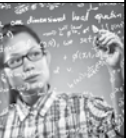




4

School Governance, Assessments and Accountability

This chapter explores the inter-relationships among school autonomy, school competition, public and private management of schools, school leadership, parental involvement, and assessment and accountability arrangements. The chapter also discusses trends since 2003 in school governance, assessments and accountability.

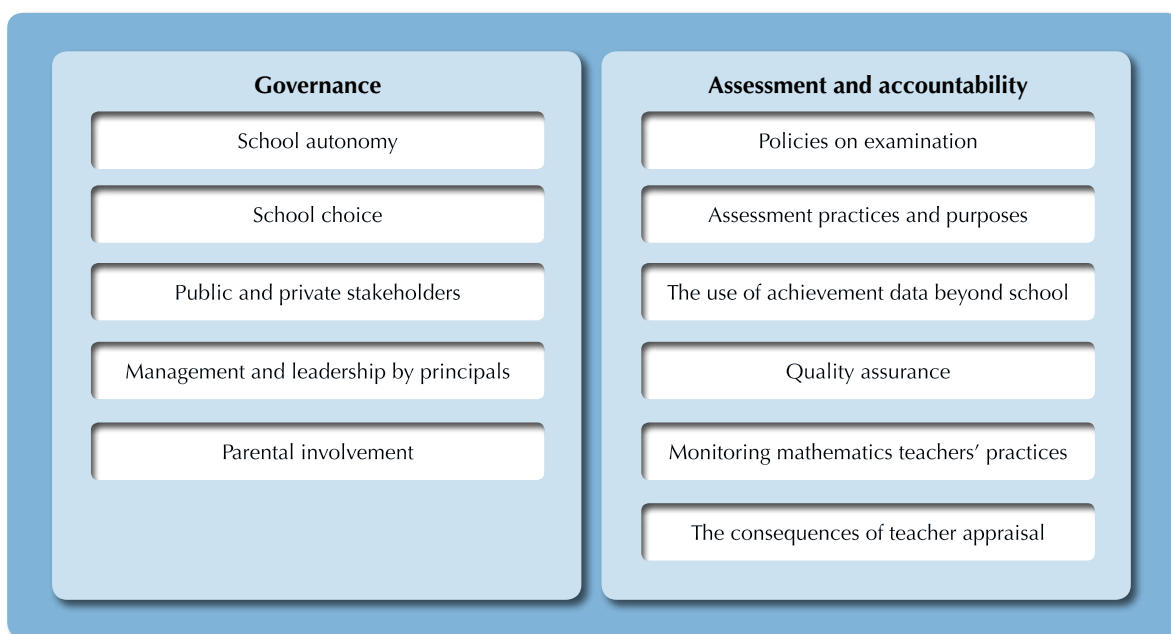


This chapter examines the balance between autonomy, accountability and collaboration among schools, teachers and parents by describing school autonomy, school competition, public and private involvement in schools, school leadership, parental involvement, and assessment and accountability arrangements.

Chapter 1 shows that the relationship between school governance and education outcomes is complex. At the school level, the relationships vary greatly, depending on the system. At the system level, school systems with high overall performance tend to grant more autonomy to schools in designing curricula and assessments and seek feedback from students for quality-assurance and improvement. In systems with more competition among schools, the impact of students' socio-economic status on their performance is stronger, while that impact is weaker in systems where more schools seek feedback from students and use teacher mentoring as part of quality-assurance and improvement activities.

■ Figure IV.4.1 ■

Governance, assessment and accountability as covered in PISA 2012



What the data tell us

- In most countries, few individual schools have a major influence on teachers' salaries; however school principals and/or teachers have more responsibility for decisions related to selecting and hiring teachers, and determining course content.
- School systems in which more schools seek written feedback from students about lessons, teachers or resources tend to be more equitable.
- Between 2003 and 2012, students in most (27 out of 38) countries and economies became more likely to be in schools that use student assessments to compare the school's performance to that of other schools. During the same period, students in most countries and economies also became more likely to attend schools that use student assessment data to monitor teacher practice.
- If offered a choice of schools for their child, parents are more likely to consider such criteria as "a safe school environment" and "a school's good reputation" more important than "high academic achievement of students in the school".



GOVERNANCE OF SCHOOL SYSTEMS

School autonomy

Chapter 1 shows that systems where schools have more autonomy over curricula and assessments tend to perform better overall. Relationships between school autonomy and performance within countries are more complex, and the relationships vary according to the extent of accountability arrangements that systems have.

Among the many decisions that school systems and schools have to make, those concerning the curriculum and the way resources are allocated and managed have a direct impact on teaching and learning. Since the early 1980s, many school systems have granted individual schools increasing authority to make autonomous decisions on curricula and resource allocation on the premise that individual schools are good judges of their students' learning needs and of the most effective use of resources. The rationale was to raise performance levels by encouraging responsiveness to student and school needs at the local level (Whitty, 1997; Carnoy, 2000; Clark, 2009; Machin and Vernoit, 2011). This has involved increasing the decision-making responsibility and accountability of principals and, in some cases, the management responsibilities of teachers or department heads. Yet school systems differ in the degree of autonomy granted to schools and in the domains for which autonomy is awarded to schools.

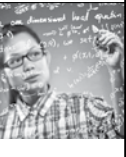
PISA 2012 asked school principals to report whether the teachers, the principal, the school's governing board, the regional or local education authorities or the national education authority had considerable responsibility for allocating resources to schools (appointing and dismissing teachers; determining teachers' starting salaries and salary raises; and formulating school budgets and allocating them within the school) and responsibility for the curriculum and instructional assessment within the school (establishing student-assessment policies; choosing textbooks; and determining which courses are offered and the content of those courses). This information was combined to create two composite indices: an *index of school responsibility for resource allocation*, and an *index of school responsibility for curriculum and assessment*, such that both indices have an average of zero and a standard deviation of one for OECD countries. Higher values indicate more autonomy for school principals and teachers.¹

In most countries and economies, few individual schools have a major influence on teachers' salaries. On average across OECD countries, around 70% or more of students are in schools whose principals reported that only national and/or regional education authorities have considerable responsibility for establishing teachers' starting salaries and determining teachers' salary increases (Figure IV.4.2). In contrast, school principals and/or teachers have more responsibility for decisions related to selecting and hiring teachers, dismissing teachers, formulating the school budget, and deciding on budget allocations within the school. School autonomy, as measured by the *index of school responsibility for resource allocation*, is greatest in Macao-China, the Netherlands, the Czech Republic, and the United Kingdom, as reported by school principals in these countries. In contrast, responsibility for resource allocation is least among schools in Turkey, Greece, Albania, Italy, Germany, Romania, Austria, France and Jordan (Table IV.4.1).

Schools within a country or an economy show varying degrees of autonomy in allocating resources. School principals in Turkey, Germany, Greece, Ireland, Romania and Belgium reported similar levels of autonomy in allocating resources, while in Peru, the Czech Republic, Chile, Indonesia, the United Arab Emirates, Macao-China, the Slovak Republic and the United Kingdom, some schools are permitted to allocate resources while for other schools these decisions are made by national or regional education authorities (Table IV.4.1). As expected, in virtually all participating countries and economies, private schools tend to have more autonomy in allocating resources than public schools. In 18 countries and economies, upper secondary schools tend to have more autonomy in allocating resources than lower secondary schools, while in Liechtenstein, Switzerland and Macao-China the reverse is true (Table IV.4.2).

In general, school systems that give responsibility for resource allocation to individual schools also tend to grant schools responsibility for curricular decisions, although this is not the case in some systems, such as Japan and Bulgaria.² Relatively higher levels of school autonomy in setting curricula and assessment practices are observed in Japan, Thailand, the Netherlands, Hong Kong-China and the United Kingdom, as measured by the *index of school responsibility for curriculum and assessment*. By contrast, Greece, Turkey, Jordan, Viet Nam, Qatar, Malaysia, Mexico, Serbia, Croatia, Luxembourg, Bulgaria, Montenegro and Uruguay are among those countries that grant the least responsibility to schools in making decisions about curricula and assessments (Figure IV.4.3 and Table IV.4.3).

Not all schools within the same system have the same level of discretion over their curricula and assessments. For example, in the United Arab Emirates, Peru, Tunisia and the Slovak Republic, some schools can formulate their own curricula and assessments while other schools must abide by decisions taken by the school governing board or national/regional authorities. The opposite is true in Serbia, Greece, Turkey, Bulgaria, Luxembourg and Croatia, where



all schools have similar levels of autonomy in designing their curricula (Table IV.4.3). In some countries and economies, there is a difference in the degree of school autonomy in deciding curricula and assessments between upper and lower secondary schools, but the pattern is not consistent: upper secondary schools tend to have more autonomy in this area than lower secondary schools in 12 countries and economies, while the reverse is observed in five other countries. In 26 countries and economies, private schools tend to have higher degrees of autonomy in making decisions about curricula and assessments, but in Estonia, the Slovak Republic and Slovenia, the reverse is observed (Table IV.4.2).

Box IV.4.1. **School autonomy and collaboration among schools**

Greater school autonomy does not lead to less collaboration among schools and school leaders; on the contrary: collaboration can complement school autonomy to promote greater empowerment of schools, and horizontal networks can also support more innovation by schools.

Sometimes school leaders in schools that have been granted greater autonomy have not yet been trained in all the areas for which they are now responsible (Pont, Nusche and Moorman, 2008). When school leaders lack sufficient expertise, the simplest types of co-operation, such as sharing managerial and administrative resources, can help reduce the school leaders' administrative workload and minimise inefficiencies. More important, more advanced types of collaboration, including collective learning, can help to develop leadership capacity (Pont, Nusche and Moorman, 2008). Networks of schools help to overcome the isolation of individual schools and educators by providing opportunities for organised professional exchange, development and enrichment (Sliwka, 2003).

In England (United Kingdom), for example, the government has been supporting a variety of approaches to enhance co-operation among schools and school leaders since the early 2000s. Funding for school-innovation projects often required schools to partner together and apply as school clusters, rather than as individual schools. More recently, when schools were invited to assume greater autonomy by applying for "academy" status, the government also encouraged strong academies to work with weaker schools to raise standards. Several academies have joined a "chain", which acts as a common trust for all of them. School-led partnerships among independent academies have also developed, such as the "Challenge Partners" network, which uses peer inspection as a way of fostering continuous improvement.

In Scotland (United Kingdom), "Heads Together" is a nationwide online community used by school leaders to share experiences, policies and ideas. It was launched after a successful pilot phase in 2003, and has since become part of the national intranet for schools, "Glow".

In Shanghai (China), policies support collaboration between better- and lower-performing schools with the aim of transferring leadership capacity from the former to the latter. One aspect is called empowered administration, a school-custody programme in which the government asks higher-performing public schools to administer weaker schools. Under this scheme, the high-performing school appoints its experienced leader, such as the deputy principal, to be the principal of the weaker school and sends a team of experienced teachers to lead in teaching. In this way, the ethos, management style and teaching methods of the good schools are transferred to the poorer-performing school. In addition, a consortium of schools is established, where strong and weak schools, old and new, public and private, are grouped into a consortium or cluster, with one strong school at the core (OECD, 2011).

Authentic and fruitful collaboration among autonomous actors, however, cannot simply be decreed. A general lesson that emerges from the OECD project on "Improving School Leadership" (Pont, Nusche and Moorman, 2008) is that if collaboration activities are perceived as being imposed from above rather than being pursued out of real commitment, their effectiveness will be limited.

Sources:

OECD (2011), *Strong Performers and Successful Reformers in Education: Lessons from PISA for the United States*, OECD Publishing. <http://dx.doi.org/10.1787/9789264096660-en>

Pont, B., D. Nusche and H. Moorman (2003), *Improving School Leadership: Volume 1, Policy and Practice*, OECD Publishing. <http://dx.doi.org/10.1787/9789264044715-en>

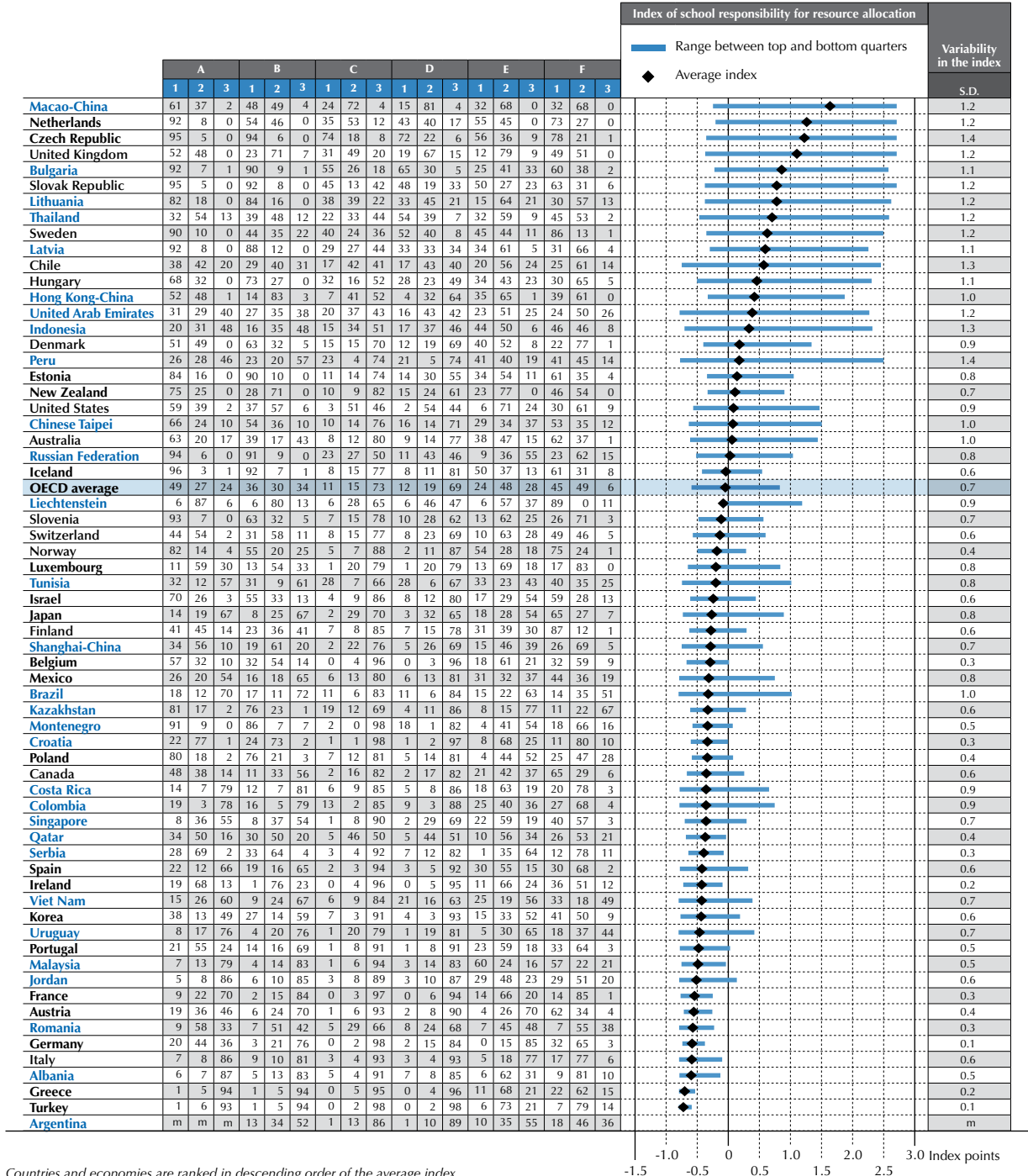
Sliwka, A. (2003), "Networking for Educational Innovation: A Comparative Analysis", OECD Networks of Innovation: Towards New Models for Managing Schools and Systems, OECD Publishing.



Figure IV.4.2 School autonomy over resource allocation

Percentage of students in schools whose principals reported that only “principals and/or teachers”, only “regional and/or national education authority”, or both “principals and/or teachers” and “regional and/or national education authority”, or “school governing board” has/have a considerable responsibility for the following tasks:

- A Selecting teachers for hire
- B Firing teachers
- C Establishing teachers’ starting salaries
- D Determining teachers’ salaries increases
- E Formulating the school budget
- F Deciding on budget allocations within the school
- 1 Only “principals and/or teachers”
- 2 Both “principals and/or teachers” and “regional and/or national education authority”, or “school governing board”
- 3 Only “regional and/or national education authority”



Countries and economies are ranked in descending order of the average index.

Source: OECD, PISA 2012 Database, Table IV.4.1.

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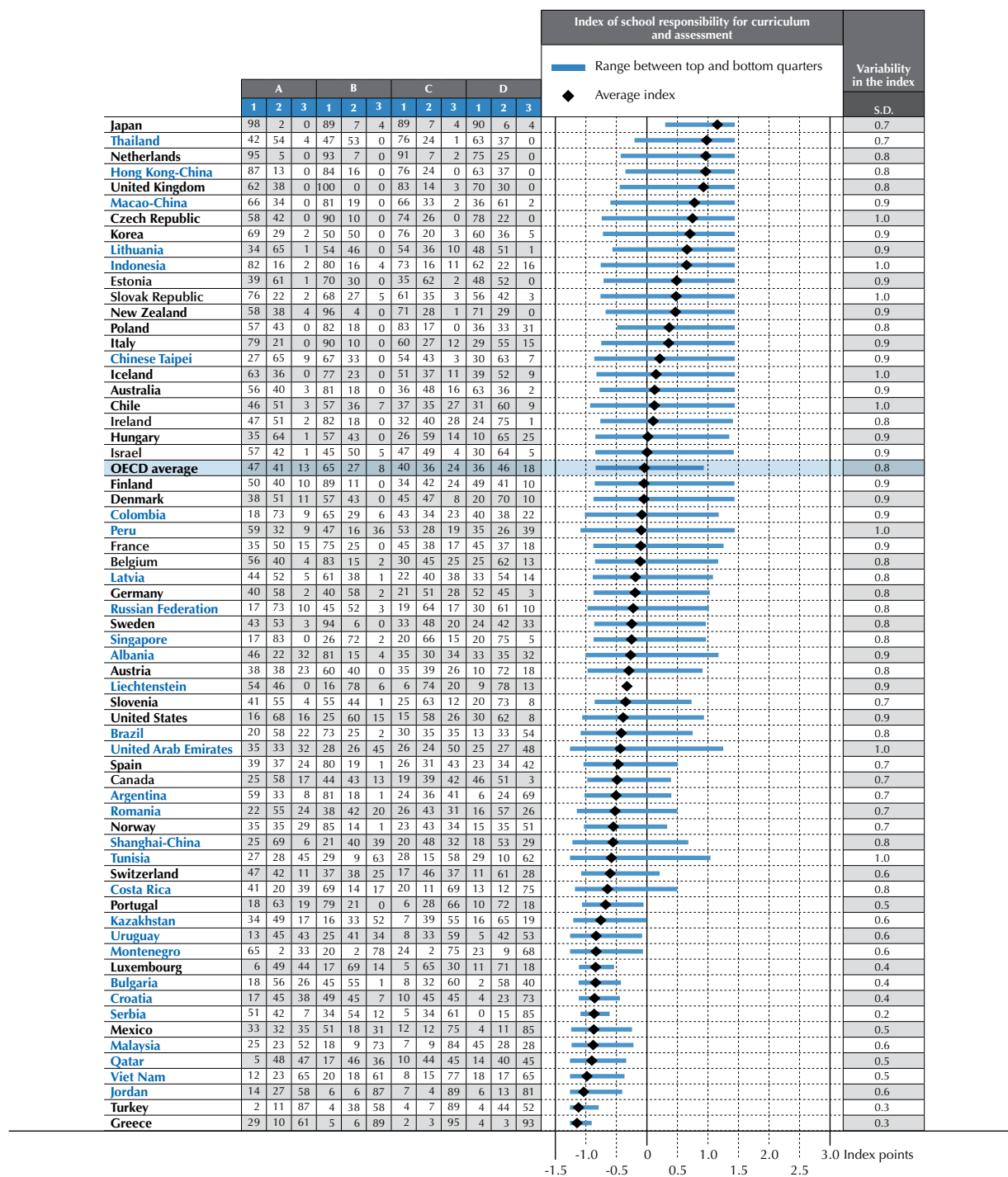
■ Figure IV.4.3 ■

School autonomy over curricula and assessments

Percentage of students in schools whose principals reported that only “principals and/or teachers”, only “regional and/or national education authority”, or both “principals and/or teachers” and “regional and/or national education authority”, or “school governing board” has/have a considerable responsibility for the following tasks:

- A Establishing student assessment policies
- B Choosing which textbooks are used
- C Determining course content
- D Deciding which courses are offered

- 1 Only “principals and/or teachers”
- 2 Both “principals and/or teachers” and “regional and/or national education authority”, or “school governing board”
- 3 Only “regional and/or national education authority”



Countries and economies are ranked in descending order of the average index.

Source: OECD, PISA 2012 Database, Table IV.4.3.

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Some caution is advised when interpreting the degree of responsibility schools have in allocating resources, formulating curricula and using student assessments. Decision-making arrangements vary widely across countries, so the questions posed to school principals were general; thus, responses may depend on how school principals interpreted the questions. For example, when school principals were asked who has considerable responsibility for formulating the school budget, some school principals might have related this question to the regular budget of the school, while others may not have had any involvement in the regular budget and may therefore have related the question to supplementary budgets, i.e. contributions from parents or the community.

School choice

Chapter 1 shows that schools systems emphasising greater competition for students among schools and greater school choice, do not necessarily perform better than systems with less competition among schools. This result reflects the fact that school competition is a multi-faceted concept, as described, in detail, below.

Students in some school systems are assigned to attend their neighbourhood school (see Chapter 2 for more details). However, in recent decades, reforms in many countries have tended to give greater choice to parents and students, to enable them to choose the schools that meet their children's educational needs or preferences (Heyneman, 2009). On the premise that students and parents have adequate information and choose schools based on academic criteria or programme quality, the competition for schools creates incentives for institutions to organise programmes and teaching in ways that better meet diverse student requirements and interests, thus reducing the cost of failure and mismatches. In some school systems this competition has financial stakes for schools such that schools not only compete for enrolment, but also for funding. Direct public funding of independently managed institutions, based on student enrolments or student credit-hours, is one model for this. Giving money to students and their families (through, for example, scholarships or vouchers) to spend on public or private educational institutions of their choice is another method. But some studies have questioned the validity of the underlying assumptions about parental and student choice (Schneider et al., 2002; Hess and Loveless, 2005; Berends and Zottola, 2009; Jensen et al., 2013); and, in some cases, adopting school-choice practices has led to greater socio-economic and academic segregation among schools.³ In some school systems, more responsibility for regulating enrolment has been given to the education authority (Box IV.4.2).

Box IV.4.2. Improving equity in Belgium's (French community) enrolment system

The French community of Belgium, which offers parents and students a high degree of school choice, recently adopted a scheme to regulate enrolments in the first year of secondary education.^a This was done to ensure that all families have equal access to the lower secondary school of their choice, to prevent dropout, and to maintain a good social, cultural and academic mix of students in every school.

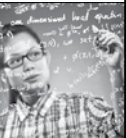
Through the scheme, parents are given a pre-printed form on which they indicate their preferred school and any other choice of schools, in order of preference. Parents are also asked to report on the proximity of their home to the primary school their child attended, the proximity of their home to their preferred secondary school, the proximity of the preferred secondary school to the primary school the child attended, and other schools located in the municipality of their child's primary school. Parents are also asked whether the child aims to continue immersion learning begun in primary school and whether there is a partnership between the primary and preferred secondary schools. Each child is then given a ranking based on a composite index of these criteria.

If the number of applications received by the preferred lower secondary school does not exceed the number of places available, all enrolment applications are accepted. In all other cases, the school ranks the applications on the basis of objective, weighted geographical and educational criteria, and awards 80% of the places in accordance with the ranking, while ensuring that the remaining places are awarded to pupils from disadvantaged primary schools.

An Inter-Network Enrolment Commission manages the cases of those students who could not be enrolled in their first-choice school. These students are allocated places in the schools where there are still some available or are allocated one of the reserved places in the schools that are already 80% "full".

After this process is completed, enrolments may be resumed on a first-come, first-served basis. For more information, see the [Eurypedia section on Belgium \(French community\)'s organisation of general lower secondary education](#).

a. For further information on this selection scheme, visit <http://www.inscription.cfwb.be/>



On average across OECD countries, 41% of students are in schools where residence in a particular area is always considered for admission, while 59% are in schools where residence in a particular area is never or sometimes considered for admission to school. In fact, in 27 countries and economies, 70% or more students are in schools where residence in a particular area is never or sometimes considered for admission to school. Over 90% of students in Belgium, Serbia, Slovenia, Macao-China, Peru, Croatia, Montenegro, Singapore, Mexico, Japan and Romania attend such schools. By contrast, in Poland, the United States, Greece and Canada, 30% of students or fewer attend such schools (Table IV.4.6).

Naturally, school systems in which more schools use admissions criteria other than the school catchment area tend to have more competition among schools. On average across OECD countries, 24% of students are in schools whose principals reported that there are no other schools in the areas that compete for students; 16% are in schools that compete with one other school; and 61% are in schools that compete with two or more other schools. Fewer than 50% of students in Norway, Liechtenstein, Switzerland, Montenegro, Finland and Iceland are in schools that compete with at least one other school for students, while over 90% of students in Singapore, Hong Kong-China, Indonesia, Macao-China, Chinese Taipei, Belgium, Australia, Latvia, New Zealand, the United Kingdom, Korea, the Netherlands, the United Arab Emirates and Japan attend such schools (Table IV.4.4).

School competition is more common at the upper secondary level of education, where there is generally greater differentiation of education programmes than at lower levels of education. For example, in Viet Nam, 38% of lower secondary students attend schools that compete with at least one other school, while 83% of upper secondary students attend such schools – a 45 percentage-point difference. In Bulgaria, Sweden, the Slovak Republic, Greece and the Czech Republic, the difference between the two groups is between 21 and 39 percentage points. In contrast, in a few school systems, there is more competition at the lower secondary than at the upper secondary level. For example, in Austria, 80% of lower secondary students attend schools that compete for students with at least one other school, while 59% of upper secondary students attend such schools (Table IV.4.5).

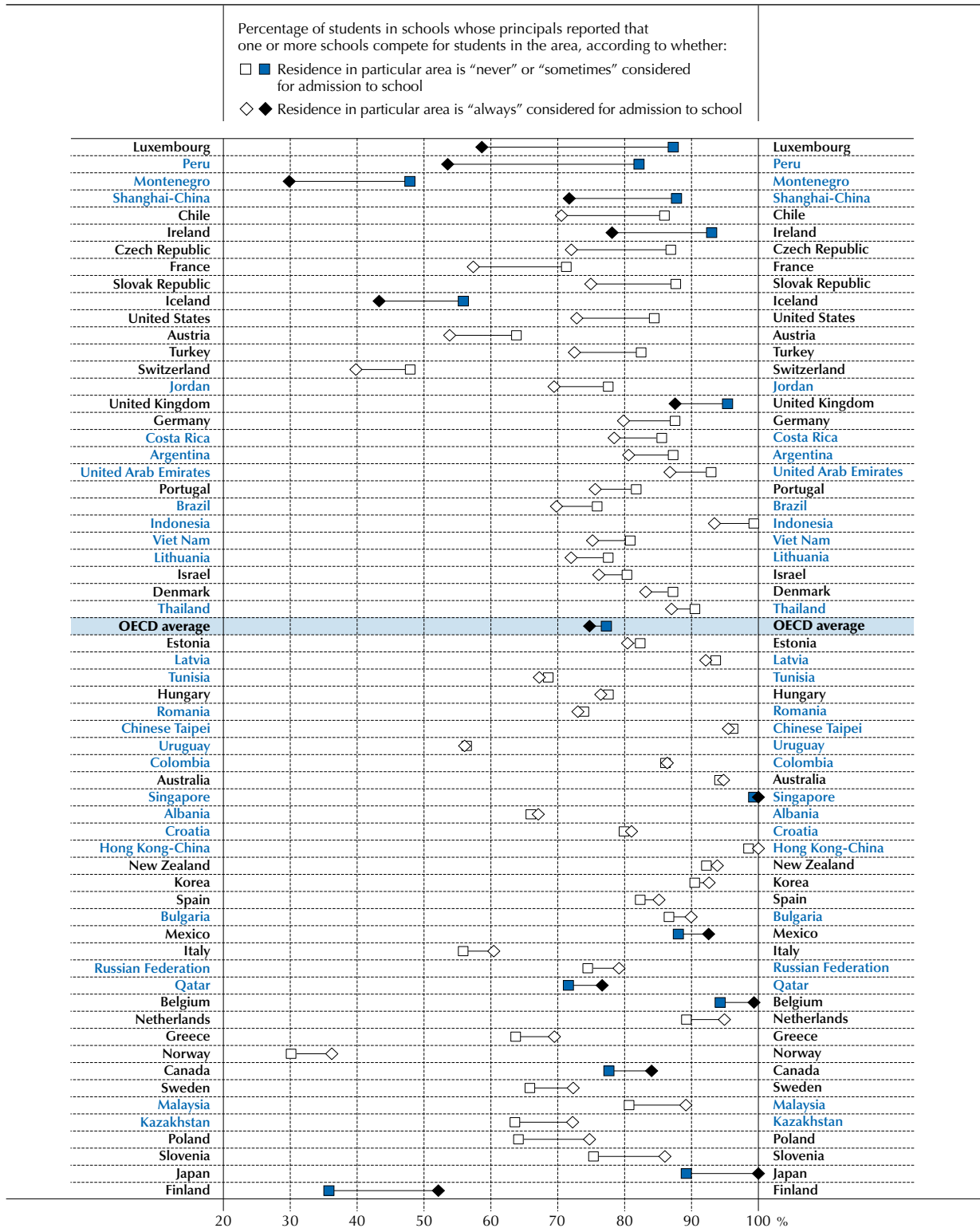
However, as Figure IV.4.4 shows, even when admission to schools is not based on catchment area, individual schools are not always competing with other schools for enrolment. Some schools use residential area as the criterion for selecting students, but there may be several schools within the area, such that schools still have to compete for enrolment with other schools. In contrast, not all schools that do not use the school catchment area as a criterion for admission compete with other schools for enrolment: there may, for example, be no other school in the area. Even if there are other schools in the same area, if these schools have different levels of academic achievement, different instructional or religious philosophies, or offer different programmes, school principals may not perceive that there are schools in the same area competing for enrolment. In Finland, Japan, Canada, Belgium, Qatar, Mexico and Singapore, schools that always consider residence in a particular area for admission to school are more likely to compete with other schools for enrolment than schools that never or sometimes use residence as a criterion for admission (the percentage-point difference in the prevalence of school competition between the two groups is between 0.7 and 16.4). In contrast, in Luxembourg, Peru, Montenegro, Shanghai-China, Ireland, Iceland and the United Kingdom, schools that never or sometimes consider residence in a particular area for admission to school are more likely to compete with other schools for enrolment than schools that always consider residence as a criterion for admission. The difference in the prevalence of school competition between the two groups is between 7.8 and 28.6 percentage points (Table IV.4.6).

Principals' perceptions of school competition are not necessarily the same as those of the parents of students in their schools. In 11 countries and economies, PISA asked parents of students who participated in PISA 2012 to report whether there are one or more other schools in the same area that compete with the school their child attends.⁴ As expected, in all of these countries and economies, parents in schools whose principals reported that the school competes with other schools for students were more likely to report that there is at least one other school competing with the school their child attends, than parents in schools whose principals reported that the school does not compete with any other school. However, even among parents whose children attend schools that compete with one or more other schools, according to principals, the parents of between 20% and 45% of these students reported that no other school competes for enrolment with their child's school. There are various reasons for this discrepancy. For example, these parents might not have enough information about other schools in the area. Even if they are aware that there are other schools in the vicinity, those schools may already be full, parents might think that those schools are too far, the schools' level of academic achievement does not meet the parents' standards, or school fees are too high, so that parents do not consider these schools as competitors with their children's school (Table IV.4.9).



■ Figure IV.4.4 ■

School competition and school policy on catchment area



Note: White symbols represent differences that are not statistically significant.

Countries and economies are ranked in descending order of the difference in the percentage of students in schools whose principal reported that one or more schools compete for students in the area between schools where residence in a particular area is “never” or “sometimes” considered, and schools where residence in a particular area is “always” considered for admission to school (never/sometimes - always).

Source: OECD, PISA 2012 Database, Table IV.4.6.

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Figure IV.4.5 [Part 1/2]

Parents' reports on criteria used to choose schools for their child, by students' socio-economic status

Percentage of parents who reported that the following criteria are very important in choosing a school for their child



Notes: White symbols represent differences between top quarter and bottom quarter of ESCS (top - bottom) that are not statistically significant.

ESCS refers to the PISA index of economic, social and cultural status.

Countries and economies are ranked in descending order of the percentage of parents (all parents) who reported that each criterion is very important.

Source: OECD, PISA 2012 Database, Tables IV.4.10 and IV.4.11.

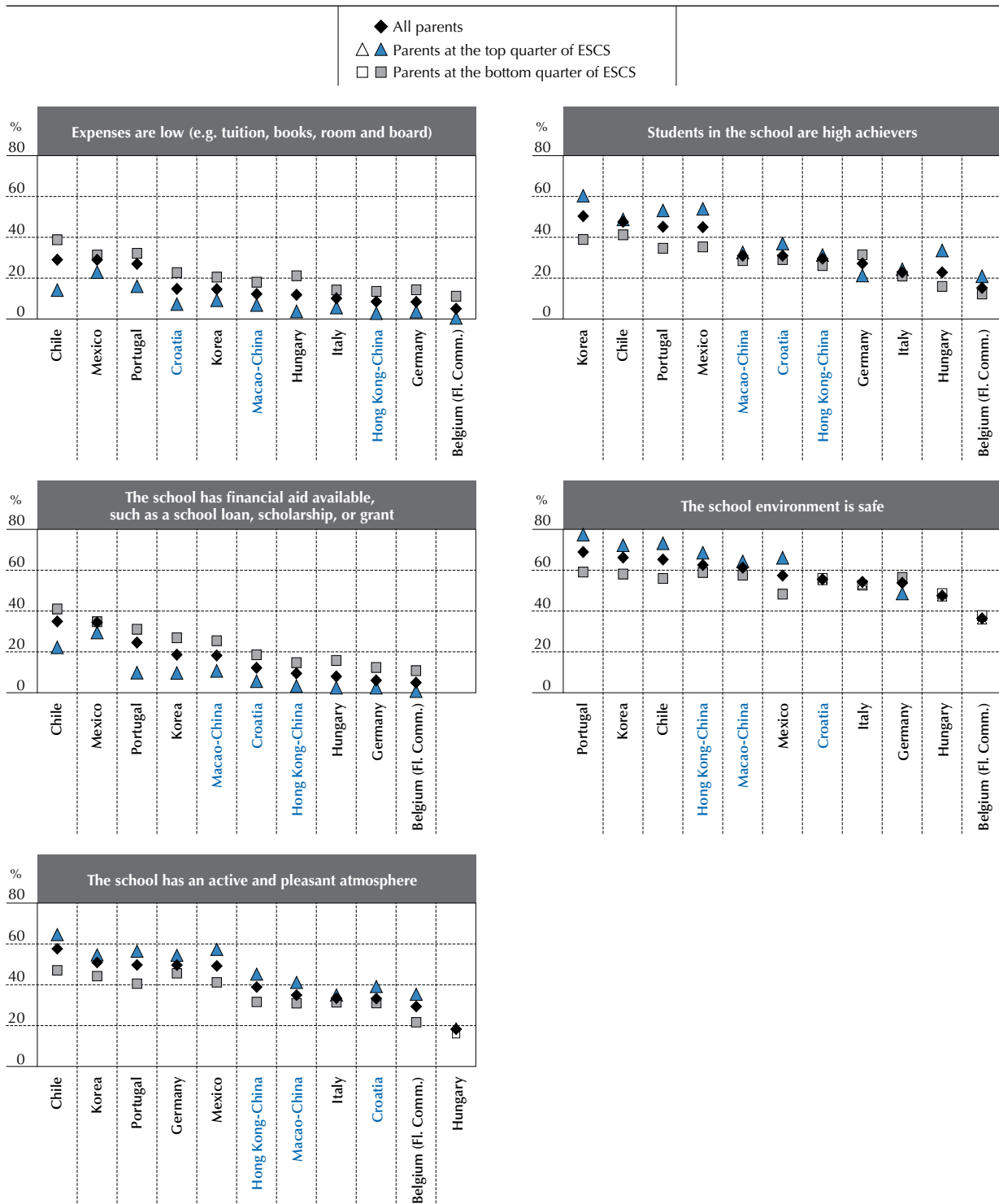
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■ Figure IV.4.5 [Part 2/2] ■

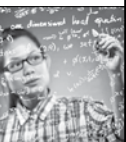
Parents' reports on criteria used to choose schools for their child, by students' socio-economic status

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Notes: White symbols represent differences between top quarter and bottom quarter of ESCS (top - bottom) that are not statistically significant. ESCS refers to the PISA index of economic, social and cultural status. Countries and economies are ranked in descending order of the percentage of parents (all parents) who reported that each criterion is very important. Source: OECD, PISA 2012 Database, Tables IV.4.10 and IV.4.11.

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These results show that school competition is a multi-faceted concept, affected by such factors as local school markets, school performance, affordability, capacity and enrolment patterns. Often, a single indicator does not adequately capture the extent of school competition and the degree to which parents choose schools with better performance through school competition. To understand differences in how parents choose schools for their children, parents in the 11 countries that distributed the parent questionnaire were asked a series of questions regarding school choice. As shown in Figure IV.4.5, in nine of these countries and economies, over 50% of parents reported that a safe school environment is a very important criterion when choosing a school for their child. In four countries and economies, over 50% of parents reported that a school's good reputation is a very important criterion for choosing a school for their child. It is noteworthy that parents do not rate "high academic achievement of students in the school" as important as these two criteria. In Korea, 50% of parents reported high academic achievement of students as a very important criterion for choosing a school for their child, while in Belgium (Flemish community), Hungary, Italy, Germany, Hong Kong-China, Croatia and Macao-China, between 15% and 31% of parents reported so (Figure IV.4.5 and Table IV.4.10).

The criteria parents use to choose a school for their child not only vary across countries and economies, but also within countries and economies. In all countries and economies with data from parents, socio-economically disadvantaged parents are more likely than advantaged parents to report that they considered "low expenses" and "financial aid" to be very important criteria in choosing a school. As shown in Figure IV.4.5, in Chile, 39% of disadvantaged parents reported that "low expenses" is a very important criterion in choosing a school, while 14% of advantaged parents reported so. In Portugal, 31% of disadvantaged parents reported that "financial aid" is a very important criterion in choosing a school, while 10% of advantaged parents reported so. In contrast, advantaged parents are more likely than disadvantaged parents to cite academic achievement as a "very important" consideration when choosing a school for their children. The greatest difference is observed in Korea, with a 21 percentage-point difference between disadvantaged parents (39%) who reported that they consider academic achievement to be very important in choosing a school, and advantaged parents (60%) who reported so. In Mexico, Portugal, Hungary, Belgium (Flemish community), Croatia, Chile, Hong Kong-China, Macao-China and Italy, the difference between the two groups is between 3 and 20 percentage points. The opposite is observed only in Germany, where 31% of disadvantaged parents reported that they consider academic achievement to be a very important criterion in choosing a school, while 21% of advantaged parents reported so (Figure IV.4.5 and Table IV.4.11).

These differences suggest that socio-economically disadvantaged parents believe that they have more limited choices of schools for their children because of financial constraints. If children from disadvantaged status cannot attend high-performing schools for this reason, then even school systems that offer parents more school choice for their children will be less effective in improving the performance of all students.

Public and private involvement

Schooling mainly takes place in public institutions, defined by PISA as schools managed directly or indirectly by a public education authority, government agency, or governing board appointed by government or elected by public franchise. Nevertheless, with an increasing variety of education opportunities, programmes and providers, governments are forging new partnerships to mobilise resources for education and to design new policies that allow the different stakeholders to participate more fully and to share costs and benefits more equitably. Private education is not only a way of mobilising resources from a wider range of funding sources; it is sometimes also regarded as a way of making education more cost-effective. Publicly financed schools are not necessarily also publicly managed. Instead, governments can transfer funds to public and private educational institutions according to various allocation mechanisms.

On average across OECD countries, 82% of 15-year-old students attend public schools, while 14% of students attend government-dependent private schools, which are managed directly or indirectly by a non-government organisation and receive 50% or more of their core funding (i.e. funding that supports the institution's basic educational services) from government agencies. Some 4% of students attend government-independent private schools, which are managed directly or indirectly by a non-government organisation and receive less than 50% of their core funding from government agencies. In Turkey, Israel, Montenegro, Serbia, Iceland, Tunisia, Romania, the Russian Federation, Bulgaria, Lithuania, Norway and Croatia, over 98% of students attend public schools. By contrast, in Macao-China, Hong Kong-China, the Netherlands, Chile and Ireland, fewer than one in two 15-year-old students attends public schools. In Hong Kong-China and Macao-China, over 80% of 15-year-old students attend government-dependent private schools (Table IV.4.7).

In 37 participating countries and economies, students who attend private schools (either government-dependent or government-independent schools) are more socio-economically advantaged than those who attend public schools. The difference between public and private schools in the average socio-economic status of their students is particularly large



in Uruguay, Costa Rica, Mexico, Brazil, Peru and Poland. Only in Chinese Taipei is the average socio-economic status of students who attend public schools more advantaged than that of those who attend private schools. Some 32% of students in Chinese Taipei attend private schools (Table IV.4.7).

Management and leadership by principals

Chapter 1 shows that the relationship between school autonomy and performance in mathematics varies according to the degree to which principals collaborate with teachers throughout the system. In systems where teachers and principals collaborate more frequently in managing schools, autonomy is positively related to performance in mathematics.

School principals can shape teachers' professional development, define the school's educational goals, ensure that instructional practice is directed towards achieving these goals, suggest modifications to improve teaching practices, and help solve problems that may arise within the classroom or among teachers. Principals are not only administrators, they can also become instructional leaders who motivate teachers to improve the quality of their practice and provide a framework for effective teacher collaboration (Blumberg and Greenfield, 1980; Bossert et al., 1981; Blase and Blase, 1998; Hallinger and Heck, 1998; and Wiseman, 2004). An international comparative study shows that effective principals are likely to display both administrative and instructional leadership (OECD, 2009).

PISA 2012 asked school principals to report how frequently various actions and behaviours related to managing their school, including teacher participation in school management, occurred in the previous academic year (Figure IV.4.6 and Table IV.4.8).

- On average across OECD countries, 72% of students are in schools whose principals reported that the school gives staff opportunities to make decisions concerning the school at least once a month (54% are in schools that give these opportunities from once a month to once a week; and 18% are in schools that give these opportunities more than once a week). Over 80% of students in Canada, Sweden, the United States, Finland, Portugal, Iceland, Australia, Jordan, Brazil, Norway, New Zealand, Colombia (Box IV.4.3), Chile, Denmark, Turkey, Germany and Thailand attend schools that give staff these opportunities at least once a month; while in Shanghai-China, Macao-China, Liechtenstein, Poland, France, Romania and Luxembourg, fewer than 50% of students attend such schools.
- Across OECD countries, an average of 70% of students are in schools whose principal reported that teachers are involved at least once a month in building a culture of continuous improvement in the school (47% of students are in schools where this occurs once a month to once a week; and 23% are in schools where this occurs more than once a week). Over 80% of students in Liechtenstein, the United States, Chile, Turkey, Australia, the United Arab Emirates, the United Kingdom, Malaysia, Uruguay, Germany, Singapore, Slovenia, Brazil, Indonesia, Thailand, Canada, Denmark, Sweden, Latvia, Jordan, Portugal and New Zealand attend schools where teachers are involved in this activity at least once a month; while in Luxembourg, France, Macao-China, Shanghai-China, Japan and Romania, fewer than 50% of students attend such schools.
- On average across OECD countries, 29% of students are in schools whose principal reported that teachers are asked to review management practices at least once a month (24% are in schools where teachers do so once a month to once a week; and 6% are in schools where teachers do so more than once a week). Over 50% of students in Turkey, Thailand, Malaysia, Jordan, Albania, Indonesia, Bulgaria, Uruguay, Brazil, Kazakhstan, the United States, the United Arab Emirates, Korea, Australia, Montenegro and the United Kingdom attend schools where teachers participate in this activity at least once a month; while in Luxembourg, France, Hungary, Switzerland and Shanghai-China, around 10% of students or fewer attend such schools.

Principals' responses to these questions are combined to develop a composite index, the *index of school management: teacher participation* (Figure IV.4.6 and Table IV.4.12). This index has an average of zero and a standard deviation of one for OECD countries. Higher values indicate greater teacher participation. In Turkey, Brazil, Jordan and Malaysia, principals reported that teachers are involved in managing school a greater extent, while principals in Shanghai-China, France and Romania reported that teachers are involved in this activity to a lesser extent (Figure IV.4.6 and Table IV.4.12).

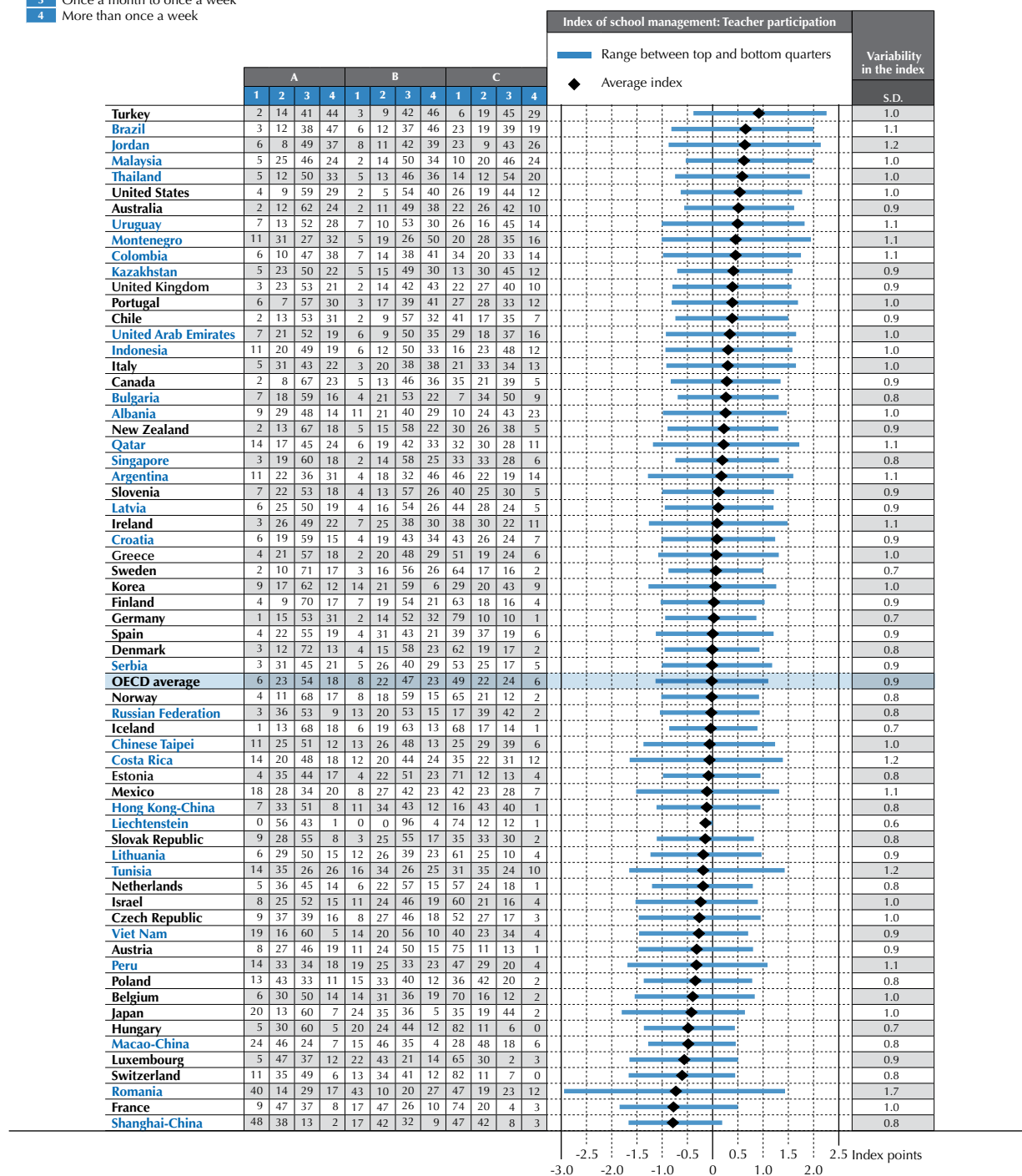
Principals were also asked about their own management style. Responses to these questions are combined to develop three composite indices: an *index on framing and communicating the school's goals and curricular development*; an *index on instructional leadership*; and an *index on promoting instructional improvements and professional development*. Each of these indices has an average of zero and a standard deviation of one for OECD countries. Higher values indicate greater principals' leadership in each area (see Tables IV.4.13, IV.4.14 and IV.4.15, available on line).

■ Figure IV.4.6 ■

Principals' views on teacher participation in school management

Percentage of students in schools whose principals reported that he/she engaged in the following actions "more than once a week", "once a month to once a week", "3-4 times during the year" or "never or 1-2 times during the year"

A	Provide staff with opportunities to make decisions concerning the school
B	Engage teachers to help build a culture of continuous improvement in the school
C	Ask teachers to participate in reviewing management practices
1	Never or 1-2 times during the year
2	3-4 times during the year
3	Once a month to once a week
4	More than once a week



Countries and economies are ranked in descending order of the average index.

Source: OECD, PISA 2012 Database, Tables IV.4.8 and IV.4.12.

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Principals in Brazil, Kazakhstan, Qatar, Malaysia, the United Kingdom, the United States and the United Arab Emirates reported that they are more frequently involved in framing and communicating the school's goals and in curricular development than other countries and economies, while principals in Japan, Switzerland, Liechtenstein, Romania, Tunisia and Poland reported that they are involved in these less (Table IV.4.13). Principals in Qatar, the United States, Jordan, Brazil, Malaysia, Turkey, Australia and the United Kingdom tended to report they practice greater instructional leadership, while principals in Japan, Liechtenstein, France, Tunisia and Switzerland reported to practice this less than principals in other countries and economies (Table IV.4.14). In some countries, such as Brazil, Montenegro, Jordan, Turkey and Albania, principals also promote instructional improvements and professional development, while principals in Romania, Liechtenstein, the Netherlands and Japan reported that they are less active in this regard than principals in other countries and economies (Table IV.4.15).

In general, schools whose principals reported that they show leadership in framing and communicating the school's goals and curricular development also tend to be those whose principals reported showing leadership in instruction. The correlation between the *index of school management: framing and communicating the school's goals and curricular development* and the *index of school management: instructional leadership* is 0.67 on average across OECD countries, ranging from around 0.51 to 0.54 in Uruguay, Shanghai-China, Switzerland, Albania and Poland, to around 0.80 or more in Romania, Thailand, Costa Rica and Korea. Schools whose principals reported that they show leadership in instruction also tend to welcome teachers' participation in school management. On average across OECD countries, the *index of school management: instructional leadership* and the *index of school management: teacher participation* is 0.60, ranging from 0.37 in Luxembourg to over 0.80 in Romania, Montenegro, Liechtenstein and Thailand (Table IV.4.16).

These relationships at the school level are also mirrored at the system level. School systems in which principals are more frequently engaged in framing and communicating the school's goals and curricular development tend to be systems in which principals reported that they provide instructional leadership (correlation coefficient is 0.84 across OECD countries, and 0.87 across all participating countries and economies). In addition, systems with higher level of principals' instructional leadership tend to have more teachers participating in managing school (correlation coefficient is 0.78 across OECD countries, and 0.74 across all participating countries and economies) (Tables IV.4.12, IV.4.13 and IV.4.14).

Parental involvement

Parents are often expected to be partners with teachers and principals in order to better meet the learning objectives of their children (Gunnarsson et al., 2009; Zhao and Akiba, 2009). This partnership can take the form of: parents discussing educational matters with their children; parents supervising their children's progress through education; parents communicating with the school; and parents actively participating in school activities. While the first two forms of parental involvement involve interactions between parents and their children, the latter two involve interactions between parents and the school (Ho and Willms, 1996).

PISA 2012 asked principals to define the proportion of students' parents who participated in various school-related activities. Parents' discussing their child's progress on the initiative of one of their child's teachers seems to be one of the most common forms of parental involvement in school. As shown in Figure IV.4.7, across OECD countries, the average student attends schools whose principal reported that 47% of parents discussed their child's progress on the initiative of one of their child's teachers; 38% of parents discussed their child's behaviour on the initiative of one of their child's teachers; 27% of parents discussed their child's progress with a teacher on their own initiative; 23% of parents discussed their child's behaviour with a teacher on their own initiative; 11% of parents participated in local school government; 10% of parents assisted in fundraising for the school; 8% of parents volunteered in extracurricular activities, such as a book club, school play, sporting event or field trip; 5% of parents assisted a teacher in the school; 4% of parents volunteered in physical activities at school, such as building maintenance, carpentry, gardening or yard work; 2% of parents volunteered in the school library or media centre; 2% of parents appeared as a guest speaker; and 1% of parents volunteered in the school canteen. In Norway, Sweden, Macao-China, Denmark and Japan, the average student attends a school whose principal reported that around 70% of parents or more discussed their child's progress at the initiative of one of their child's teachers. By contrast, the average student in Tunisia, the Slovak Republic, Hungary, Croatia, Uruguay, Ireland and Austria attends a school whose principal reported that fewer than 30% of parents did so (Figure IV.4.7 and Table IV.4.17).


■ Figure IV.4.7 ■

Parental involvement

Based on school principals' reports

		Percentage of students' parents who participated in the following school-related activities during the previous academic year:											
		Discussed their child's behaviour with a teacher on their own initiative	Discussed their child's behaviour on the initiative of one of their child's teachers	Discussed their child's progress with a teacher on their own initiative	Discussed their child's progress on the initiative of one of their child's teachers	Volunteered in physical activities, e.g. building maintenance, carpentry, gardening or yard work	Volunteered in extracurricular activities, e.g. book club, school play, sports, field trip	Volunteered in the school library or media centre	Assisted a teacher in the school	Appeared as a guest speaker	Participated in local school government, e.g. parent council or school-management committee	Assisted in fundraising for the school	Volunteered in the school canteen
		%	%	%	%	%	%	%	%	%	%	%	
OECD	Australia	19	30	26	41	5	7	2	5	2	5	14	4
	Austria	17	22	26	29	2	5	1	4	1	6	8	1
	Belgium	20	28	24	35	1	2	0	1	1	3	2	0
	Canada	24	36	32	41	3	9	1	4	2	5	9	1
	Chile	29	58	29	59	9	14	5	15	6	34	30	2
	Czech Republic	18	31	24	40	1	2	0	0	0	5	5	a
	Denmark	17	41	20	74	5	17	0	6	2	8	2	1
	Estonia	17	27	22	40	5	16	1	10	6	9	3	0
	Finland	26	45	28	55	1	4	0	0	1	4	10	1
	France	26	40	25	41	1	3	1	1	2	9	3	0
	Germany	22	30	27	35	4	7	1	6	2	5	4	0
	Greece	33	33	51	39	5	7	2	a	3	20	14	1
	Hungary	17	20	22	23	7	12	1	9	1	5	12	0
	Iceland	16	41	19	57	2	8	0	2	2	4	13	4
	Ireland	11	24	15	28	1	4	1	2	2	6	13	1
	Israel	24	41	28	49	5	8	1	5	6	11	3	0
	Italy	43	46	48	47	1	9	2	a	2	36	11	a
	Japan	10	63	11	70	7	7	0	1	0	9	4	a
	Korea	25	45	30	47	2	7	4	6	3	13	3	0
	Luxembourg	26	44	32	48	1	4	1	1	2	6	6	0
	Mexico	28	45	29	48	18	17	6	13	6	34	25	5
	Netherlands	17	31	27	43	1	3	2	1	1	3	0	1
	New Zealand	18	26	23	42	4	10	1	5	1	3	14	1
	Norway	13	52	17	87	6	12	0	1	1	7	10	0
	Poland	28	53	32	59	5	20	4	12	3	17	16	a
	Portugal	35	47	38	53	1	4	0	1	2	7	4	0
	Slovak Republic	26	32	19	23	4	10	1	1	1	17	13	0
	Slovenia	30	36	38	34	2	4	2	4	2	15	26	0
	Spain	35	52	40	62	2	6	1	5	2	14	9	0
	Sweden	15	36	27	80	3	8	0	1	2	7	5	1
Switzerland	18	42	20	47	1	4	1	4	1	3	2	0	
Turkey	32	41	30	36	10	13	8	12	7	22	11	2	
United Kingdom	15	29	19	53	1	4	0	2	2	2	10	0	
United States	24	33	32	41	7	14	3	6	3	11	23	1	
OECD average	23	38	27	47	4	8	2	5	2	11	10	1	
Partners	Albania	42	58	45	58	10	19	9	14	18	48	19	5
	Argentina	22	43	20	44	9	11	6	10	5	18	18	6
	Brazil	24	41	25	42	2	6	2	3	3	21	5	1
	Bulgaria	30	48	30	44	8	10	2	24	3	13	10	0
	Colombia	37	59	39	58	13	16	10	14	12	51	28	6
	Costa Rica	26	40	31	40	7	10	3	8	5	21	22	3
	Croatia	31	27	32	27	2	7	1	a	2	18	11	a
	Hong Kong-China	38	66	39	66	2	7	2	3	1	9	12	0
	Indonesia	31	49	32	43	21	21	12	18	11	53	23	6
	Jordan	29	33	28	30	12	14	8	11	13	31	5	5
	Kazakhstan	57	56	61	65	41	52	33	46	34	51	15	11
	Latvia	26	35	33	42	9	22	1	2	2	11	9	1
	Liechtenstein	11	42	11	57	1	2	0	5	0	3	0	3
	Lithuania	32	38	36	44	7	14	2	11	4	10	16	0
	Macao-China	31	80	34	76	1	8	1	4	3	13	25	0
	Malaysia	17	25	16	31	7	7	3	8	4	19	32	3
	Montenegro	49	43	39	38	3	7	2	3	1	22	2	a
	Peru	33	41	33	44	16	16	5	18	5	48	30	3
	Qatar	40	47	43	52	10	22	17	18	20	28	16	4
	Romania	39	46	40	49	16	22	13	12	11	35	31	2
	Russian Federation	28	39	39	49	31	32	5	26	18	27	27	8
	Serbia	39	50	36	45	2	4	0	1	2	23	20	0
	Shanghai-China	49	58	46	55	8	13	6	12	8	12	13	3
	Singapore	20	49	24	66	2	5	1	3	1	4	14	0
	Chinese Taipei	39	41	34	38	6	10	4	5	3	13	9	1
	Thailand	38	53	40	56	13	18	9	9	12	18	51	7
	Tunisia	19	33	15	18	2	4	1	2	1	7	3	0
United Arab Emirates	35	38	39	42	12	21	15	15	15	25	9	4	
Uruguay	10	23	18	27	3	5	3	3	2	10	8	0	
Viet Nam	45	49	49	52	13	14	12	41	18	24	61	2	

Source: OECD, PISA 2012 Database, Table IV.4.17.

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Principals were also asked to report whether they receive: constant pressure from many parents who expect their school to set very high academic standards and to achieve them; pressure from a minority of parents to achieve higher academic standards; or whether such pressure from parents is largely absent. On average across OECD countries, 21% of students are in schools whose principals reported that they are pressured by many parents; 46% are in schools that are pressured by a minority of parents; and 33% are in schools that are not pressured by parents. In Singapore, Ireland, New Zealand, Sweden, the United Kingdom, Qatar, Viet Nam, Thailand, the United States, the United Arab Emirates and Australia, at least one out of three students are in schools whose principals reported that they are pressured by many parents; in Singapore, 60% of students attend such schools. By contrast, fewer than 10% of students in Macao-China, Hong Kong-China, Finland, Latvia, Croatia, Germany, Uruguay, Turkey, Lithuania, Serbia, Austria, Spain, Argentina, Korea, Belgium, Kazakhstan, and Switzerland are in schools that are pressured by many parents to meet high academic standards (Table IV.4.18).

All of parents' involvement in school activities – such as volunteering in physical activities, in extracurricular activities, and in the school library or media centre, assisting a teacher in the school, appearing as a guest speaker, or assisting in fundraising for the school – are highly correlated with each other, both across OECD countries and across all participating countries and economies. This means that when parents are highly involved in one of these school activities they also tend to be highly involved in other school activities. However, across OECD countries, the level of parents' involvement in school activities seems not to be related to the degree of their involvement in discussing their child's behaviour and/or progress with a teacher (Figure IV.4.8).

■ Figure IV.4.8 ■

Relationship among various aspects of parental involvement


Correlation coefficients between two relevant indicators

Correlation coefficients range from -1.00 (i.e. a perfect negative linear association) to +1.00 (i.e. a perfect positive linear association). When a correlation coefficient is 0, there is no linear relationship between two indicators.

		Percentage of students whose parents...											
		Discussed their child's behaviour with a teacher on their own initiative	Discussed their child's behaviour on the initiative of one of their child's teachers	Discussed their child's progress with a teacher on their own initiative	Discussed their child's progress on the initiative of one of their child's teachers	Volunteered in physical activities, e.g. building maintenance, carpentry, gardening or yard work	Volunteered in extracurricular activities, e.g. book club, school play, sports, field trip	Volunteered in the school library or media centre	Assisted a teacher in the school	Appeared as a guest speaker	Participated in local school government, e.g. parent council or school management committee	Assisted in fundraising for the school	Volunteered in the school canteen
Percentage of students whose parents...	Discussed their child's behaviour with a teacher on their own initiative		0.34	0.86	-0.14	0.06	0.08	0.48	0.35	0.39	0.68	<i>0.30</i>	0.02
	Discussed their child's behaviour on the initiative of one of their child's teachers	0.51		0.14	0.68	0.24	0.23	0.28	0.16	0.19	0.44	0.12	0.15
	Discussed their child's progress with a teacher on their own initiative	0.90	0.39		-0.11	-0.05	-0.03	0.30	0.23	0.26	0.50	0.25	-0.01
	Discussed their child's progress on the initiative of one of their child's teachers	0.10	0.73	0.15		0.10	0.24	-0.14	-0.11	-0.05	0.01	-0.11	0.10
	Volunteered in physical activities, e.g. building maintenance, carpentry, gardening or yard work	0.45	<i>0.23</i>	0.46	0.13		0.73	0.69	0.73	0.63	0.57	0.53	0.59
	Volunteered in extracurricular activities, e.g. book club, school play, sports, field trip	0.49	0.26	0.51	<i>0.22</i>	0.91		0.49	0.75	0.54	0.48	0.41	<i>0.36</i>
	Volunteered in the school library or media centre	0.61	0.30	0.58	0.12	0.81	0.82		0.77	0.74	0.73	0.49	0.45
	Assisted a teacher in the school	0.57	0.26	0.60	0.10	0.83	0.78	0.80		0.76	0.74	0.53	0.40
	Appeared as a guest speaker	0.59	0.30	0.61	0.16	0.84	0.84	0.92	0.85		0.61	0.38	<i>0.35</i>
	Participated in local school government, e.g. parent council or school management committee	0.63	0.38	0.56	0.06	0.71	0.64	0.70	0.66	0.70		0.58	0.40
	Assisted in fundraising for the school	0.40	0.28	0.41	0.09	0.45	0.35	0.39	0.54	0.45	0.48		0.46
	Volunteered in the school canteen	0.41	<i>0.25</i>	0.38	0.14	0.81	0.73	0.73	0.63	0.78	0.66	0.41	

Note: Correlation coefficients that are statistically significant at the 5% level ($p < 0.05$) are indicated in bold and those at the 10% level ($p < 0.10$) are in italic.

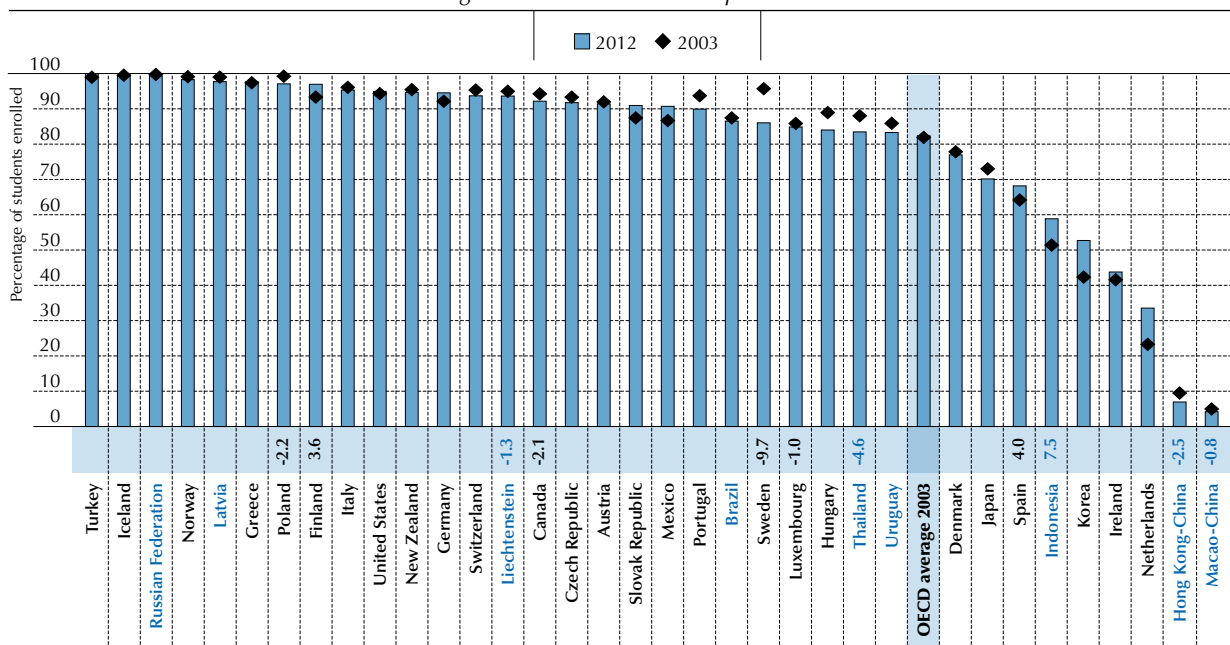
Source: OECD, PISA 2012 Database, Table IV.4.17.

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TRENDS IN GOVERNANCE OF SCHOOL SYSTEMS SINCE PISA 2003

In 2003, on average across OECD countries, 83% of students attended government or public schools, 14% attended government-dependent private schools and 4% attended government-independent private schools.⁵ These percentages have remained stable since then. In both PISA 2003 and PISA 2012 students enrolled in government or public schools had, on average, a lower socio-economic status than students attending private schools (by an order of around 0.4 points in the *PISA index of economic social and cultural status*). However, some countries and economies have seen an increase in enrolment in public schools (Figure IV.4.9), while in others there has been a shift towards private schools (Table IV.4.19). In Indonesia, Mexico, Spain and Finland, a larger proportion of 15-year-old students attended public schools in 2012 than did in 2003. In Indonesia there was a 21 percentage-point reduction in the share of students attending government-independent private schools, with a consequent 13 percentage-point increase in enrolment in government-dependent private schools and an 8 percentage-point increase in public school enrolments. In Mexico, Spain and Finland there was a four percentage-point increase in the share of students attending public schools. In Sweden, the share of students enrolled in public schools fell by ten percentage points, with a consequent greater share of students attending government-dependent private schools. A similar shift in enrolment towards government-dependent schools – an increase of six percentage points – was observed in Thailand, and, to a lesser degree, in Poland (Figure IV.4.9 and Table IV.4.19).

■ Figure IV.4.9 ■
Change between 2003 and 2012 in public school enrolments
 Percentage of students enrolled in public schools




Notes: Only countries and economies with comparable data from PISA 2003 and PISA 2012 are shown.

The percentage-point difference in the share of students attending public schools (2012 - 2003) is shown above the country/economy name. Only statistically significant differences are shown.

OECD average 2003 compares only OECD countries with comparable data since 2003.

Countries and economies are ranked in descending order of the share of students in public schools in 2012.

Source: OECD, PISA 2012 Database, Table IV.4.19.

StatLink  <http://dx.doi.org/10.1787/888932957346>

In PISA 2003, students enrolled in public schools came from more socio-economically disadvantaged backgrounds than students enrolled in private schools, on average across OECD countries.⁶ That year, only in Luxembourg were students from more advantaged backgrounds more likely to attend public schools. This general trend continued in most countries and economies through 2012. The disparity between the socio-economic status of students who attend public schools and those who attend private schools became wider in Mexico, Austria and Uruguay between 2003 and 2012. It became apparent in Denmark, while in 2003 there was no difference between the average socio-economic status of the two groups of students. In Luxembourg in 2012, students in public schools had the same average socio-economic status as those in private schools, in contrast to what was observed in 2003 (Table IV.4.19).



Only in Korea were public schools able to attract more advantaged students in 2012 than they did in 2003. While in 2003 the average student in public schools came from a substantially lower socio-economic background than students in private schools (a difference of 0.4 points in the *PISA index of social, economic and cultural status*), by 2012 there was no difference in the socio-economic status of the average student in public and private schools. It seems that between 2003 and 2012 public or government schools became better equipped to attract more advantaged students into their classrooms (Table IV.4.19). In addition, in Ireland and Brazil the socio-economic difference in students attending public and private schools narrowed between 2003 and 2012.⁷

Box IV.4.3. Improving in PISA: Colombia

With a population of 47 million, Colombia is Latin America's third most populated country after Brazil and Mexico. It began participating in PISA in 2006 and has shown an average annual improvement in reading performance of 3.0 points per year (from 385 points in 2006 to 403 points in 2012). Improvement in reading was led by the country's lowest-achieving students: those in the 10th percentile of reading performance increased their scores by more than 50 points, from 243 to 295 points, in six years. Similarly, science performance among low-achieving students has increased while that of high-achieving students has remained stable. These large improvements follow those observed in the years prior to Colombia's first participation in PISA, as Colombia was the most rapid improver in the Trends in International Mathematics and Science Study (TIMSS) between 1995 and 2007 (World Bank, 2010). These improvements are remarkable given the fact that, during the same period, Colombia has also increased its enrolment rates. Between 2002 and 2010, enrolment among 15- and 16-year-olds grew from 57% to 75%, there was a 40% reduction in the share of students aged 5 to 14 who were not in education, and 98.5% of primary school pupils progressed into secondary school (up from 89.6% in 2000).

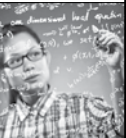
Since the mid-1990s, Colombia has been engaged in improving both access to and the quality of schooling. Cash-transfer programmes, such as *Familias en Acción*, public campaigns (*Ni Uno Menos*) and direct investment (*Programa de Ampliación de la Cobertura y Mejoramiento de la Calidad de la Educación Secundaria, PACES*) increased student enrolments and reduced dropout rates, while targeted programmes, such as *Hogares Comunitarios de Bienestar Familiar* and *Grado Cero*, promoted enrolment in early childhood programmes which, in turn, reduced the incidence of grade repetition. The *Escuela Nueva* and similar programmes have improved student achievement in rural areas by allowing students to progress through a flexible curriculum and engaging students through active pedagogy, democratic decision-making, and community engagement (World Bank, 2010).

More recently, the *Todos a Aprender* programme, which began in 2012, adopts a comprehensive view towards school change, offering support to low-performing schools on several fronts. It first makes sure students can go to and stay in school by offering transportation and meals to disadvantaged students. It offers new pedagogical material for teachers, training for teachers to develop their classroom management and pedagogical skills with the assistance of tutors, and support in developing school-improvement plans.

The early 2000s also mark the beginning of *Revolución Educativa*, a major education-improvement programme that modified how education policy objectives are set, the way resources are allocated, how education is monitored, how the central government supports schools and local authorities (*Secretarías*), and teachers' career trajectories. The programme scaled-up the policies and practices adopted in the local government of Bogotá since 1995, particularly between 1998 and 2003 (MEN, 2010).

The *Revolución Educativa* established quinquennial (*Plan Sectorial*) and decennial (*Plan Decenal*) education-development plans, articulating policy objectives and areas of development. These plans, developed centrally by the Ministry of Education in consultation with stakeholders and adapted locally by the *Secretarías*, provided a framework for the development of individual policies and programmes. They shifted the objective of education to student-centred instruction, focusing on competencies and clearly defining the quality benchmarks that ought to be achieved as students progress through school. The plan also called for an integrated information system to promote the development and follow-up of school-improvement plans (MEN, 2010).

...



A major shift in school financing also occurred in the early 2000s. Between 2002 and 2010, total funding for education increased by 48.4%, 60% of which was an increase in public expenditure. More important, the structure of school financing shifted, such that, as of the 2000s, central government funding is allocated to *Secretarías* and then to schools based on enrolments, accounting for the accessibility of each school. A per-pupil financing system required an up-to-date online information system with which all students could be identified and followed through the school system, but no such system existed in Colombia. Information systems were developed to follow students as they are promoted and transition to other levels, as they transfer to other schools, drop out or graduate (*Sistema Integrado de Matrícula*), track schools, their staff and performance results (*Sistema Nacional de Información de Educación Básica*), track human resources to co-ordinate pay and human-resource management (*Sistema Integrado de Recursos Humanos*), track financial resources to help *Secretarías* manage their schools and budget (*Sistema de Gestión Financiera*), and support school-improvement plans and follow the management of schools. These information systems were created to be compatible with national and local social and welfare information systems (MEN, 2010).

The devolution of school management to local education authorities required support from the central government to ensure that each authority was able to assume their responsibilities. *Secretarías* were thus assisted in evaluating their processes and were provided the infrastructure necessary for adequate education and information management. In many authorities, plans were developed to ensure a stable workforce to give continuity to each management area. Large investments, with co-operation from the Inter-American Development Bank, were made to train workers and promote a work culture of efficiency and continuous improvement. The Ministry of Education was also restructured (MEN, 2010).

The monitoring of students and schools for management and school-improvement purposes is central to these reforms. Quality benchmarks and the competencies to be acquired by students at different levels of education were defined, and the annual national exam for entry into tertiary education (ICFES) and the triennial national assessments (SABER) were integrated in a common framework in accordance with these standards. Colombia also participates regularly in international assessments. All of these assessments and examinations are now co-ordinated by an independent institution, the *Instituto Colombiano de Evaluación de la Educación* (MEN, 2010).

The Ministry of Education provides guidelines so that every school develops an improvement plan and each *Secretaría* offers support for schools to achieve these objectives. Improvement plans focus on leadership, instructional management, financial and administrative management, and the relationship with the community. The Ministry worked closely with the *Secretarías* to ensure that each local authority had the capacity to support their individual schools, and encouraged collaboration with non-profit foundations, universities and foreign governments to support local authorities and individual schools in their improvement plans. Annual forums are held where good practices at the school, local authority and international levels are shared (MEN, 2010).

These reforms also changed the way teachers are selected into and progress through the profession. As of 2002, all new teachers are required to hold university-level degrees, and are recruited through an open and competitive selection process that includes an assessment of course content and pedagogy, a psychological evaluation, a personal interview and consideration of prior experience. The results of these processes are also used to determine in which schools to place teachers. By 2010, 22% of working teachers had been selected through this process. Career advancement shifted from a tenure-based system to one based on competencies, identified through a new teacher-evaluation system. Teacher salaries were raised to be aligned with those of other social science professionals. Salary increases were concentrated at the beginning of a teacher's career, to encourage continual improvement and promote retention. In parallel, teacher pre-service training programmes were accredited and a pilot programme to improve them began in 2009 (MEN, 2010).

Sources:

Ministerio de Educación Nacional (MEN) (2010), *Revolución Educativa 2002-2010, Acciones y Lecciones*, Ministerio de Educación Nacional, República de Colombia, Bogotá.

World Bank (2010), *Quality of Education in Colombia, Achievements and Challenges Ahead: Analysis of the Results of TIMSS 1995 – 2007*, World Bank, Washington, D.C.



ASSESSMENT AND ACCOUNTABILITY

Chapter 1 shows that equity in a school system is positively related to the degree to which systems seek feedback from students regarding lessons, teachers or resources, and to the degree to which teachers are mentored. Chapter 1 also shows that accountability arrangements, such as posting achievement data publicly and implementing standardised policies for mathematics, play an important role in relation to school autonomy and performance.

The shift in public and government concern away from mere control over the resources and content of education towards a focus on outcomes has, in many countries, led to the establishment of standards of quality for educational institutions. In most OECD countries, evaluation and assessment systems not only focus on students, but also on teachers and school leaders; and the use of performance data to improve teaching and learning has expanded in recent years (OECD, 2013a). The approaches to standard-setting that countries pursue range from defining broad education goals to formulating precise performance expectations in well-defined subject areas. PISA 2012 collected data on the nature of accountability systems and the ways in which the resulting information was used and made available to various stakeholders and the general public.

Assessments and examinations

Countries and economies implement different policies to evaluate their students' performance. System-wide evaluations can generally be classified as those that do not have direct consequences for students (assessments) and those that do (examinations). Assessments can be used to take stock of students' performance in order to make decisions on future instruction or to summarise performance for information purposes. Although assessments can be used to, for example, decide on allocation of resources to low-performing schools or tailor instruction to low-performing students, assessment results do not have direct tangible consequences for students. Results from examinations, by contrast, can be used to determine students' progression to higher levels of education (e.g. the transition from lower to upper secondary school), selection into different curricular programmes (e.g. into vocational or academic programmes), or selection into university programmes. Assessments and examinations provide students with benchmarks, and, in the case of examinations, with incentives to work hard in school in order to pass the examinations.

All PISA-participating countries and economies have an assessment or examination system in place.⁸ Nineteen school systems in OECD countries implement national assessments in all programmes in lower secondary schools and eight do so in upper secondary schools. Of these, in Belgium (Flemish community), Chile, Hungary, Korea, Mexico, Sweden and the United States national assessments are conducted in both lower and upper secondary schools (Tables IV.4.20 and IV.4.21). Twelve systems in OECD countries administer examinations in lower secondary schools and 21 systems in OECD countries conduct examinations in upper secondary schools. In some of these systems, however, not all students take these examinations, as they are only for students in general programmes (e.g. in lower secondary schools in Estonia, Germany and Portugal, and in upper secondary schools in Finland, Germany, the Netherlands and Portugal) or for students in pre-vocational or vocational programmes (e.g. in upper secondary schools in Spain) (Tables IV.4.22 and IV.4.23). Other examinations are used in Belgium (French Community), Japan, Norway, Switzerland and the United States (Table IV.4.24 and Table IV.4.25). Examinations not conducted by secondary schools are required for access to tertiary education programmes in all OECD countries for at least some fields of study, except in Iceland, the Netherlands and Portugal, where no examination is required. These tertiary-level entrance examinations are required for access to all fields of study in Chile, Greece, Japan, Korea, Mexico, Sweden and Turkey. In Chile, Italy, Japan and Turkey they are the only way to gain access to tertiary education programmes. In 13 OECD countries these tertiary entrance examinations are used to determine access to selective institutions (Table IV.4.26).

Countries and economies can be grouped into four categories of assessment-and-examination systems as shown in Figure IV.4.10. A first group of countries and economies tends to have assessments at the lower secondary level and national examinations at the upper secondary level, with few tertiary fields of study requiring a special examination for admission. A second group of countries and economies tends to have national examinations at both the upper and secondary levels. A third group of countries and economies tends to rely on not only national examinations, but also other types of examinations or on other types of examinations only. The fourth group of countries and economies tends to have no examinations at the lower or upper secondary level, but a large number of tertiary fields of study require examinations.⁹

Twelve school systems in OECD countries conduct national examinations in lower secondary school and 21 do so in upper secondary school; all partner countries and economies conduct them in upper secondary school. At the lower secondary level, these examinations are, in all cases, used to certify students' graduation or grade completion.

■ Figure IV.4.10 ■

Profiles of assessments and examinations across countries and economies

Assessment in lower secondary, national exams in upper secondary, few fields requiring tertiary exams	Only national exams in lower and upper secondary	National or other non-national examinations in lower or upper secondary	No national or other examinations, most fields requiring tertiary exams
Australia Croatia Czech Republic England (UK) Finland Hong Kong-China Hungary Israel Luxembourg Scotland (UK) Singapore Slovak Republic Tunisia	Albania Bulgaria Denmark Estonia France Germany Indonesia Ireland Italy Jordan Latvia Lithuania Malaysia Netherlands Poland Portugal Romania Russian Federation Shanghai-China Chinese Taipei Thailand Viet Nam	Belgium (Fr. Comm.) Liechtenstein Montenegro Norway Qatar United Arab Emirates United States	Austria Belgium (Fl. Comm.) Brazil Chile Colombia Greece Iceland Japan Korea Macao-China Mexico Peru Spain Sweden Turkey Uruguay

Source: OECD, PISA 2012 Database, Tables IV.4.20, IV.4.21, IV.4.22, IV.4.23, IV.4.24, IV.4.25 and IV.4.26.

In Norway and Poland these examinations are used to determine access to selective upper secondary schools; and in Scotland, Norway and Ireland they are used to select students into certain programmes, courses or tracks in upper secondary school. In all OECD countries, the results from these examinations are shared directly with students, with an external audience in addition to education authorities, with school administrators (except in Italy), and directly with parents (except in Germany). Upper secondary examinations are also used in all OECD countries (except in general programmes in Poland) to certify completion or graduation and to determine students' access to tertiary education (except examinations in the United States and in pre-vocational and vocational programmes in Hungary and Spain). In 15 OECD countries these upper secondary examinations are also used to determine student selection for fields of study at the tertiary level (Tables IV.4.22 and IV.4.23)

Assessment practices and purposes

Principals were asked to report on how student assessments are used. Among the possibilities offered, assessments are most commonly used in OECD countries to inform parents about their child's progress: 98% of students, on average, are in schools whose principal reported that student assessments are used in this way. Some 81% of students are in schools whose principals reported that student assessments are used to monitor the school's progress from year to year; 80% are in schools that use student assessments to identify aspects of instruction or the curriculum that could be improved; 77% are in schools that use them to make decisions about whether students are held back or promoted; 63% are in schools that use them to compare the school to district or national performance; and about one in two students attends a school that uses student assessments to compare the school with other schools, to group students for instructional purposes, or to make judgements about teachers' effectiveness (Figure IV.4.11 and Table IV.4.30).


Systems in which more schools use student assessments for one purpose also tend to be systems where more schools use them for other purposes as well. The strongest relationship among the different uses of student assessment among the OECD countries is found between the proportion of students who attend schools whose principals reported that they use student assessments to compare the school to district or national performance and to compare the school to other schools (correlation coefficient is 0.85) (Figure IV.4.12). The only exception is "to make decisions about students' retention or promotion", which seems not to be related to any other assessment purposes; sometimes it has a negative relationship with other uses of student assessments. For example, across OECD countries, those where more schools use student assessments to make decisions about whether students are retained or promoted than in other countries tend to be less likely than other countries to use the assessments to compare the school's performance to district or national performance (Figure IV.4.12).



■ Figure IV.4.11 ■
Use of assessment practices

		Percentage of students in schools whose principal reported that assessments of students in the national modal grade for 15-year-olds are used for the following purposes:							
		To inform parents about their child's progress	To make decisions about students' retention or promotion	To group students for instructional purposes	To compare the school to district or national performance	To monitor the school's progress from year to year	To make judgements about teachers' effectiveness	To identify aspects of instruction or the curriculum that could be improved	To compare the school with other schools
		%	%	%	%	%	%	%	%
OECD	Australia	100	63	84	56	88	50	91	44
	Austria	96	94	31	28	63	39	70	30
	Belgium	97	96	17	23	60	35	73	18
	Canada	100	95	74	82	92	30	87	62
	Chile	100	89	44	54	94	61	92	39
	Czech Republic	93	79	33	58	86	63	86	63
	Denmark	99	10	52	55	57	27	85	56
	Estonia	99	82	21	65	78	65	83	59
	Finland	99	93	17	46	60	16	61	21
	France	97	96	43	62	73	23	50	41
	Germany	96	96	39	43	57	24	61	28
	Greece	100	98	8	17	56	14	49	22
	Hungary	94	69	47	78	93	58	77	71
	Iceland	100	15	42	77	89	39	93	73
	Ireland	100	62	81	77	86	47	68	35
	Israel	100	82	97	66	95	82	92	54
	Italy	99	87	53	65	82	30	92	37
	Japan	99	90	45	17	52	76	79	15
	Korea	95	56	86	70	90	85	96	67
	Luxembourg	95	94	41	74	72	22	74	40
	Mexico	99	91	73	77	92	77	88	71
	Netherlands	99	98	61	70	89	68	78	64
	New Zealand	100	77	94	93	100	68	99	87
	Norway	98	1	48	68	84	30	74	52
	Poland	99	98	55	58	96	79	95	59
	Portugal	100	98	40	85	96	50	93	63
	Slovak Republic	100	93	38	64	71	69	83	69
	Slovenia	98	93	26	59	91	38	72	47
	Spain	99	95	47	44	88	50	94	37
	Sweden	94	43	25	90	96	44	84	85
Switzerland	94	86	40	41	48	36	51	27	
Turkey	97	55	44	75	93	71	68	85	
United Kingdom	99	69	96	96	100	88	96	90	
United States	99	57	74	94	95	60	94	86	
OECD average		98	77	51	63	81	50	80	53
Partners	Albania	99	77	74	77	91	87	87	78
	Argentina	91	87	24	22	74	51	94	7
	Brazil	97	91	47	83	97	80	89	56
	Bulgaria	99	65	39	86	95	93	72	85
	Colombia	99	93	44	68	94	60	95	64
	Costa Rica	98	91	37	65	86	71	85	50
	Croatia	100	88	52	66	95	56	85	62
	Hong Kong-China	98	98	86	44	96	80	99	30
	Indonesia	97	93	80	69	98	96	97	87
	Jordan	97	92	81	70	85	72	89	55
	Kazakhstan	100	95	65	92	100	100	99	91
	Latvia	100	97	38	92	100	93	100	85
	Liechtenstein	100	72	49	68	67	20	69	59
	Lithuania	99	85	53	61	94	74	82	60
	Macao-China	99	95	65	32	87	75	96	21
	Malaysia	99	53	87	81	98	92	97	67
	Montenegro	97	81	39	79	96	92	89	65
	Peru	98	88	45	41	85	78	93	38
	Qatar	97	88	86	83	96	87	97	81
	Romania	77	70	57	68	72	75	76	69
	Russian Federation	99	94	57	93	100	99	99	98
	Serbia	98	84	36	34	96	57	86	57
	Shanghai-China	98	51	55	50	87	86	96	57
	Singapore	100	88	96	96	99	88	98	88
	Chinese Taipei	96	45	35	37	78	48	94	42
	Thailand	99	86	79	85	97	91	96	76
	Tunisia	80	95	52	71	89	67	56	69
	United Arab Emirates	100	91	87	77	96	94	97	72
	Uruguay	95	92	25	16	87	31	86	12
	Viet Nam	99	95	74	89	98	99	91	88

Source: OECD, PISA 2012 Database, Table IV.4.30.

StatLink  <http://dx.doi.org/10.1787/888932957346>

Using student assessments to make decisions about whether students are held back or promoted is prevalent in Greece, Portugal, Hong Kong-China, the Netherlands, Poland, Latvia, France, Belgium, Germany, Viet Nam, Tunisia, Kazakhstan and Canada (around 95% or more), while in Norway, Denmark, Iceland, Sweden and Chinese Taipei, fewer than one in two students attends a school that uses student assessment for that purpose (Table IV.4.30).

■ Figure IV.4.12 ■

Relationship among various aspects of assessment practices and purposes


Correlation coefficients between two relevant indicators

Correlation coefficients range from -1.00 (i.e. a perfect negative linear association) to +1.00 (i.e. a perfect positive linear association). When a correlation coefficient is 0, there is no linear relationship between two indicators.

		Percentage of students in schools whose principal reported that assessments of students in the national modal grade for 15-year-olds are used for the following purposes:							Index of assessment practices (sum of "yes" responses to these eight purposes)	
		To inform parents about their child's progress	To make decisions about students' retention or promotion	To group students for instructional purposes	To compare the school to district or national performance	To monitor the school's progress from year to year	To make judgements about teachers' effectiveness	To identify aspects of instruction or the curriculum that could be improved		To compare the school with other schools
Percentage of students in schools whose principal reported that assessments of students in the national modal grade for 15-year-olds are used for the following purposes:	To inform parents about their child's progress		0.03	0.30	0.08	0.20	0.12	0.33	0.02	0.28
	To make decisions about students' retention or promotion	0.02		-0.19	-0.34	-0.17	0.03	-0.21	-0.40	-0.07
	To group students for instructional purposes	0.16	-0.08		0.55	0.55	0.55	0.56	0.45	0.69
	To compare the school to district or national performance	0.10	-0.18	0.53		0.79	0.33	0.51	0.85	0.79
	To monitor the school's progress from year to year	0.18	-0.01	0.53	0.67		0.53	0.69	0.75	0.91
	To make judgements about teachers' effectiveness	0.04	0.13	0.55	0.47	0.65		0.62	0.54	0.64
	To identify aspects of instruction or the curriculum that could be improved	0.29	-0.07	0.52	0.36	0.68	0.63		0.58	0.78
	To compare the school with other schools	0.05	-0.21	0.48	0.88	0.68	0.61	0.42		0.72
Index of assessment practices (sum of "yes" responses to these eight purposes)	0.32	0.11	0.62	0.72	0.85	0.70	0.69	0.69		

Note: Correlation coefficients that are statistically significant at the 5% level ($p < 0.05$) are indicated in bold and at the 10% level ($p < 0.10$) are in italic.

Source: OECD, PISA 2012 Database, Table IV.4.30.

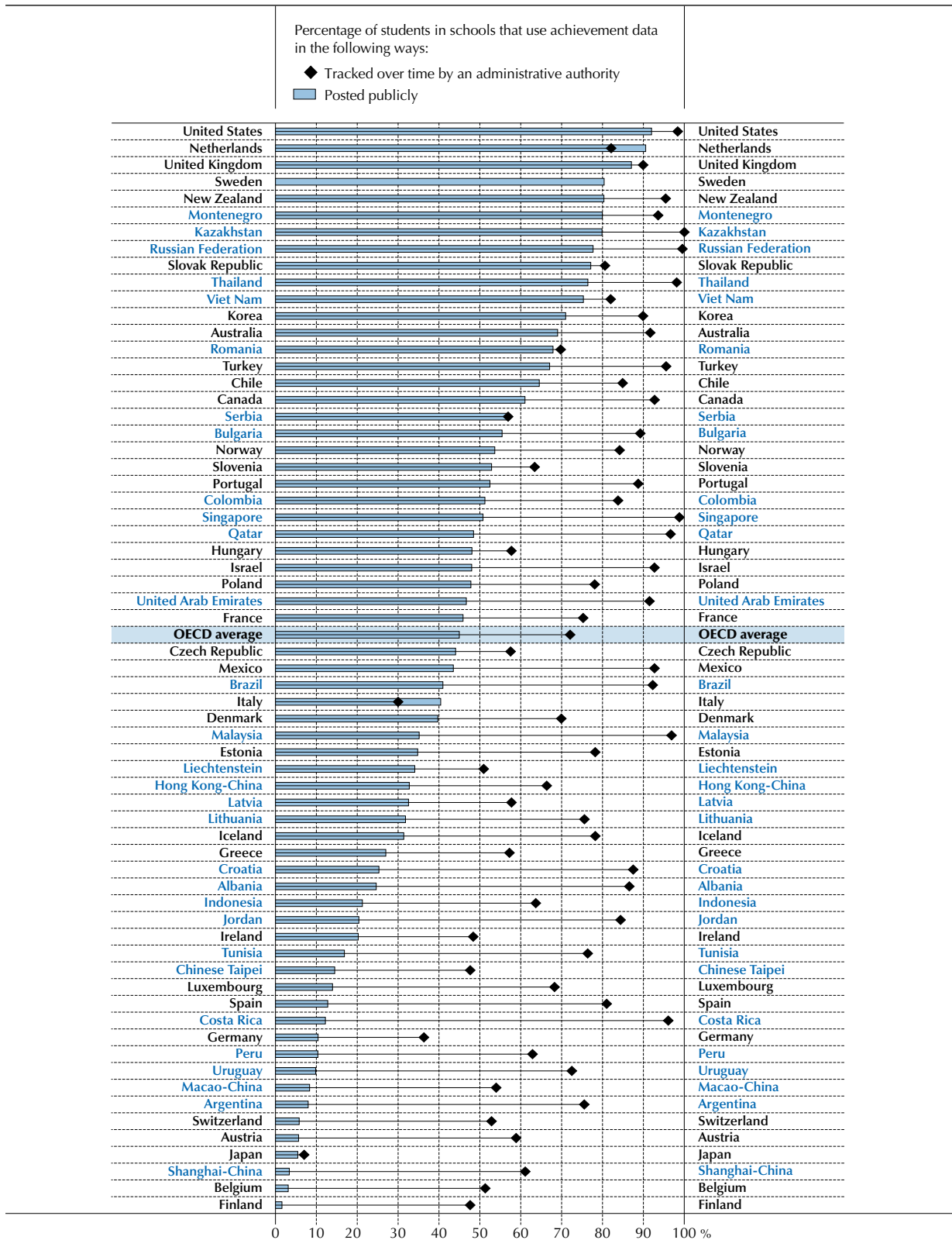
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A summary *index of assessment practices* is created by summing up how many times principals responded "yes" to the eight suggested uses of student assessments mentioned above. In theory, this index ranges from 0 to 8, but in fact the data show that it varies from 0 to 6, as no principal reported using assessments in seven or eight ways. This index mainly reflects principals' responses to all individual questions asked regarding the uses of assessments except "to make decisions about students' retention or promotion" (Figure IV.4.12). Across OECD countries, 33% of students are in schools whose principals reported that they use student assessments for six of the eight purposes; 26% are in schools that use student assessments for five of the eight purposes; 20% are in schools that use assessments for four of the eight purposes; and 21% are in schools that use student assessments for at most three of the eight purposes. In the Russian Federation, student assessments seems to be used for many purposes in most schools, as over 90% of students attend schools that use student assessments for six of the eight purposes. By contrast, in Greece, Switzerland, Finland, Denmark and Belgium, student assessments are not used for many of these purposes: more than 40% of students in these countries attend schools that use student assessments for at most three of the eight purposes (Table IV.4.30).



■ Figure IV.4.13 ■

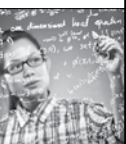
Use of achievement data for accountability purposes



Countries and economies are ranked in descending order of the percentage of students in schools where achievement data are posted publicly.

Source: OECD, PISA 2012 Database, Table IV.4.31.

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The use of achievement data beyond school

Achievement data are used for accountability purposes involving some stakeholders beyond school, teachers, partners and students. School principals were asked to report on whether achievement data are posted publicly, or tracked over time by an administrative authority. On average across OECD countries, 45% of students are in schools whose principals reported that achievement data are posted publicly. In the United States, the Netherlands, the United Kingdom, Sweden and New Zealand over 80% of students attend such schools, while in Finland, Belgium, Shanghai-China, Japan, Austria, Switzerland, Argentina, Macao-China and Uruguay, fewer than 10% of students do (Figure IV.4.13 and Table IV.4.31).

Tracking achievement data over time seems to be a more common practice than posting such data publicly. On average across OECD countries, 72% of students are in schools whose principals reported that achievement data are tracked over time by an administrative authority. In 31 countries and economies, over 80% of students attend schools whose principals reported this, while only in Japan do fewer than 10% of students (7%) attend such schools (Figure IV.4.13 and Table IV.4.31).

Quality assurance

Schools also use measures other than student assessments to monitor the quality of the education they provide. PISA 2012 asked school principals to report on whether their schools use various measures related to quality assurance and improvement. Chapter 1 shows that the degree to which a system seeks feedback from students regarding lessons, teachers or resources tends to be related to the system's overall performance; and also tends to be related to equity. In New Zealand, Liechtenstein, Shanghai-China, Turkey, Qatar, the Netherlands and Singapore, over 85% of students attend schools whose principals reported that the school seeks written feedback from students. In contrast, in France, Luxembourg, Ireland, Greece, Tunisia, Belgium and Denmark, fewer than 40% of students attend such schools (Figure IV.4.14 and Table IV.4.32).

Chapter 1 also shows that, across all countries and economies that participated in PISA 2012, systems where more schools use teacher mentoring for quality-assurance and improvement purposes tend to show a weaker impact of students' socio-economic status on their performance. On average across OECD countries, 72% of students attend schools whose principals reported that teacher mentoring is used for these purposes. In 37 countries and economies, over 80% of students attend such schools; in France, Iceland, Chile, Spain, Costa Rica, Germany and Argentina, fewer than 50% of students do (Figure IV.4.14 and Table IV.4.32).

A recent OECD review of evaluation and assessment in education concluded that it is important to engage all school staff and students in school self-evaluations, and to use student feedback about teachers for formative purposes (OECD, 2013a). While student feedback can help identify certain problems in teachers' practices, it cannot replace relevant professional feedback, advice and support by teaching experts since students are not pedagogical experts.

On average across OECD countries, 59% of students attend schools where students' written feedback is combined with other forms of evaluation (i.e. internal and/or external evaluations), while only 2% of students attend schools where students' written feedback is sought but neither internal nor external evaluations are used. Some 15% of students in Greece and 9% of students in Norway attend schools where students' written feedback is sought but neither internal nor external evaluations are used. Around 6% of students in Uruguay and Austria attend such schools (Figure IV.4.15 and Table IV.4.33).

As shown in Figure IV.4.14, school principals were also asked about other measures used related to the quality of teachers and schools. On average across OECD countries:

- 87% of students are in schools whose principals reported that internal evaluations or self-evaluations are used;
- 86% are in schools that have written specifications of the school's curriculum and education goals;
- 85% are in schools that systematically record data, including teacher and student attendance and graduation rates, test results and professional development of teachers;
- 74% are in schools that have written specifications of student-performance standards;
- 63% are in schools that use external evaluations;
- 62% are in schools that implement a standardised policy for teaching mathematics, such as a school curriculum with shared instructional materials accompanied by staff development and training; and
- 43% are in schools that regularly consult with one or more experts over a period of at least six months, with the aim of improving the school.




■ Figure IV.4.14 ■

Quality assurance and school improvement

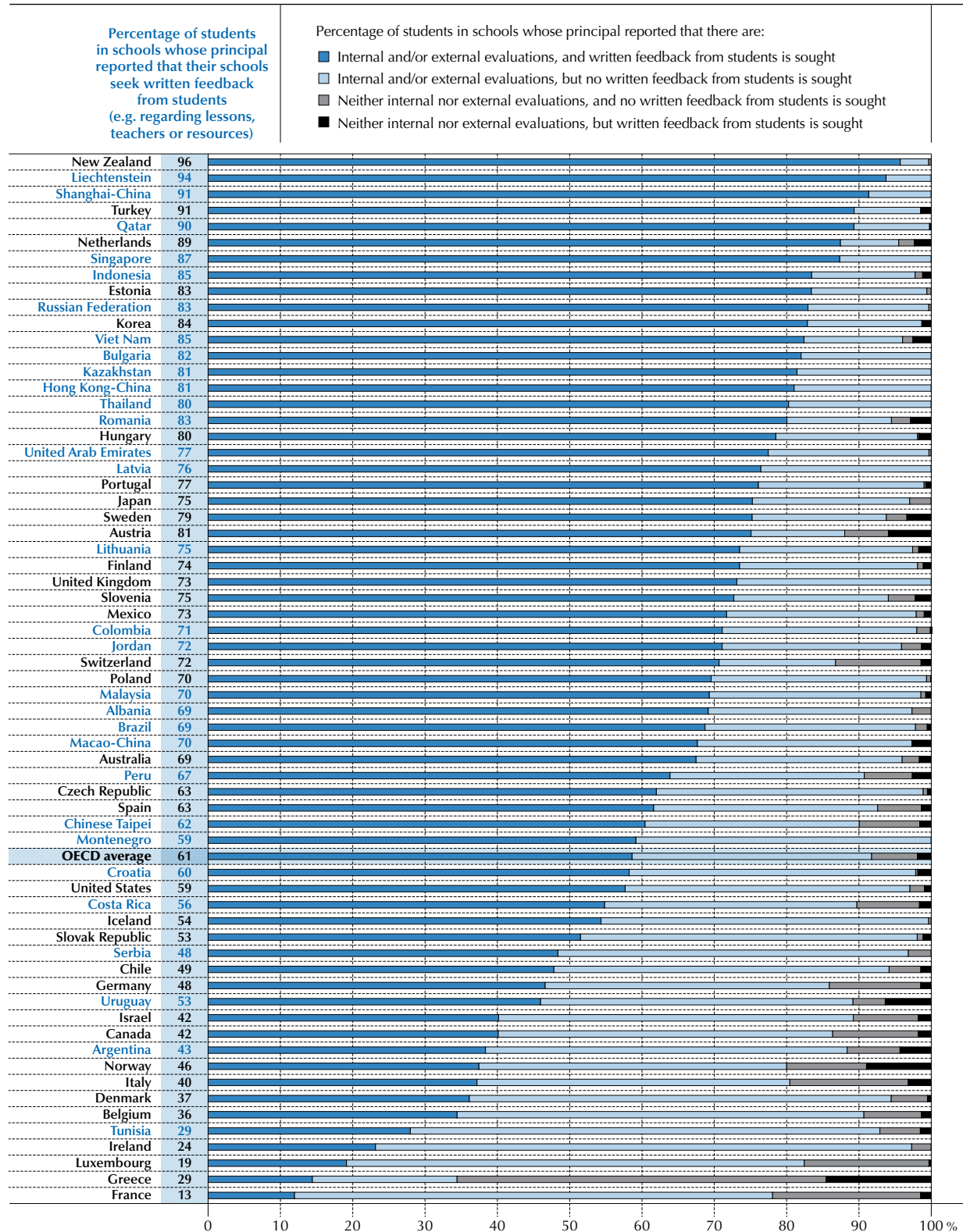
		Percentage of students in schools whose principal reported that their schools have the following for quality assurance and improvement:								
		Written specification of the school's curriculum and educational goals	Written specification of student-performance standards	Systematic recording of data, including teacher and student attendance and graduation rates, test results and professional development of teachers	Internal evaluation/self-evaluation	External evaluation	Written feedback from students (e.g. regarding lessons, teachers or resources)	Teacher mentoring	Regular consultation with one or more experts over a period of at least six months with the aim of improving the school	Implementation of a standardised policy for mathematics (i.e. school curriculum with shared instructional materials accompanied by staff development and training)
		%	%	%	%	%	%	%	%	
OECD	Australia	96	90	98	94	70	69	92	72	77
	Austria	76	56	75	86	20	81	88	55	61
	Belgium	82	48	77	79	69	36	72	40	42
	Canada	95	85	90	81	62	42	86	69	80
	Chile	83	76	87	90	55	49	21	40	50
	Czech Republic	99	77	85	98	63	63	96	27	90
	Denmark	66	38	80	88	58	37	52	50	24
	Estonia	93	88	95	99	77	83	80	39	88
	Finland	94	75	74	96	51	74	55	10	63
	France	72	25	75	61	52	13	17	21	44
	Germany	86	71	77	74	60	48	33	19	55
	Greece	57	38	68	33	6	29	87	77	70
	Hungary	96	91	80	97	57	80	71	17	69
	Iceland	65	84	95	99	79	54	19	46	47
	Ireland	75	48	89	83	82	24	64	53	81
	Israel	96	78	96	82	60	42	94	54	87
	Italy	98	84	52	76	34	40	78	23	56
	Japan	98	49	54	96	77	75	88	5	38
	Korea	99	95	94	97	79	84	88	59	65
	Luxembourg	64	45	71	75	40	19	65	42	60
	Mexico	93	83	94	94	75	73	54	52	68
	Netherlands	91	86	99	91	81	89	98	47	47
	New Zealand	99	88	98	100	89	96	97	63	81
	Norway	97	73	84	61	53	46	70	33	29
	Poland	68	83	99	97	79	70	87	39	82
	Portugal	93	74	96	98	86	77	78	29	75
	Slovak Republic	86	80	93	95	38	53	88	54	61
	Slovenia	94	95	86	92	32	75	67	41	67
	Spain	96	79	92	82	79	63	26	27	38
	Sweden	70	95	95	90	65	79	68	32	29
	Switzerland	70	43	63	84	63	72	71	27	54
	Turkey	89	94	96	99	79	91	86	60	74
United Kingdom	97	93	100	100	91	73	96	80	74	
United States	98	95	98	93	86	59	98	73	88	
OECD average	86	74	85	87	63	61	72	43	62	
Partners	Albania	96	97	97	95	68	69	92	68	91
	Argentina	91	66	79	83	36	43	48	43	40
	Brazil	94	74	83	96	82	69	93	50	72
	Bulgaria	93	79	98	98	95	82	69	70	53
	Colombia	96	95	88	98	82	71	67	55	50
	Costa Rica	87	80	87	85	48	56	28	48	51
	Croatia	93	68	95	92	81	60	98	58	79
	Hong Kong-China	98	91	100	100	91	81	91	45	86
	Indonesia	99	92	100	91	85	85	100	74	82
	Jordan	91	92	93	90	71	72	68	57	76
	Kazakhstan	97	99	100	99	95	81	97	87	92
	Latvia	96	88	100	100	84	76	72	23	52
	Liechtenstein	81	59	37	94	83	94	82	68	57
	Lithuania	73	79	98	95	57	75	53	40	30
	Macao-China	90	93	99	88	64	70	91	44	57
	Malaysia	97	100	99	99	83	70	89	82	93
	Montenegro	95	81	97	100	93	59	98	74	90
	Peru	89	67	67	87	42	67	97	42	44
	Qatar	100	98	100	99	87	90	100	90	98
	Romania	88	87	89	88	84	83	85	66	74
	Russian Federation	93	89	98	98	96	83	96	54	86
	Serbia	82	55	97	96	53	48	98	58	41
	Shanghai-China	100	86	97	100	88	91	98	93	94
	Singapore	99	98	99	100	93	87	100	63	92
	Chinese Taipei	94	88	92	84	75	62	73	32	57
	Thailand	98	94	98	100	99	80	98	89	86
	Tunisia	50	33	71	91	49	29	80	21	61
	United Arab Emirates	95	96	99	98	94	77	92	73	82
	Uruguay	75	59	96	85	45	53	74	27	29
	Viet Nam	98	92	98	96	49	85	99	45	93

Source: OECD, PISA 2012 Database, Table IV.4.32.

StatLink  <http://dx.doi.org/10.1787/888932957346>

■ Figure IV.4.15 ■

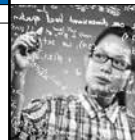
Internal or external evaluations and feedback from students



Countries and economies are ranked in descending order of the percentage of students in schools whose principal reported that the school has internal and/or external evaluations and seeks written feedback from students.

Source: OECD, PISA 2012 Database, Tables IV.4.32 and IV.4.33.

StatLink <http://dx.doi.org/10.1787/888932957346>



Chapter 1 shows that, in the systems where a standardised policy for mathematics is implemented more widely, school autonomy is positively related to performance. In Qatar, Shanghai-China, Viet Nam, Malaysia, Kazakhstan, Singapore, Albania and the Czech Republic, over 90% of students attend schools where a standardised policy for mathematics is implemented. In contrast, in Denmark, Norway, Uruguay, Sweden, Lithuania, Japan and Spain, fewer than 40% of students attend such schools (Figure IV.4.14 and Table IV.4.32).

A standardised policy for mathematics and school autonomy in establishing the curriculum and assessments are not mutually exclusive. At the system level, there is no relationship between the proportion of students in schools that use a standardised policy for mathematics and the *index of school responsibility for curriculum and assessments* (i.e. the correlation coefficient between the two is 0.04 across OECD countries) (Tables IV.4.3 and IV.4.32).

Monitoring mathematics teachers' practices

To examine in greater detail how the practice of mathematics teachers is monitored to ensure quality of teaching, PISA 2012 asked school principals to report on whether the following methods have been used to monitor the practice of mathematics teachers in their schools: test or assessments of student achievement; teacher peer review of lessons plans, assessment instruments, and lessons; principal or senior staff observations of lessons; and observation of classes by inspectors or other persons external to the school. On average across OECD countries, 78% of students are in schools whose principals reported that tests or assessments of student achievement have been used to monitor the practice of mathematics teachers; 69% are in schools where the principal or senior staff observe lessons; 60% are in schools that use teacher peer reviews of lesson plans, assessment instruments, and lessons; and 27% are in schools where classes are observed by inspectors or other persons external to the school (Figure IV.4.16 and Table IV.4.34).

In general, those countries that use one of these methods also use other methods. For example, across OECD countries, the percentage of students who attend schools that use teacher peer review and those who attend schools that use principal or senior staff observations of lessons are highly correlated (correlation coefficient is 0.59). The only exception is "observation of classes by inspectors or other persons external to the school". Among OECD countries, the proportion of students in schools using this method seems to be unrelated to the proportion of students in schools using other methods.

In Albania, Indonesia, Jordan, Kazakhstan, Malaysia, Qatar, the Russian Federation, Shanghai-China, Thailand and the United Kingdom, over 90% of students are in schools whose principals reported that the school uses tests or assessments of student achievement, teacher peer review, and principal or senior staff observations of lessons, while in Greece, Finland, France and Ireland, the use of these three methods is much less prevalent than the OECD average. By contrast, in Jordan, Shanghai-China, Tunisia, Liechtenstein, Viet Nam, the United Arab Emirates, Qatar and Kazakhstan, more than 80% of students attend a school where classes are observed by inspectors or other persons external to the school, while in Italy, Finland, Portugal, Slovenia, Luxembourg, Estonia and Chinese Taipei fewer than 10% of students do (Figure IV.4.16 and Table IV.4.34).

The consequences of teacher appraisals

Teacher appraisals can have many consequences, both positive and negative. On average across OECD countries, 81% of students attend schools whose principals reported that appraisals of and/or feedback to teachers lead directly to a role in school-development initiatives (e.g. curriculum-development group, development of school objectives); 79% are in schools where these lead directly to public recognition from the principal; 73% are in schools where these lead directly to opportunities for professional-development activities; 68% are in schools where these lead directly to changes in work responsibilities that make the job more attractive; 53% are in schools where these lead directly to a change in the likelihood of career advancement; 30% are in schools where these lead directly to a financial bonus or another kind of monetary reward; and 27% are in schools where these lead directly to a change in salary (Figure IV.4.17 and Table IV.4.35).

Across countries, the proportions of students in schools whose principals reported that teacher appraisals have one of these seven consequences are highly correlated. This means that countries with more students in schools where teacher appraisals have one of the abovementioned seven consequences also tend to have more students in schools where teacher appraisal has other consequences as well. For example, among OECD countries, in those countries where "a role in school-development initiatives" is frequently seen as a consequence of teacher appraisal, "a change in the likelihood of career advancement" is also a common consequence of teacher appraisal (correlation coefficient is 0.66).

Figure IV.4.16

Monitoring mathematics teachers' practice

		Percentage of students in schools whose principal reported that the following methods have been used to monitor the practice of mathematics teachers at their schools:			
		Tests or assessments of student achievement	Teacher peer review of lesson plans, assessment instruments, and lessons	Principal or senior staff observations of lessons	Observation of classes by inspectors or other persons external to the school
		%	%	%	%
OECD	Australia	79	77	70	11
	Austria	91	79	74	29
	Belgium	66	76	65	48
	Canada	73	60	82	21
	Chile	77	80	91	25
	Czech Republic	92	67	98	33
	Denmark	75	41	64	17
	Estonia	71	49	90	8
	Finland	40	19	31	2
	France	61	42	12	73
	Germany	72	45	67	22
	Greece	60	26	8	21
	Hungary	74	75	97	13
	Iceland	84	12	46	25
	Ireland	65	34	13	48
	Israel	96	51	75	34
	Italy	74	87	17	1
	Japan	69	54	81	26
	Korea	84	99	96	68
	Luxembourg	81	63	48	6
	Mexico	93	76	77	41
	Netherlands	83	54	87	42
	New Zealand	84	92	97	32
	Norway	72	54	48	11
	Poland	100	64	94	16
	Portugal	98	71	60	4
	Slovak Republic	75	84	98	27
	Slovenia	72	62	94	5
	Spain	78	22	10	15
	Sweden	68	59	80	27
	Switzerland	61	63	83	29
	Turkey	92	52	94	22
United Kingdom	95	93	97	68	
United States	89	66	100	42	
OECD average	78	60	69	27	
Partners	Albania	98	92	99	62
	Argentina	82	74	85	22
	Brazil	88	75	50	23
	Bulgaria	91	29	97	49
	Colombia	84	60	43	11
	Costa Rica	83	81	87	45
	Croatia	72	62	93	34
	Hong Kong-China	95	85	97	39
	Indonesia	91	91	95	77
	Jordan	94	93	98	97
	Kazakhstan	99	99	100	82
	Latvia	83	89	100	41
	Liechtenstein	82	70	49	87
	Lithuania	96	75	98	38
	Macao-China	90	88	96	48
	Malaysia	99	91	99	70
	Montenegro	81	72	99	56
	Peru	71	80	84	54
	Qatar	97	98	100	82
	Romania	68	69	73	58
	Russian Federation	99	96	100	44
	Serbia	50	59	95	34
	Shanghai-China	92	91	97	90
	Singapore	96	86	100	23
	Chinese Taipei	82	61	61	8
	Thailand	98	93	95	45
	Tunisia	75	40	50	87
	United Arab Emirates	96	85	100	84
	Uruguay	58	63	88	66
	Viet Nam	98	83	97	85

Source: OECD, PISA 2012 Database, Table IV.4.34.


StatLink  <http://dx.doi.org/10.1787/888932957346>




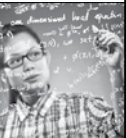
Figure IV.4.17
Consequences of teacher appraisals

		Percentage of students in schools whose principal reported that appraisals of and/or feedback to teachers lead directly to the following:						
		A change in salary	A financial bonus or another kind of monetary reward	Opportunities for professional-development activities	A change in the likelihood of career advancement	Public recognition from the principal	Changes in work responsibilities that make the job more attractive	A role in school-development initiatives (e.g. curriculum-development group, development of school objectives)
		%	%	%	%	%	%	%
OECD	Australia	13	6	86	68	83	63	87
	Austria	3	8	36	30	75	44	73
	Belgium	0	1	68	23	66	51	64
	Canada	3	3	79	44	73	44	84
	Chile	38	40	76	67	87	83	81
	Czech Republic	72	86	84	59	93	62	86
	Denmark	4	7	67	15	78	56	62
	Estonia	38	70	79	58	93	70	90
	Finland	19	23	71	27	76	68	81
	France	42	20	63	64	79	59	73
	Germany	7	8	56	44	53	49	68
	Greece	24	24	52	42	73	53	60
	Hungary	22	82	67	74	98	86	93
	Iceland	19	18	83	29	76	82	69
	Ireland	1	1	53	28	71	41	78
	Israel	23	26	81	79	95	90	84
	Italy	16	38	67	34	63	81	83
	Japan	27	34	67	53	65	87	92
	Korea	47	69	90	63	95	78	83
	Luxembourg	2	2	49	19	80	60	82
	Mexico	42	51	73	78	86	80	78
	Netherlands	22	27	91	70	92	74	86
	New Zealand	20	7	98	82	82	79	89
	Norway	9	3	84	51	79	77	85
	Poland	34	83	75	57	92	61	87
	Portugal	21	11	46	42	58	63	73
	Slovak Republic	49	83	85	72	95	81	94
	Slovenia	43	53	86	85	96	91	94
	Spain	9	9	46	23	67	55	63
	Sweden	87	19	93	61	89	82	94
	Switzerland	12	17	57	21	43	39	58
	Turkey	56	61	86	83	84	90	92
United Kingdom	66	16	98	87	88	81	97	
United States	11	15	88	57	80	60	90	
OECD average	27	30	73	53	79	68	81	
Partners	Albania	39	22	75	66	72	81	89
	Argentina	10	6	62	67	63	63	78
	Brazil	36	43	65	57	79	83	77
	Bulgaria	29	85	90	85	94	81	92
	Colombia	39	21	73	74	80	74	82
	Costa Rica	33	17	72	73	74	66	80
	Croatia	15	27	88	91	98	81	91
	Hong Kong-China	30	16	61	98	92	94	99
	Indonesia	85	80	97	97	92	97	99
	Jordan	59	60	81	79	96	95	90
	Kazakhstan	62	67	95	83	97	90	96
	Latvia	44	35	87	64	94	79	91
	Liechtenstein	6	6	88	26	27	60	95
	Lithuania	45	48	88	63	96	64	94
	Macao-China	62	69	80	89	91	92	95
	Malaysia	75	85	93	93	95	95	96
	Montenegro	18	22	85	70	94	85	91
	Peru	49	41	73	69	88	91	88
	Qatar	54	66	95	89	89	93	94
	Romania	30	33	66	72	76	73	73
	Russian Federation	94	90	92	92	96	83	95
	Serbia	13	24	65	45	84	70	70
	Shanghai-China	41	92	94	97	97	95	97
	Singapore	61	94	93	96	90	94	96
	Chinese Taipei	28	39	83	52	56	73	90
	Thailand	88	74	86	86	95	93	95
	Tunisia	72	66	90	87	90	88	74
	United Arab Emirates	58	50	93	89	96	94	97
	Uruguay	27	24	68	56	70	74	70
	Viet Nam	72	92	98	95	99	99	92

Note: The percentage refers to the percentage of students in schools whose principal reported that appraisals of and/or feedback to teachers lead directly to at least a small change.

Source: OECD, PISA 2012 Database, Table IV.4.35.

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Box IV.4.4. **Teachers' perceptions of the consequences of appraisals: results from the first TALIS survey¹⁰**

The consequences for teachers of teacher appraisals and feedback vary significantly across systems and, within systems, by individual teachers. Overall, data from the first OECD Teaching and Learning International Survey (TALIS) (2007-08) show that in most participating countries, direct consequences for teachers' career and compensation are small or non-existent. However, teachers overwhelmingly report positive impact on their job satisfaction, and report that they find the feedback they received helpful for improving their work.¹¹ While teachers' perceptions of the impact of assessments may depend on whether the appraisal was positive or negative, and on which aspects of their work were reviewed, TALIS is able to provide a system-level measure of teachers' perceptions about the consequences of appraisal and feedback by surveying a large, representative sample of teachers.

Direct impact of appraisal and feedback on career and compensation

For most teachers surveyed in TALIS, the appraisal and feedback they received had little direct impact on their career or compensation. On average across participating countries, only 9% of teachers reported a moderate or large impact on their salary, and fewer than 11% reported an impact on a bonus or other monetary reward. Around 16% of teachers reported a (moderate or large) change in the likelihood of career advancement as a result of the appraisal or feedback received. Higher percentages are found in Central and East European countries, in Mexico, and in the partner countries Brazil and Malaysia.

This indicates that in most countries, career paths and teacher compensation are only indirectly linked, if at all, to teacher appraisal and feedback. This finding is consistent with the results of an OECD review of policy frameworks for teacher appraisal. Of the 28 systems reviewed, 22 had a regulatory framework for teacher appraisal. Only in Chile, Korea and Mexico are teacher appraisals linked to a reward scheme; and only in the Czech Republic, Estonia, Israel, Korea and Poland are teacher appraisals used to determine promotions. Most often, teacher appraisals are used in the context of a probationary period (13 countries) or of regular school-based appraisals (17 countries) (OECD, 2013b, p.16).

Impact of appraisal and feedback on public recognition and job satisfaction

For teachers who receive appraisals and/or feedback, a far more common outcome is some form of public recognition, either from the school principal or from teachers' colleagues. An average of more than one in three teachers (36%) reported a moderate or large change in the recognition they received; in Bulgaria, Lithuania, Malaysia and Poland, more than one in two teachers so reported. Some 30% of teachers, on average, reported that as a result of the appraisal and feedback they were given a role in school-development initiatives.

On average across countries, 51% of teachers reported a positive change in job satisfaction following the appraisal and/or feedback they received. In Malaysia and Mexico, more than one in three teachers reported "a large increase" in job satisfaction; in Brazil, Iceland and Poland, more than one in five teachers so reported. In most countries, very few teachers reported less job satisfaction after an appraisal/feedback, with larger proportions of discontent (more than 10%) found only in Korea and Turkey. TALIS thus shows that the effect of appraisal and feedback on teacher morale is largely positive.

Impact of appraisal and feedback on teaching and teachers' work

For 58% of teachers, the appraisal and feedback received also contained suggestions for improving certain aspects of teachers' work. Whether it contained specific suggestions or not, more than three out of four teachers agreed that the feedback and/or appraisal they received was helpful for improving their work as teachers. While only 53% of teachers in Korea reported so, more than 90% of teachers in Bulgaria and Malaysia did.

Teachers were also asked which teaching practices they changed as a result of the feedback and/or appraisal they received. In general, more than one in three teachers changed their instructional practices and/or their classroom-management practices as a result of feedback on their work as teachers. In many countries, more teachers reported

...



a moderate or large impact on their classroom-management practices, or on their handling of student discipline and behaviour problems, than on their instructional practices. In contrast, in Austria, Estonia, Italy, Korea, Lithuania, Malaysia and the Slovak Republic, more teachers reported changes in their instructional practices than in their classroom-management practices.

Sources:

OECD (2013b), *Teachers for the 21st Century: Using Evaluation to Improve Teaching*, OECD Publishing.
<http://dx.doi.org/10.1787/9789264193864-en>

OECD (2009), *Creating Effective Teaching and Learning Environments: First Results from TALIS*, OECD Publishing.
<http://dx.doi.org/10.1787/9789264072992-en>

TRENDS IN ASSESSMENT AND ACCOUNTABILITY POLICIES SINCE PISA 2003

Between PISA 2003 and 2012 there has been a clear trend towards using student assessments to compare the school's performance to district or national performance and to compare the schools' performance to that of other schools. For example, and on average across OECD countries, in 2003, 46% of students attended schools whose principal reported that the school uses student assessment data to compare itself against national or district performance; by 2012, 62% of students attended such schools (Figure IV.4.18 and Table IV.4.36).¹² Similarly, the percentage of students who attended schools that use assessment data to compare themselves to other schools increased from 40% to 52% during the period. Student assessment data are also increasingly used to make judgements about teachers' effectiveness (an increase of nine percentage points, on average across OECD countries) and to identify aspects of instruction or the curriculum that could be improved (an increase of six percentage points). In fact, assessment data are increasingly being used to monitor a school's progress from year to year (in 25 countries and economies), to compare the school with other schools (in 25 countries and economies), to compare the school's performance with national or district performance (in 23 countries and economies), and to make judgements about teachers' effectiveness (in 19 countries and economies) (Table IV.4.36).¹³

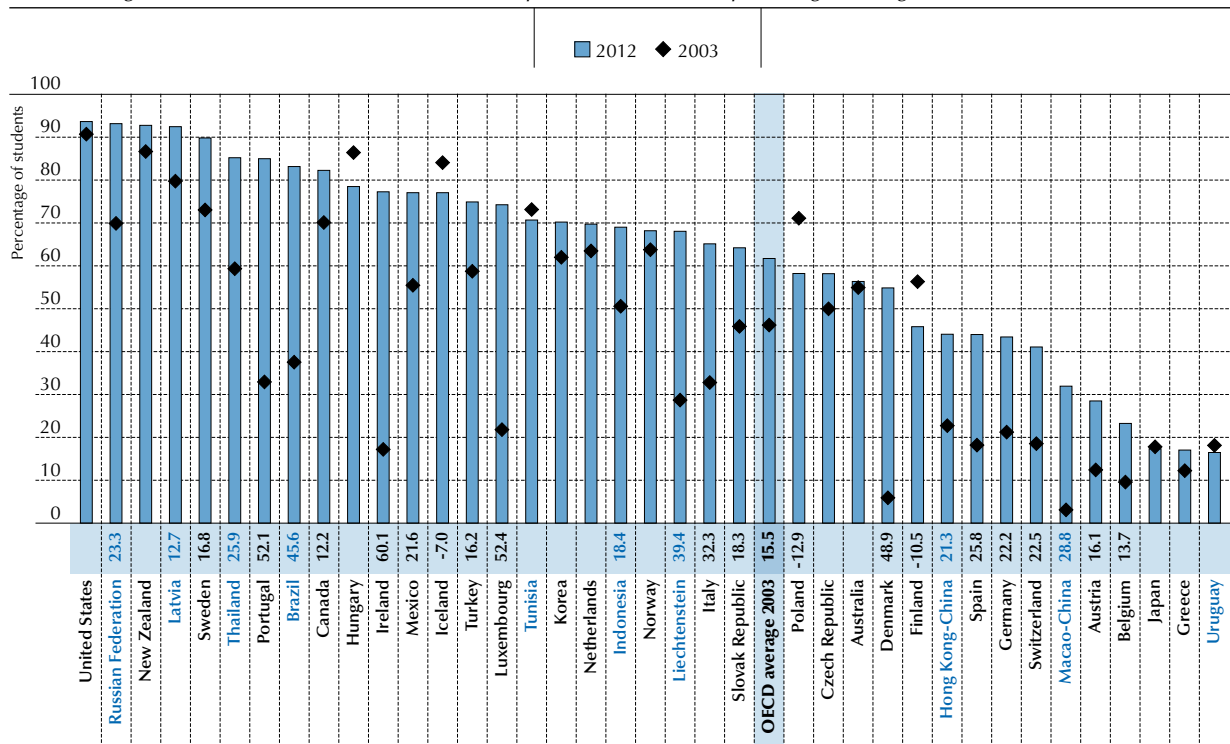
The use of student-assessment data for various purposes has increased most notably in Ireland and Denmark between 2003 and 2012. In Ireland, for example, students in 2012 were 60 percentage points more likely than their counterparts in 2003 to attend schools where student assessment data were used to compare the school with national or district performance (Figure IV.4.18); 37 percentage points more likely to be in schools where the data were used to monitor the school's progress from year to year; and more than 25 percentage points more likely to be in schools that used student assessments to judge teachers' effectiveness, to identify aspects of instruction or the curriculum that could be improved or to compare the school with other schools. In Denmark, students were at least 20 percentage points more likely in 2012 than in 2003 to attend schools where student-assessment data are used to group students for instructional purposes, inform parents about students' progress, compare the school's performance against national or district performance, monitor school progress, compare the school with other schools, identify aspects of the curriculum that could be improved, and make judgements about teachers' effectiveness (Table IV.4.36).

By contrast, the use of student assessments has declined in Finland and Hungary. In both of these countries, students in 2012 were less likely than their counterparts in 2003 to attend schools where assessments were used to make judgements about teachers' effectiveness. In Finland, students were less likely in 2012 than in 2003 to attend schools where assessment data are used to compare the school to other schools or to national or district performance. In Hungary, students were also less likely to attend schools where their assessment is used to make retention or promotion decisions or to identify aspects of the curriculum that could be improved, although assessment data are more likely to be used to group students for instructional purposes. Students in the Slovak Republic were less likely in 2012 than in 2003 to attend schools where assessment is used to group students for instruction purposes or to monitor school progress, but assessment data are being used more to compare the school with other schools. In Poland students in 2012 were also less likely than their counterparts in 2003 to attend schools where assessment data are used to compare school performance against national or regional benchmarks, but more likely to attend schools that use assessment data to group students for instructional purposes (Table IV.4.36).

■ Figure IV.4.18 ■

Change between 2003 and 2012 in using student assessment data to compare school performance

Percentage of students in schools where school performance is compared against regional or national benchmarks



Notes: Only countries and economies with comparable data from PISA 2003 and PISA 2012 are shown.

The percentage-point difference in the share of students attending schools where student assessment data are used to compare the school against regional or national benchmarks in 2012 and 2003 (2012 - 2003) is shown above the country/economy name. Only statistically significant differences are shown. OECD average 2003 compares only OECD countries with comparable data since 2003.

Countries and economies are ranked in descending order of the percentage of students in school where the principal reported using assessment data to compare the school against regional or national benchmarks in 2012.

Source: OECD, PISA 2012 Database, Table IV.4.36.

StatLink <http://dx.doi.org/10.1787/888932957346>

As discussed above, teachers' practices can be monitored in several ways: through student achievement tests, peer reviews of lesson plans, class observations by the principal or senior staff or by external inspectors. With the exception of external observations, all of these types of teacher-monitoring practices have become more common since 2003. On average across OECD countries with comparable data from 2003 to 2012, students in 2012 were 20 percentage points more likely than their counterparts in 2003 to attend schools where the use of tests or assessments of student achievement are used to monitor teacher practice, and around eight percentage points more likely to attend schools that use peer reviews of lesson plans or principal or senior staff observations of lessons to the same end (Figure IV.4.19 and Table IV.4.37).

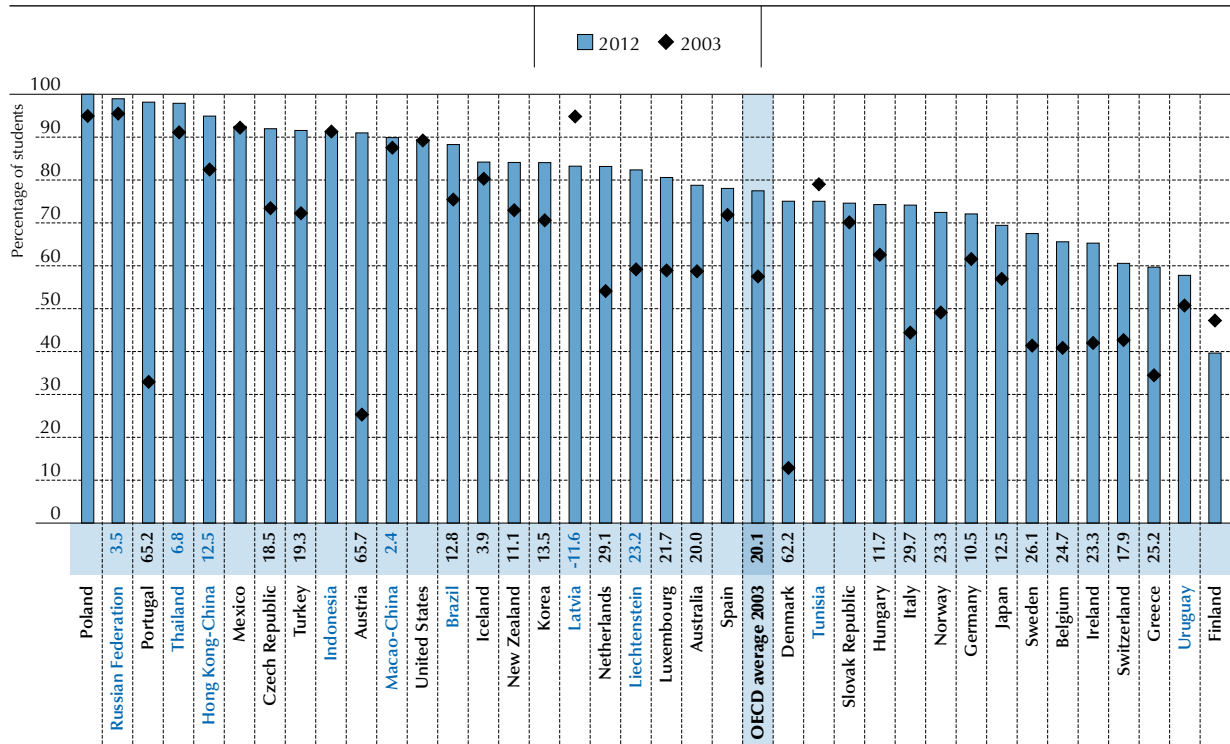
Using student assessments to monitor teachers' practices has become prevalent in PISA-participating countries and economies. In 2003, among all countries and economies with comparable data, 17 were those where fewer than 60% of students attended schools where student assessments were used to monitor teacher practices. By 2012, in only three countries with comparable data from 2003 – Greece, Uruguay and Finland – did fewer than 60% of students attend such schools; and in Finland, fewer than 40% of students attended such schools. In addition, 23 countries and economies saw an increase of more than 10 percentage points in the proportion of students who attend schools that use student assessments to monitor teachers' practices; and among the 14 countries and economies showing less of an increase or no increase, six showed more than 90% of students in such schools in 2003. Only two countries bucked this trend: Latvia, where the share of students in these types of schools decreased by 12 percentage points (from 95% in 2003 to 83% in 2012) and Finland, where fewer than 40% of students attend such schools (Figure IV.4.19 and Table IV.4.37).



■ Figure IV.4.19 ■

Change between 2003 and 2012 in using student assessment data to monitor teachers

Percentage of students in schools whose principals report that student assessment is used to monitor mathematics teachers' practice




Notes: Only countries and economies with comparable data from PISA 2003 and PISA 2012 are shown.

The percentage-point difference in the share of students attending schools where student assessment data are used for teacher monitoring purposes in 2012 and 2003 (2012 - 2003) are shown above the country/economy name. Only statistically significant differences are shown.

OECD average 2003 compares only OECD countries with comparable data since 2003.

Countries and economies are ranked in descending order of the percentage of students in school where the principal reported to use assessment data for teacher monitoring purposes in 2012.

Source: OECD, PISA 2012 Database, Table IV.4.37.

StatLink  <http://dx.doi.org/10.1787/888932957346>

In 15 countries and economies with comparable data, it was at least ten percentage points more common in 2012 than in 2003 for students to attend schools where teachers were monitored through peer reviews of lesson plans, assessment instruments and lessons. These increases are notable in Sweden and Luxembourg, where the share of students attending such schools increased by more than 30 percentage points during the period. Only in Turkey, Tunisia, Spain and Finland did this proportion shrink by more than ten percentage points. In Turkey the percentage of students who attend schools where teachers are monitored through observations by external experts also decreased; but this drop was concurrent with an increase in the proportion of students in schools where teachers are monitored through student assessments. Tunisia also saw a decrease in the percentage of students in schools where teachers are monitored through observations by the principal or other senior staff (Table IV.4.37).

Notes

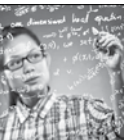
1. The ratio of the number of items for which “principals” and/or “teachers” have responsibility to the number of items for which “regional or local education authority” and/or “national education authority” have responsibility was computed. “School governing board” was not considered in the calculation.
2. System-level correlation between the *index of school responsibility for resource allocation* and the *index of school responsibility for curriculum and assessment* is 0.56 across OECD countries and 0.60 across all participating countries and economies. In Japan, the value on the *index of school responsibility for resource allocation* is relatively low compared with other countries, while the value on the *index of school responsibility for curriculum and assessment* is relatively high. In Bulgaria, the value on the *index of school responsibility for resource allocation* is relatively high, while the value on the *index of school responsibility for curriculum and assessment* is relatively low.
3. See Gewirtz, Ball and Bowe, 1995; Whitty, Power and Halpin, 1998; Karsten, 1999; Viteritti, 1999; Plank and Sykes, 2003; Hsieh and Urquiola, 2006; Heyneman, 2009; Bunar, 2010a; Bunar, 2010b; Söderström and Uusitalo, 2010; and Schneider and Buckley, 2002.
4. The parent questionnaire was distributed in Belgium (Flemish community), Chile, Croatia, Germany, Hong Kong-China, Hungary, Italy, Korea, Macao-China, Mexico and Portugal. Table III.6.14 (available on line) shows that in most countries and economies that distributed the parental questionnaire, participation was high, and the parents of virtually all students who participated in PISA responded to the questionnaire. Response rates were as high as 90% or more in Chile, Croatia, Hong Kong-China, Hungary, Italy, Korea, Macao-China and Mexico. The response rate in Portugal was 83%, while it was comparatively low in Germany (57%) and the Flemish community of Belgium (48%). Response rates for individual items vary as some parents responded to several questions but not to others. However, the extent of non-response to items in the parental questionnaire is similar to that of non-response to items in the student background questionnaire. Table III.6.14 illustrates how, in Belgium (Flemish community) and Germany, where response rates are low, and in Portugal, students whose parents responded to the parental questionnaire tend to score higher in PISA and have a more socio-economically advantaged status.
5. This average corresponds to the OECD average of countries that have comparable data in both PISA 2003 and PISA 2012.
6. This was also true in 19 countries and economies that participated in PISA 2003 and PISA 2012.
7. The PISA 2003 questionnaires did not include questions about principals’ perspectives on school choice, leadership or parental involvement. Although PISA 2003 asked school principals about school autonomy as PISA 2012 did, the wording of these questions changed substantially, making it impossible to analyse trends in school autonomy. In the PISA 2003 questionnaire, school principals were asked “In your school, who has the main responsibility for <each governance attribute>” and offered the following response options: “Not a main responsibility of the school”, “School’s governing board”, “Principal”, “Department Head” or “Teachers”. In the PISA 2012 questionnaire, school principals were asked “Regarding your school, who has a considerable responsibility for <each governance attribute>” and offered the following response options: “Principal”, “Teachers”, “School governing board”, “Regional or local education authority”, “National education authority”. In both PISA 2003 and PISA 2012, school principals could select as many response options as appropriate.
8. Information is available for all OECD countries except Canada, New Zealand and Slovenia. Information is available for all participating partner countries and economies except Argentina, Costa Rica, Kazakhstan and Serbia. Turkey and Switzerland do not have information on the existence of assessments so they are excluded from the analysis.
9. These groups are created using a cluster analysis with the Ward method, which groups countries and economies to minimise the variance within each cluster, using data available in Tables IV.4.20 to IV.4.26. Variables that entered the analyses are: the existence of national assessments in lower secondary and upper secondary schools, the percentage of students taking national examinations in lower and upper secondary general programmes, the percentage of students taking other examinations in lower and upper secondary general programmes, and the percentage of tertiary fields of study requiring a non-secondary school examination for access. For those countries and economies where the percentage of students taking the examinations is unavailable, if examinations are compulsory, a percentage of 100 is used (Viet Nam), and if not compulsory, a percentage of 50 is used (Australia, upper secondary education). When the percentage of students taking other examinations is missing, a percentage value of 0 is used if no information on other examinations is provided (Australia, Korea, Romania, Slovenia, Tunisia, Turkey and Viet Nam); if these examinations do exist, then a value of 50 is used (Japan). When the number of fields of study requiring a tertiary examination is missing, a value of 0 is used (Tunisia).
10. The following countries and economies participated in the first TALIS survey, TALIS 2008: Australia, Austria, Belgium (Flemish community), Denmark, Estonia, Hungary, Iceland, Ireland, Italy, Korea, Mexico, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Turkey, and the partner countries Brazil, Bulgaria, Lithuania, Malaysia and Malta. For the second TALIS survey, TALIS 2013, the following countries and economies are participating: Australia, Belgium (Flemish community), Canada (Alberta), Chile, the Czech Republic, Denmark, Estonia, Finland, France, Iceland, Israel, Italy, Japan, Korea, Mexico, the Netherlands, Norway, Poland, Portugal, the Slovak Republic, Spain, Sweden, the United Kingdom (England), the United States, and the partner countries Brazil, Bulgaria, Croatia, Latvia, Malaysia, Romania, Serbia, Singapore and the United Arab Emirates.



11. There is a possibility that certain negative consequences, such as teachers who were discouraged and left the profession or who were discharged from a particular school, is under-reported, because these teachers did not remain in the same school.
12. This average trend corresponds to the OECD average of countries that have comparable data in both PISA 2003 and PISA 2012. When rounded, the percentages of 84.65, 11.49 and 3.85 adds up to 101.
13. PISA 2012 also asked school principals about quality assurance and teacher appraisals. Because PISA 2003 did not include these questions, it is not possible to determine trends over time for these two aspects of assessment and accountability.

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