness research. Each country expert submitted a country report completing the questionnaire as detailed below.

1. The cultural context of school education

Cultural and family background

Key words: social gradient, cultural and social capital, socio-economic status.

- How important are educational issues within families and society?
- How seriously are they taken compared to other issues (parental investment, educational budget, achievement)?
- How does family background affect students' achievement?
- What kind of social prestige do teachers have (salary, appeal of the teaching profession)?

2. The system level: Structure, processes and outcomes of the school system as a whole

How the system works

Horizontal and vertical structure of the school system

Key words: primary and secondary education, real school careers, selection in the education system.

- Which courses of study are available (*e.g.*, academic vs. vocational tracks)?
- To what extent are these courses/tracks mixed; for example, can students change from one track to the other; can they move “upwards” and “downwards”?
- What are the learning targets and how binding are these targets in primary schools?

Resources

Key words: national database, empirical results outside of the OECD publication “Education at a Glance”, public debate, school as the workplace, “shadow education”).

- How are human and financial resources distributed among the different levels of the education system?
- How much time do students (at the age of 15 and below) spend on learning in general and with regard to specific subjects like mathematics, science, the native language and foreign languages?
- How is the total working time for teachers defined and organised?
- How are schools financed? Does the allocation of resources depend on achievement?

Coping with the heterogeneity of students at the system level

Key words: selection in education, dealing with variation.

- How open or selective is the education system?
- How are special needs dealt with in the school system? Is mainstreaming the general strategy for supporting students with special needs?

- Are opportunities offered for individual courses of education? Are individual school careers always careers characterised by failure (“non-promotion”, transfer to a school offering a leaving certificate of lower value) or are there also careers characterised by success (systematic support)?

Support systems

Key words: school inspection, counselling, in-service teacher training, discussion on a national scale.

- How do these support systems help improve school quality? How do they co-operate? What is known about their impact? How are they financed?
- Are the support systems used voluntarily? What role does external control play?
- Which support structures are provided for the educational integration of non-native children and children with foreign-born parents?

Teacher training

Key words: understanding of the teaching profession, training of competences, transition from pre-service teacher training to school, role of teacher testing.

- How is professionalism understood within the teaching profession?
- How is teacher training organised in terms of structure and content (phases, number of subjects, training of pre-school teachers, role of didactics in training for the primary sector, relationship between different tracks of pre-service teacher training)?
- How are teachers’ diagnostic competences promoted?

Goals

Educational goals

Key words: PISA and national curriculum, distribution of learning time.

- What is the relationship between national educational goals, both traditional and modern, and the learning targets assessed by the PISA survey?
- Is there a strong focus on core areas?

Standards

Key words: national understanding of “standards”, dealing with standards.

- How are educational standards (minimum standards, especially) defined and used in the curriculum, in educational research and in evaluation?
- How are indicators for educational standards operationalised at different levels and for different targets of education (degree of detail)?

Strategies for educational reform and innovation

Key words: report system, documentation of reforms, primary and lower secondary education.

- Which major reforms have been implemented in the education sector since the mid-1980s? Have these been informed by educational research? What is the general goal of these reforms?

Evaluation

Models of evaluation and control

Key words: national models, responsibility of schools.

- Which decisions are taken at national, regional and local levels and what is controlled via “inputs” or “outputs”? What role does the local community play in governing the school?
- Which data are available to demonstrate the relationship between extended school autonomy, self-efficacy of schools and school outcomes?
- To what extent are schools responsible for (self-) evaluations?
- What role do examinations (especially centralised examinations) and school-leaving certificates play in school evaluation and how are they dealt with?

System-monitoring

Key words: types of large-scale assessments, feedback systems, changes in policy strategies.

- What experience has the country had with respect to large-scale assessments? How did the public, education professionals and policy makers react to the results of previous assessments?
- What kinds of (regular) performance tests are carried out at different levels (educational policy and administration, educational research, individual schools) and how are the results used? What kinds of feedback do the participants receive and how are the results dealt with?
- Are the results published? Are “value-added” results reported?
- What is the relationship between central standards of evaluation and those founded on market models?
- How are the results interpreted within the country itself? What explanations are given?

What are empirical insights on system quality?

Key words: differential effects, PISA and further studies.

- Do national and international studies reveal insights into the relative strengths and weaknesses of national education systems?
- Are there data on regional differences within the country? How are they interpreted and dealt with?

3. The school and classroom levels: Pedagogical concepts

School structure

Key words: qualitative information, “school/family”, empirical data on effects of all-day schooling.

- What role do all-day schools play? What is known about the impact of all-day schooling on school quality and student outcomes?
- How is the all-day organisation used (structure of school day, lessons vs. pedagogical “free time”, cognitive support)?

Ability to adapt to/cope with heterogeneity at the classroom level

Key words: response to heterogeneity of students, cultural differences, classroom climate.

- How is heterogeneity dealt with in learning groups?
- How is encouragement of students practised, especially during classroom instruction?
- How are teachers and students taught to individualise the design of their lessons?
- What evidence is there of efforts to balance socio-cultural differences?

Integration of non-native children, children with foreign-born parents

Key words: social and educational integration, language competences.

- How is mastering the language of instruction and the promotion of multilingualism among immigrants achieved?
- Which measures are taken in this regard during lessons and outside the classroom (so that students achieve a good command of the national, native and required foreign languages)?
- How are minorities (ethnic minorities) dealt with in the school system?

Reading advancement

Key words: relationship between classroom and extra-curricular activities, gender differences.

- How is the competence to deal with and evaluate students' interest in reading developed and supported?
- Are there special support measures, especially for boys?
- Is there any connection between classroom activities and extra-curricular activities concerning reading advancement?

Early diagnosis and early support

Key words: qualification of pre-school teachers, screening for high-risk students.

- What are the educational goals of pre-school institutions?
- What steps are taken to support children at an early age, particularly in reading?

Evaluation and quality of individual schools

Key words: external/internal evaluation, role of the market, school standards.

- What is the relationship between external and internal evaluation?
- Is there a teacher assessment, and does it bear any consequences?

