

Equity and Quality in Education

Supporting Disadvantaged Students and Schools



Partnership for
Global Learning

A GLOBAL CITIES EDUCATION NETWORK REPORT



EQUITY AND QUALITY IN EDUCATION: Supporting Disadvantaged Students and Schools

OECD, April 2012

FOREWORD

Globalization of the economy, increasingly diverse and interconnected populations, and rapid technological change are posing new and demanding challenges to individuals and societies alike. School systems are rethinking the knowledge and skills students will need for success and the educational strategies and systems required for all children to achieve them. In both Asia and North America, urban school systems are at the locus of change in policy and practice – at once the sites of the most critical challenges in education and the engines of innovation needed to address them. Therefore, Asia Society organized the Global Cities Education Network, a network of urban school systems in North America and Asia to focus on challenges and opportunities for improvement common to them, and to virtually all city education systems.

A critical element of high-performing school systems is that they not only benchmark the practices of other countries, but they systematically adapt and implement these practices within their own cultural and political contexts. The Global Cities Education Network is intended as a mechanism for educators and decision-makers in Asia and North America to *collaboratively* dream, design, and deliver internationally informed solutions to common challenges with which education systems are currently grappling.

The Network engages in cycles of in-depth inquiry, planning, and action to address specific topics related to the themes of **transforming learning and achieving equity**. Each cycle involves knowledge sharing and problem solving, including at Global Cities Education Network Symposia and the production of research and knowledge products such as case studies, background papers, and meeting reports. The overarching goal is to develop practical wisdom from the research and experience of the world's leading experts which reflects proven or promising efforts in Network cities, that can be used to enhance the effectiveness of Network and city school systems world wide.

This report presents the key recommendations of the OECD publication *Equity and Quality in Education: Supporting Disadvantaged Students and Schools* (2012a), which maps out policy levers that can help build high quality and equitable education systems, with a particular focus on North American and Asian-Pacific countries. It has been prepared by the OECD Education Directorate with support from the Asia Society as a Background Report for the first Asia Society Global Cities Network Symposium, Hong Kong, May 10-12, 2012. Asia Society is grateful for OECD's leadership in international benchmarking and for our ongoing partnership.

We would like to thank the sponsors of the Global Cities Education Network including: JPMorgan Chase Foundation, MetLife Foundation, Carnegie Corporation, Pearson Foundation, and Hewlett Foundation.

We hope that this series of reports provides knowledge and experience useful to cities in Asia, North America, and elsewhere eager to create the conditions that will promote success for all students in today's interconnected world.

Tony Jackson
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EQUITY AND QUALITY IN EDUCATION: KEY POLICY RECOMMENDATIONS

One of the most efficient educational strategies for governments is to invest early and all the way up to upper secondary. Governments can prevent school failure and reduce dropout using two parallel approaches: eliminating education policies and practices that hinder equity; and targeting low performing disadvantaged schools. But education policies need to be aligned with other government policies, such as housing or welfare, to ensure student success.

Eliminate education policies and practices that contribute to school failure

The way education systems are designed can exacerbate initial inequities and have a negative impact on student motivation and engagement, eventually leading to dropout. Making education systems more equitable benefits disadvantaged students without hindering other students' progress. Five recommendations can contribute to prevent failure and promote completion of upper secondary education:

1. Eliminate grade repetition.
2. Avoid early tracking and defer student selection to upper secondary.
3. Manage school choice to avoid segregation and increased inequities.
4. Make funding strategies responsive to students' and schools' needs.
5. Design equivalent upper secondary education pathways to ensure completion.

Help disadvantaged students and schools improve

Schools with higher proportions of disadvantaged students are at greater risk of low performance, affecting education systems as a whole. Low performing disadvantaged schools often lack the internal capacity or support to improve, as school leaders and teachers and the environments of schools, classrooms and neighbourhoods frequently fail to offer a quality learning experience for the most disadvantaged. Five policy recommendations have shown to be effective in supporting the improvement of low performing disadvantaged schools:

1. Strengthen and support school leadership.
2. Stimulate a supportive school climate and environment for learning.
3. Attract, support and retain high quality teachers.
4. Ensure effective classroom learning strategies.
5. Prioritise linking schools with parents and communities.

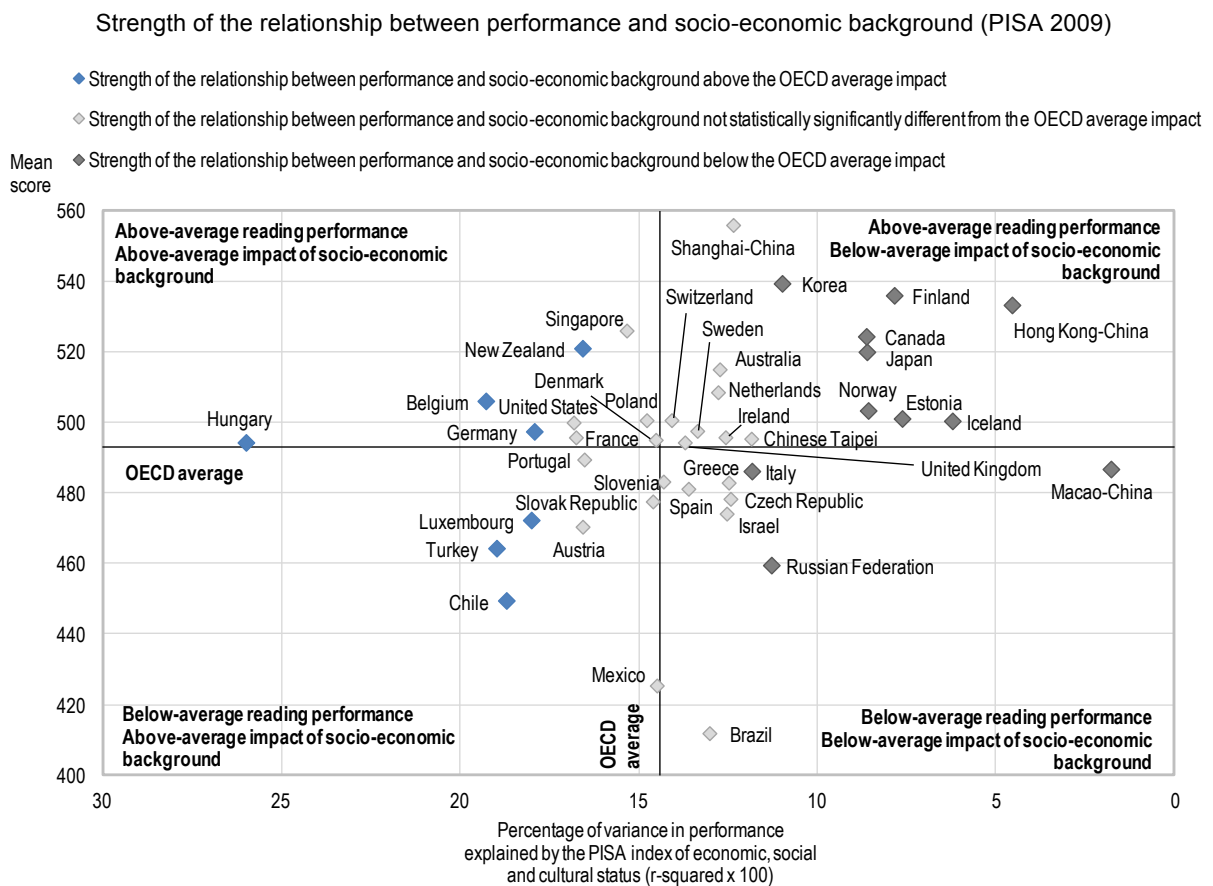
GLOSSARY

- **Basic skills:** Students who obtain scores below Level 2 in the Programme for International Student Assessment (PISA hereafter) can be considered as lacking basic skills (OECD, 2012a).
- **Disadvantaged schools:** There is no common definition across OECD countries of which schools are disadvantaged, but these are referred as schools with high proportions of disadvantaged students. In PISA data, disadvantaged schools are defined as schools where the average socio-economic background of students is below the national average.
- **Disadvantaged students:** Students at higher risk of low performance due to personal and social circumstances, such as ethnic origin, family's socio-economic level or gender.
- **Dropout:** Refers to non completion of upper secondary education and training (ISCED 3), although there are different ways of measuring this phenomenon across OECD countries and different standards of completing upper secondary. This phenomenon is also known as 'early school leaving'.
- **Equity in education:** It can be seen through two dimensions: fairness and inclusion (Field, Kuczera and Pont, 2007). Equity as inclusion means ensuring that all students reach at least a basic minimum level of skills. Equity as fairness implies that personal or socio-economic circumstances, such as gender, ethnic origin or family background are not obstacles to educational success. Equitable education systems are fair and inclusive and support their students to reach their learning potential without either formally or informally pre-setting barriers or lowering expectations.
- **Low performing schools:** Schools failing to achieve adequate level of student performance, without taking into account external factors, such as the average student intake's socio-economic background.
- **Student selection:** Refers to decisions made by the education system to differentiate students. Often, students are selected on academic grounds. For example, a highly selective education system, with selective secondary schools, streaming within schools and separate schools for most students with special needs, may yield, through a process of successive distillation, classrooms which are extremely homogeneous in terms of attainment (Field, Kuczera and Pont, 2007). In contrast, decisions made by students (and sometimes their parents) are referred as *choice*.

1. EQUITY IN EDUCATION: A KEY CHALLENGE

The highest performing education systems are those that combine quality with equity. Equity in education means that personal or social circumstances such as gender, ethnic origin or family background, are not obstacles to achieving educational potential (definition of fairness) and that all individuals reach at least a basic minimum level of skills (definition of inclusion). In these education systems, the vast majority of students have the opportunity to attain high level skills, regardless of their own personal and socio-economic circumstances. Within the Asia-Pacific region, for example, Korea, Shanghai-China and Japan are examples of Asian education systems that have climbed the ladder to the top in both quality and equity indicators. In North America, Canada is among such countries as well. The United States is above the OECD mean in reading performance but below the mean with regard to equity.

Figure 1.1. High performing education systems combine equity with quality



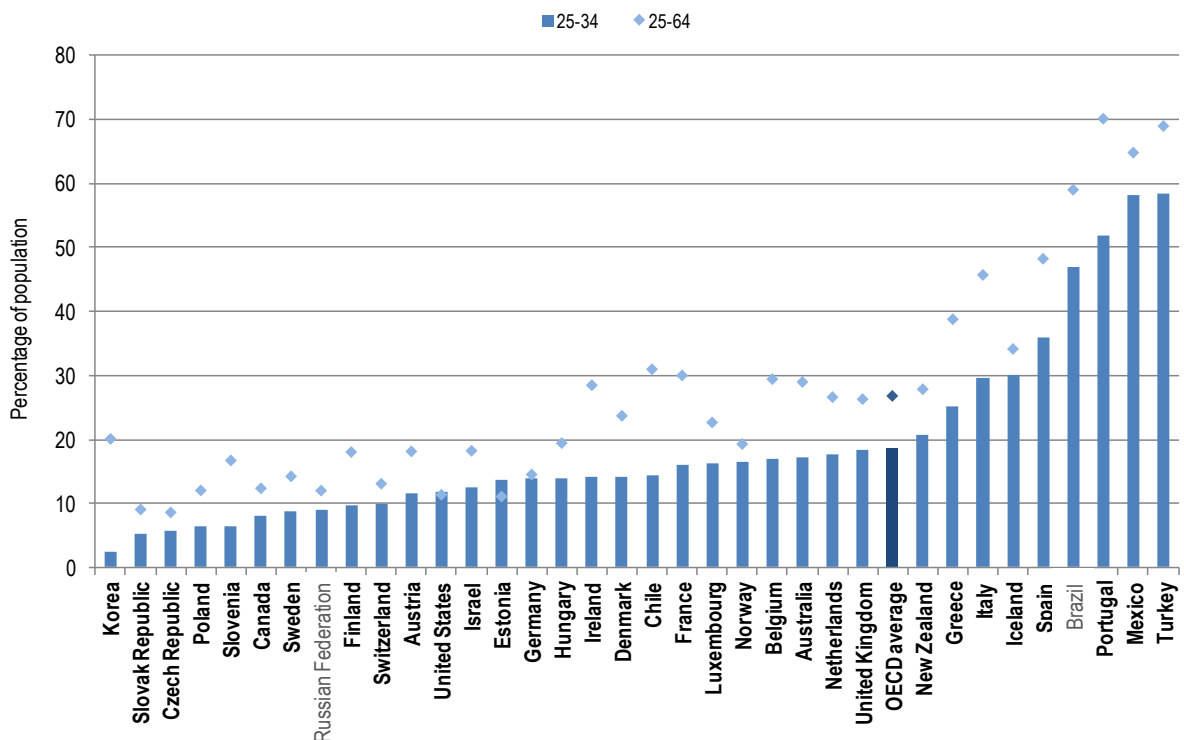
Source: OECD (2010a), PISA 2009 Results: Overcoming Social Background: Equity in Learning Opportunities and Outcomes (Volume II), PISA, OECD, Paris.

Yet, even in high performing systems a significant number of students fail to obtain a minimum level of education, jeopardising their own future and the progress of their society. The degree of inclusion of an education system can be measured by the percentage of low performers and individuals who do not attain upper secondary education (OECD, 2012a). In PISA 2009, 19% of 15-year-old

students scored below Level 2 in reading across OECD countries, which signals that almost one out of five youngsters across OECD countries lacks basic literacy skills, and in some countries this proportion even exceeded 25% (See Figure 1.3). It is very likely that those lacking basic skills at this age will either drop out from the education system and not finish upper secondary school, entering the workforce with low skills and unprepared, or will continue studying but struggling more than their peers and needing additional (and more expensive) support. Indeed, the percentage of 25-34 years-olds that have not attained upper secondary education reaches almost 20% of young people across OECD countries (See Figure 1.2), although it varies markedly, from 3% in Korea to 62% in Turkey (OECD, 2011a).

Figure 1.2. How many individuals have not attained at least upper secondary education?

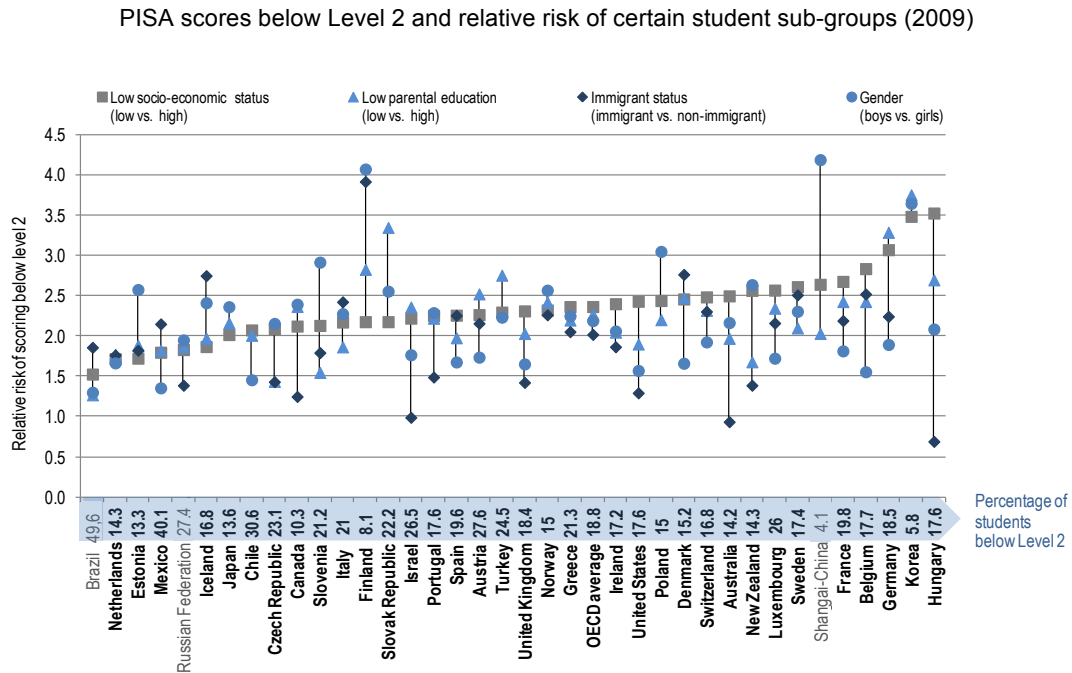
Proportion of 25-34 and 25-64 years-old who have not completed upper secondary education (2009)



Source: OECD (2011a), Education at a Glance 2011: OECD Indicators, OECD, Paris.

Students' background has a significant impact on their academic achievement in many countries, and often, low socio-economic background and low performance converge in specific population groups. The increased likelihood of disadvantaged students to perform below level 2 can be interpreted as an indicator of fairness of an education system (OECD, 2012a). For example, in Korea, the few students that do not achieve basic skills are often disadvantaged students. In this country, students from low socio-economic status are almost 3.5 times more likely to be low performers than their peers with a high status (See Figure 1.3).

Figure 1.3. How many students are at risk of low performance?



Source: OECD (2011a), Education at a Glance 2011: OECD Indicators, OECD, Paris.

Reducing school failure pays off for both society and individual and contributes to economic growth and social development. The economic and social costs of school failure and dropout are high, whereas investing early in education (Heckman, 2011) and up until upper secondary education completion is efficient. Individuals with at least upper secondary education have better employment and healthier lifestyle prospects, resulting in greater contributions to public investment through higher taxes. More educated people contribute to sustainable economies, and are less dependent on public aid and less vulnerable to economic downturns which in turn contribute to more equitable societies (OECD, 2011b).

Education is a central element of OECD countries' growth strategies. To be effective in the long run, improvements in education need to enable all students to have access to quality education early, to stay in the system until at least the end of upper secondary education, and to obtain the skills and knowledge they will need for effective social and labour market integration. This can be done with two parallel strategies:

- **By designing education systems that are conducive to equity:** More specifically, some systemic practices, such as early tracking, repetition, certain school choice schemes or low quality vocational education and training tend to amplify social and economic disadvantages and are conducive to school failure. Section 2 reviews system level practices that hinder equity and provides five recommendations to prevent failure and promote the completion of upper secondary education. This can help reinforce equity across the system and benefit disadvantaged students without hindering other students' progress.
- **By focusing on and supporting disadvantaged schools:** Schools with higher proportions of disadvantaged students are at greater risk of problems that can result in under performance, affecting education systems as a whole. Low performing disadvantaged schools often lack

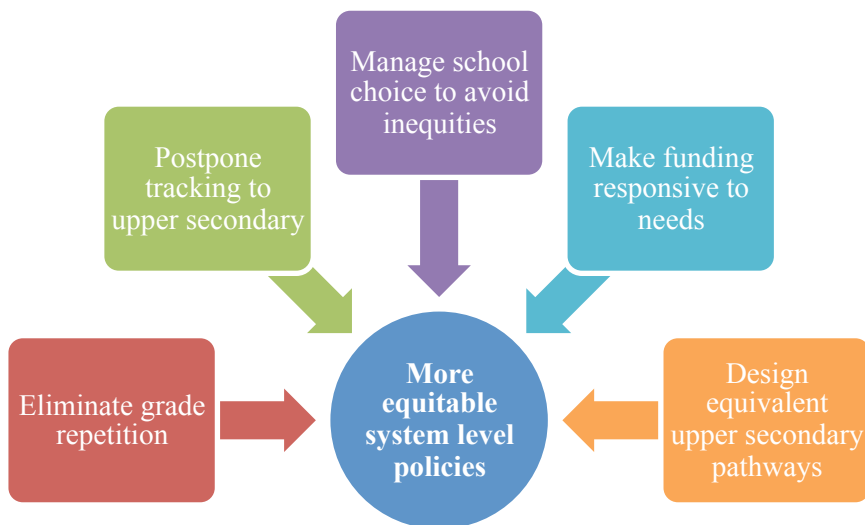
the internal capacity or support to improve, as school leaders and teachers and the environments of schools, classrooms and neighbourhoods frequently fail to offer a quality learning experience for the most disadvantaged. Section 3 proposes five policy recommendations that have shown to be effective in supporting the improvement of low performing disadvantaged schools. While these apply to all schools, they are particularly relevant for low performing disadvantaged schools, where they may be harder to achieve but can deliver improvements.

Addressing these challenges is a difficult endeavour in any country. Improvements across an entire education system can come only with strong and consistent political support and leadership sustained over time. It also requires policy design and implementation that is aligned to governance structures. In this regard, setting high achievement targets or standards is important to raise the bar and signal equity priorities (Section 4).

2. TACKLING SYSTEM LEVEL POLICIES THAT HINDER EQUITY IN EDUCATION

Education systems and the pathways through them need to be designed in a way that both enhances equity and raises students' success. Yet, some system level policies, such as grade repetition or early tracking, tend to amplify socio-economic disparities and are conducive to disengagement and dropout, whereas other policies seem to mitigate them (Causa and Chapuis, 2009). This section presents and develops five specific system level policy levers that can reduce inequities in education and contribute to improve overall performance.

Figure 2.1. Policies for more equitable education systems

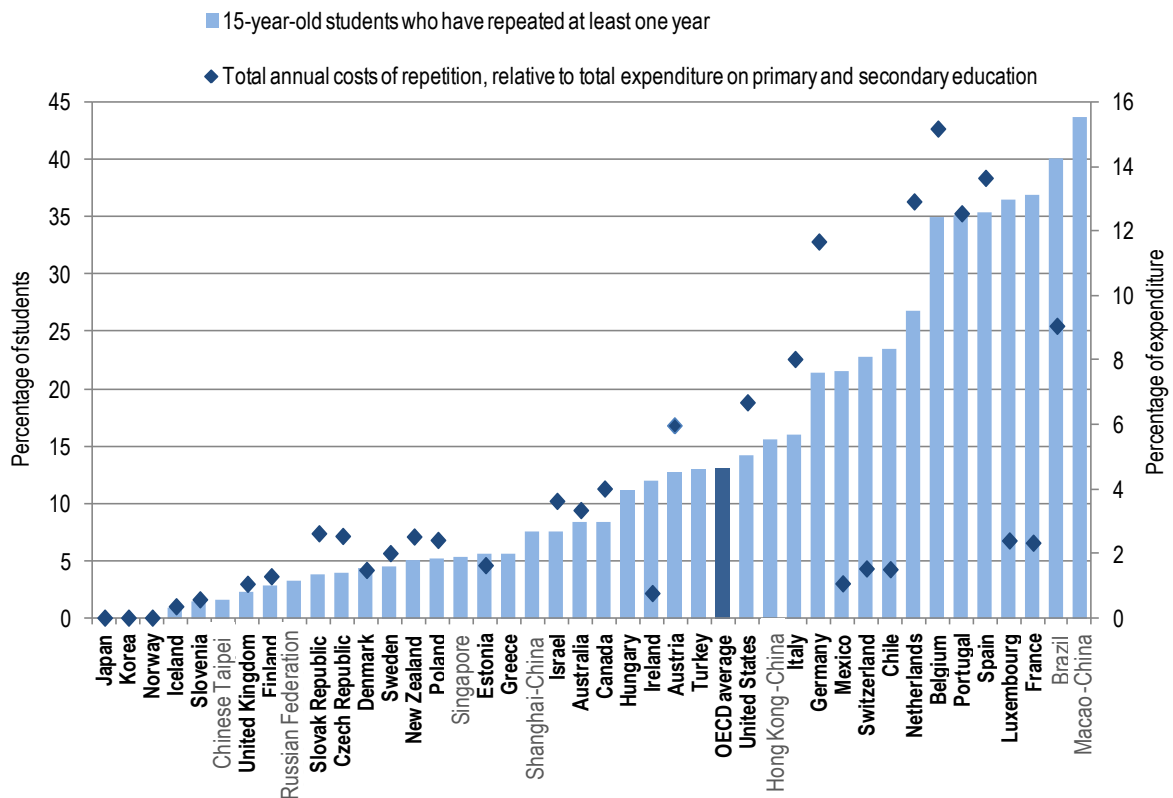


2.1. Eliminate grade repetition

Challenge: grade repetition is a common practice in many OECD countries

Grade repetition occurs when students, after a formal or informal assessment, are held back in the same grade for an additional year, rather than being promoted to the next stage along with their peers. Grade repetition is practised in many OECD countries: 13% of 15-year-olds are reported to have repeated at least one year either in primary or secondary school (Figure 2.2). This proportion is particularly high in the partner economy Macao-China, where it affects over 40% of students. School systems that extensively use repetition are associated with low levels of educational performance (OECD, 2010b), while strategies to support each individual prevail in countries with higher performance levels.

Figure 2.2. Grade repetition affects many students and can entail high costs (2009)



1. Cost estimations refer to 2007 or latest available year and represent the total costs of grade repetition for one year age cohort. Opportunity costs are estimated based on the assumption that repeaters attain around the national average education level. Notes and information on the methodology used are available at: <http://oecd.org/dataoecd/35/29/48362484.pdf>.

Source: OECD (2010b), PISA 2009 Results: What Makes a School Successful?: Resources, Policies and Practices (Volume IV), PISA, OECD, Paris; OECD (2011d), When students repeat grades or are transferred out of school: What does it mean for education systems?, OECD, PISA in focus, No. 6.

Evidence: high and lasting costs, while benefits are slight and short-lived

The costs of grade repetition are large for both individuals and society. First, the direct costs for school systems are very high, as these include providing an additional year of education and delaying

entry to the labour market by a year. Second, it increases the likelihood of earning no qualification or only a lower secondary one, while the academic benefits of grade retention are slight and short-lived as these accrue from going over the same curricula a second time (Jacob and Lefgren, 2009). Third, grade retention widens inequities because students with low socio-economic backgrounds, poorly educated parents or immigrant backgrounds, and boys, are significantly more likely to repeat than others (OECD, 2011d).

In many countries, schools have few incentives to take into account the high costs grade repetition bears on the system. On one hand, both the additional and opportunity costs do not decrease the funding that individual schools receive (Field, Kuczera and Pont, 2007), while alternative practices that can reduce the use of repetition very often have direct costs for schools. On the other hand, teachers widely support the practice as they observe the immediate gains but not the long-term negative effects (Jimerson, Anderson and Whipple, 2002), and moving weaker students to the following year would require them to teach in more challenging mixed-ability environments, for which they may not be prepared or supported.

Policy options to eliminate grade repetition

- *Preventive measures: ensure continuous assessment and support strategies.* The most successful alternatives are focused on prevention to make repetition unnecessary, providing the needed support to those falling behind before the end of the school year and putting them back on track on time, before the learning gaps widen, as done in Finland and Japan (See Box 2.1). Continuous assessment of students' needs can facilitate the design and implementation of tailored support programmes as early as possible. These include improving teachers' skills to teach in classrooms with more diverse attainment levels, extending learning opportunities as well as diversifying the strategies to support learning, and strengthening students' meta-cognitive skills.
- *Promotion with support.* Repetition rates can be reduced by restricting the criteria that determine whether a student is to be held back and by establishing further opportunities to move forward. However, promotion should be combined with a structured and engaging plan of support to correct educational deficits and meet the educational standards. Also, repetition can be limited to the subjects or modules failed instead of year-repetition. For example, in Canada, New Zealand and the United States, retention is usually restricted to the specific classes that the student failed. A student can be, for instance, promoted in a math class but retained in a language class.
- *Reversing the culture of grade repetition in schools.* Educational authorities should raise teacher awareness of its consequences, offer support and resources, and also include teachers and school leaders in searching for alternatives to help students with learning difficulties. In addition, financial incentives and targets for reduction of repetition can be introduced into accountability systems. For example, in France repetition levels have substantially decreased since specific targets to hold schools accountable for grade repetition rates were established in parallel with individualised support and catch up opportunities.

Box 2.1. The approach to grade repetition in Finland and Japan

In **Finland**, retention was widely used before a policy of automatic promotion combined with early intervention was implemented in the 1970s. Today, fewer than 2% of students who leave the compulsory nine-grade comprehensive school at the age of 16 have repeated a grade. Every child has the right to individualised support provided by trained professionals as part of normal schooling. Also, in upper secondary school a student may repeat only those courses that were not passed satisfactorily rather than an entire grade.

In **Japan** students are not held back if they are having difficulty. Teachers are responsible for ensuring that all students keep up with the curriculum and they meet frequently with one another to discuss students who are having difficulty in order to provide them with more individual attention within the regular school day. Also, students who are not doing well in certain subjects usually receive extra instruction after school.

Source: Välijärvi, J. and P. Sahlberg (2008), "Should 'failing' students repeat a grade? A retrospective response from Finland", *Journal of Educational Change*, Vol. 9, No. 4, pp. 385-389; OECD (2012b), *Lessons from PISA for Japan, Strong Performers and Successful Reformers in Education*, OECD, Paris.

2.2 Avoid early tracking and defer student selection to upper secondary

Challenge: early student selection is a common practice

Student selection refers to *tracking* students into different study programmes or grouping them into classrooms according to their abilities, either in all or few subjects. Selection occurs in all OECD countries, but there are important differences between countries in the timing and form of this selection. With an average age of first formal selection at 14 years across OECD (OECD, 2010b), some countries, such as Finland, Norway or Spain, have non-selective and comprehensive school systems up to the end of lower secondary education. Other countries such as Austria and Germany, respond to the diversity challenge by sorting children between different curricula or levels of difficulty when they are just 10 years old, with the aim of serving them according to their learning needs and academic potential. Also, in the United States and Canada, for example, more than 90% of 15 year-old students are in schools that group students by ability (See Figure 2.3). These early tracking practices may result in greater inequities and a stronger influence of socioeconomic background on education.

Evidence: academic selection widens achievement gaps and inequities

Proponents of grouping students according to their performance suggest that students learn better when grouped with others like themselves and when teaching can be adapted to their needs. In contrast, evidence shows that early student selection has a negative impact on students assigned to lower tracks, without raising the performance of the whole student population (Hanushek and Woessmann, 2006). Less demanding tracks tend to provide less stimulating learning environments and fuel a vicious cycle in the expectations of teachers and students. Also, students' placed in less demanding tracks do not benefit from the positive effects of being around more capable peers (Hanushek and Woessmann, 2006). Evidence shows that the track where students are assigned has a great impact on their educational and life prospects (Shavit and Müller, 2006).

In addition, selection exacerbates inequities since students from disadvantaged backgrounds are more likely to be placed in the least academically oriented tracks or groups (Spinath and Spinath, 2005). For example, students with an immigrant background, when tracked at an early stage, may be locked into a lower educational environment before they have had a chance to develop the linguistic, social and cultural skills to attain their maximum potential (OECD, 2010c).

Policy options to delay selection

- *Delay selection and adopt comprehensive schooling until upper secondary school.* Many OECD countries have adopted comprehensive education measures, and raised the age of first tracking or postponed it to a later stage of the educational process – most commonly to the end of lower secondary education. The Nordic countries were among the first to make the change in the 1970s and became a reference of comprehensive education systems. One of the most recent reforms was undertaken in Poland, where early tracking was postponed one year, until the age of 15. The reform raised students' performance substantially, particularly for those students that would have been assigned into vocational tracks, without hindering the performance of top achievers (Wisniewski, 2007).
- *Reduce the level of early tracking by eliminating low level tracks.* In contexts where key stakeholders may be reluctant to end early tracking, suppressing low-level tracks or groups or ensuring that these offer equivalent education opportunities and outcomes to other pathways can mitigate some of the negative effects of tracking. This could be particularly beneficial in systems in which there are different and very impermeable tracks in a hierarchy.

In recent years, Austria, Luxembourg, Slovak Republic and some German states have taken steps in this direction.

- *Limit the negative effects of early selection.* In countries where students are tracked, streamed or grouped by ability early, a variety of policies and practices can be explored to limit the negative effects and embrace differentiated instruction in mixed-ability settings. One option is to limit ability grouping to specific subjects or replace it with short-term flexible grouping for specific purposes, while classes remain heterogeneous. For instance, Nordic countries use temporary groupings with the possibility of changing groups, which allow flexibility to meet specific academic needs during the school year. Another option consists in increasing flexibility to change tracks or classrooms, and improving the selection methods for the different tracks or groups. A further option is to ensure that all tracks give students a challenging curriculum and high quality instruction.

Box 2.2. Attenuating student selection in Singapore

In recent years, **Singapore** has replaced streaming in elementary schools with subject-based grouping. This consists in allowing students to follow, for example, science and his mother tongue at the standard level, but attend mathematics at the foundational level. In this way, students can improve in all subjects. More opportunities for students to move horizontally between streams at the secondary level and beyond have also been introduced to create more flexibility in the system and to recognise “late bloomers”. Another remarkable feature of the Singapore education system is the value, attention and resources it devotes to lower level achievers, not just high achievers. This focus on “leveling up”, so that the lowest stream gets very high quality training, exemplifies the “many pathways” approach and is illustrated with the Institute for Technical Education (See Box. 2.5).

Source: OECD (2011c), *Lessons from PISA for the United States, Strong Performers and Successful Reformers in Education*, OECD, Paris.

Figure 2.3. Types of differentiation in lower secondary across countries (2009)

| | Age of first selection | Number of school types or distinct educational programmes available to 15-year-old students | Percentage of students in schools where students' record of academic performance are considered for admittance | Percentage of students in schools that group students by ability(1) |
|---------------------|------------------------|---|--|---|
| Australia | 16 | 1 | 60 | 95 |
| Austria | 10 | 4 | 74 | 46 |
| Belgium | 12 | 4 | 52 | 46 |
| Canada | 16 | 1 | 53 | 90 |
| Chile | 16 | 1 | 70 | 65 |
| Czech Republic | 11 | 5 | 69 | 69 |
| Denmark | 16 | 1 | 24 | 50 |
| Estonia | 15 | 1 | 73 | 56 |
| Finland | 16 | 1 | 18 | 58 |
| France | 16 | 1 | w | w |
| Germany | 10 | 4 | 77 | 51 |
| Greece | 15 | 2 | 27 | 15 |
| Hungary | 11 | 3 | 90 | 68 |
| Iceland | 16 | 1 | 8 | 75 |
| Ireland | 15 | 4 | 24 | 96 |
| Israel | 15 | 2 | 78 | 97 |
| Italy | 14 | 3 | 55 | 56 |
| Japan | 15 | 2 | 99 | 67 |
| Korea | 14 | 3 | 61 | 90 |
| Luxembourg | 13 | 4 | 95 | 71 |
| Mexico | 15 | 3 | 59 | 69 |
| Netherlands | 12 | 7 | 97 | 80 |
| New Zealand | 16 | 1 | 43 | 98 |
| Norway | 16 | 1 | 7 | 73 |
| Poland | 16 | 1 | 49 | 46 |
| Portugal | 15 | 3 | 16 | 32 |
| Slovak Republic | 11 | 5 | 73 | 73 |
| Slovenia | 14 | 3 | 68 | 55 |
| Spain | 16 | 1 | 11 | 60 |
| Sweden | 16 | 1 | 5 | 74 |
| Switzerland | 12 | 4 | 70 | 75 |
| Turkey | 11 | 3 | 66 | 62 |
| United Kingdom | 16 | 1 | 20 | 99 |
| United States | 16 | 1 | 45 | 91 |
| OECD average | 14 | 2.5 | 53 | 68 |
| Brazil | 17 | 1 | 20 | 45 |
| Hong Kong-China | 15 | 2 | 99 | 76 |
| Macao-China | 16 | 1 | 92 | 64 |
| Russian Federation | 14.5 | 3 | 42 | 77 |
| Shanghai-China | 14 | 4 | 80 | 64 |
| Singapore | 12 | 4 | 99 | 100 |
| Chinese Taipei | 15 | 3 | 80 | 52 |

1. (1) refers to schools where principals indicated “always” or “sometimes” and may include responses from principals in upper secondary schools. Data not collected is referred as “w”.

Source: OECD (2010b), PISA 2009 Results: What Makes a School Successful?: Resources, Policies and Practices (Volume IV), PISA, OECD, Paris.

2.3. Manage school choice to avoid segregation and increased inequities

Challenge: school choice is a reality in OECD countries

In the last 25 years, more than two-thirds of OECD countries have increased the extent of parental school choice in publicly (and in some countries also privately) funded schools. Advocates often argue that school choice would allow all students – including disadvantaged ones and those attending low performing schools – to opt for higher quality schools, as the introduction of choice in education can foster efficiency, spur innovation and raise quality overall. The evidence however shows that choice, if not well managed, can generate greater inequalities, without necessarily raising overall performance.

Evidence: if not well designed, school choice programmes can increase segregation and inequities

Socio-economic segregation between schools is partially explained by residential segregation. Although urban policies play an important role in redressing inequalities, school choice schemes can contribute to mitigating or widening socio-economic differences in students' intakes between schools. School choice schemes that do not take into account equity considerations can result in a greater sorting and segregation of students by ability, income and ethnic background (Musset, 2012).

Research has shown that oversubscribed schools are selective in their admissions and tend to prefer students who are easier to teach and more able to learn, crowding out students with low performance (Lubienski, 2006; Raveaud and Van Zanten, 2009). For example, many education systems are challenged with balancing the number of immigrant children across schools. Indeed, better-off parents are more likely to exercise school choice, as they have more information and resources, and usually enrol their children in high quality schools. In contrast, more disadvantaged parents tend to exercise choice less and send their children to their local neighbourhood schools. Less educated families may face more difficulties gauging the information required to make informed school choice decisions, or have different preferences over school characteristics (Hastings, Kane and Staiger, 2005).

Policy options to balance choice and equity

- *Introducing controlled choice schemes to combine parental choice and equity.* Controlled choice programmes, also called flexible enrolment plans, are student allocation schemes that provide parental choice while trying to mitigate its risk of increased segregation. These schemes rely on the introduction of mechanisms to ensure that children are distributed to schools in a more diverse manner representative of their social composition (in terms of parental socio-economic status, ethnic origin, etc), and that in the event of oversubscription, disadvantaged students are not crowded out.

Controlled choice schemes can take different forms. In Cambridge (United States) and Nijmegen (Netherlands), there are central subscription systems that give priority to disadvantaged students once preferences have been revealed (Kahlenberg, 2006; Ladd, Fiske and Ruijs, 2009). In Rotterdam (Netherlands), double waiting lists have been introduced. In Spain, annual family income is taken into account in the event of oversubscription, quotas can be established to preserve an even distribution, and latecomers are accommodated in a balanced way (Calero, 2005).

- *Design incentives to enable disadvantaged students to attend high quality schools.* Some countries have experimented with providing more funding for low performing or

disadvantaged students. Since the amount of the voucher is higher for children with the biggest needs, schools will have greater incentives to attract such students and to give them resources that address their needs. When the choices that parents can actually consider depend on their ability to pay, vouchers or tax credits can be offered to reduce the financial burden of tuition fees as well as other costs.

Restricting schools' discretion over admission criteria, setting a similar time of registration or regulating tuition fees can prevent a biased selection. In Chile, selection of students based on their socio-economic background or prior educational attainment at primary schools receiving public funding has been forbidden in 2009 (Brandt, 2010). In Sweden, since 1997 independent schools receive the same funding as public schools and additional fees are forbidden.

- *Support parents to make well-informed choices.* Information asymmetries on the schools that can be chosen can be reduced by increasing the amount, relevancy and accessibility of the information available to all parents and using strategies to target more specifically parents who exercise choice the least and/or send their children to low performing schools.

Education systems can raise awareness about the importance of exercising choice with active information campaigns and using multiple channels to facilitate reaching out parents and supporting them in making well-informed choices. For example, a district in Milwaukee (United States) set up an extensive programme to inform parents and help them in the choice process. It included sending volunteers door-to-door in low income and non-English speaking communities, setting up information booths in shopping malls, organising a fair and establishing phone hotlines. As a result of all these actions, 95% of families filled in their school choice forms (Godwin *et al*, 2006).

Box 2.3. Limiting choice in Shanghai-China

Shanghai is a metropolitan area with large socio-economic disparities. School attendance use to be based on examinations to enter elitist schools. In 1994, neighborhood attendance was introduced requiring students to attend their local schools. Parents fought this reform and, as a result, a compromise was reached to enable students to attend other schools by paying a sponsorship fee. This may raise inequalities but it was perceived that would avoid preferential admissions on the basis of political power or personal connections (OECD, 2011c). Classes with mixed abilities raised concerns among teachers in the beginning but later teachers adapted and valued being able to handle children of diverse backgrounds and different abilities. Also, neighbourhood attendance has permitted to remove public examinations at the end of primary schooling, thus releasing lecturing from examination pressure in primary education.

Source: OECD (2011c), *Lessons from PISA for the United States, Strong Performers and Successful Reformers in Education*, OECD Publishing.

2.4. Make funding strategies responsive to students' and schools' needs

Challenge: disadvantaged schools may need additional resources

Students and schools have different socio-economic profiles and varying needs, and these should be reflected in funding schemes. While it may be recognised that differences in instructional costs need to be taken into consideration in funding allocations, there are debates about the way to allocate resources more fairly and about the amount of additional funding for disadvantaged students or schools in which disadvantaged students are concentrated to effectively respond to their learning needs.

Evidence: the way resources are spent can make a difference

Resources need to be spent in an equitable manner across schools. Research shows that providing more money to schools is not enough to improve their performance, yet the way money is allocated to schools does matter for equity. Among the calculation methods, formula funding is better at ensuring equity and can be more efficient than *administrative discretion*, which is based on an individual assessment of each school, or *incremental costs*, which takes into consideration the historical expenditure. *Formula funding* relies on a mathematical formula which contains a number of variables, among which needs-based and school characteristics-based criteria. Formula funding combines both horizontal equity – schools with similar characteristics funded at the same level – and vertical equity – schools with higher needs receive more resources (Levacic, 2008).

In addition, equity should be taken into account in distributing resources across educational levels. Countries' per student investment is nearly 2.5 times higher for tertiary education than for early childhood education and care (ECEC) and participation rates are lower, particularly for disadvantaged children (OECD, 2011a). Nonetheless, investments in ECEC are both equitable and efficient. Students who had attended pre-primary education for more than one year outperformed the rest in PISA, and in many countries the difference is equivalent to more than one school year, even when taking into account the students' socio-economic background (OECD, 2010a).

Policy options for funding mechanisms to respond to the needs of schools and students

- *Provide access to quality early childhood education and care, particularly to at-risk children.* In recent years, several OECD countries have made important efforts to increase access to ECEC by advancing the age of compulsory schooling or increasing the number of places available for children, including Australia, Austria, Poland and Spain. At this initial educational stage, direct public funding of services is associated with more effective governmental monitoring of early childhood services, advantages of scale, better quality across the country, more effective training for educators and a higher degree of equity in access (OECD, 2006).

Some countries have opted for a targeted approach by promoting access for disadvantaged groups. This is the case in the United States, where only 45% of 3-to-5-year-olds from low-income families are enrolled in pre-school programmes, compared to almost 75% from high-income families (Fuller et al., 2002). Also, funding support to schools that cater to low-income students is provided in Singapore (OECD, 2011c). There are risks however: targeted programmes segregate, may stigmatise and may fail to provide ECEC for many of the children eligible or for a large group of more moderate income families that are also unable to afford the private costs (OECD, 2006).

- *Take into consideration that disadvantaged students can be more costly to educate.* In Ontario (Canada), for example, low-income families, recent immigration, students with low educated parents, and single parent groups are taken into account in the distribution of funds to school boards. Among the different existing funding strategies for schools, formula funding using a needs-based group of variables is the most conducive to equity. In this approach students are typically the unit of measure and, in countries where there is school choice money follows the student if she/he moves to another school. Finland, Chile and the Netherlands use a formula that provides significantly more funding for disadvantaged students.

Regular school funding can be supplemented with programmes that allow governments to address specific needs. For example, in many Asian countries the number of students who attend after-school lessons is very high, and these are often private (See Figure 2.4). In Korea, private tutoring, also known as shadow education, is a common practise and the government offers additional financial support to schools and parents (See Box 2.4).

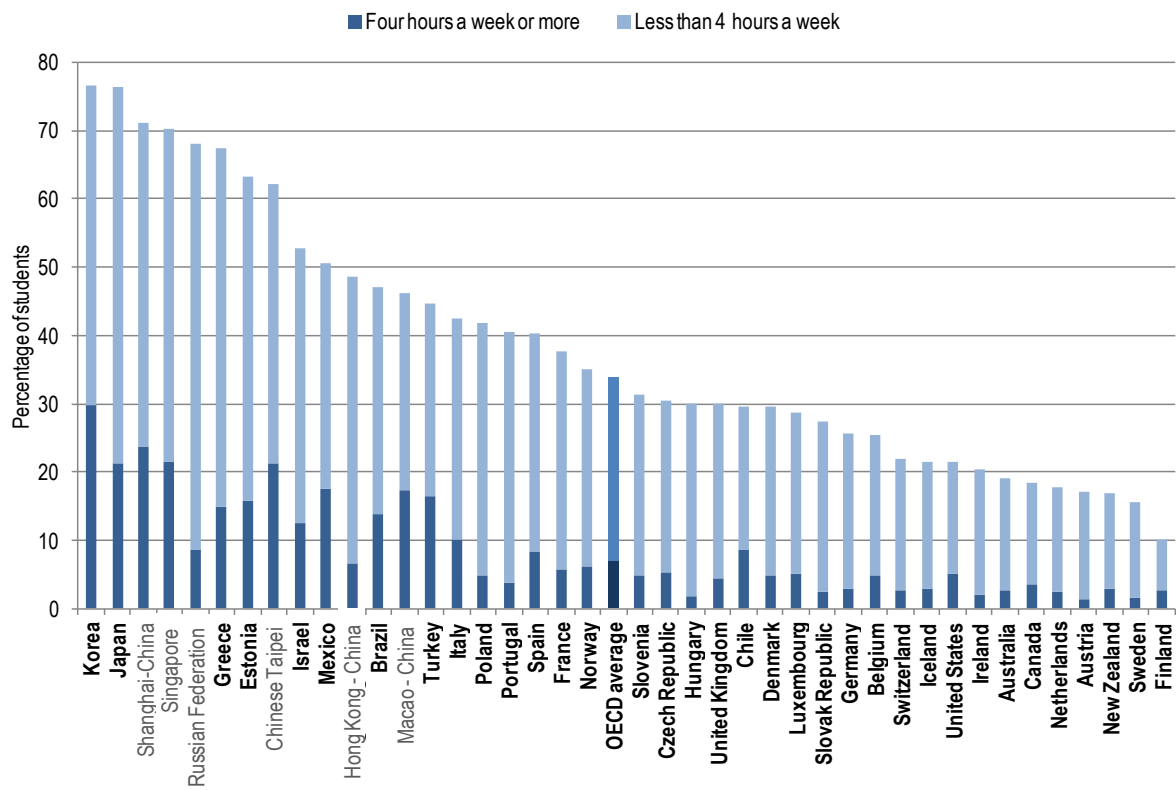
Box 2.4. Making after-school lessons available to all students in Korea

In Asia, the share of students attending after-school lessons is higher than the OECD average. In Korea, a government survey found that 77% of students in primary and secondary schools have private tutors, which is known as *hagwon*, for an average of about 10 hours a week. Private tutoring reinforces inequities as it represents a considerable financial burden for low income families. Its costs are estimated to represent 8% of the monthly average income, which adds up to the already high level of private spending in education. In Korea, additional resources enable schools to offer extra instruction after school and financial support is provided to poor parents to make private tutors more affordable.

Source: OECD (2011e), *A framework for growth and social cohesion in Korea*, OECD, Paris, <http://www.oecd.org/dataoecd/37/2/48225033.pdf>.

In several OECD countries with large between-school variation and a geographic concentration of low performing schools, supplementary funds have also been devoted to create specific area-based support structures for schools. This approach was adopted in France in the 1980s and results showed the need to concentrate more resources in fewer schools. To this end, in 2006 this initiative evolved into a dual network differentiated by levels of need. While the *Réseaux de Réussite Scolaire* (RRS, “Networks of School Success”) include around 14% of students in compulsory schooling, the *Réseaux d’Ambition Réussite* (RAR, “Networks of Ambition Success”) are confined to the most disadvantaged schools. In the Netherlands a national programme is being designed to create a “Quality Leap” of the southern part of Rotterdam. Drawing from the experience of the Harlem Children’s Zone in New York (United States), the Dutch initiative aims at pulling together the resources of different educational stakeholders in the most deprived area of the country. However, an excessive reliance on supplementary programmes may generate overlap, difficulties in coordinating allocations, excessive bureaucracy, inefficiencies and lack of long term sustainability for schools.

Figure 2.4. Students attending after-school lessons in mathematics (2009)



Source: OECD (2010b), PISA 2009 Results: What Makes a School Successful?: Resources, Policies and Practices (Volume IV), PISA, OECD, Paris.

- Balance autonomy with resource accountability to ensure resources reach those with the greatest needs.* Decentralising educational funding to local authorities can increase responsiveness to local needs – but it may not be effective if either the funding is inadequate or local authorities lack the required capacity. In addition, resources may be diverted from disadvantaged students to other purposes when insufficient funds are provided (Sibieta, Chowdry and Muriel, 2008) and inequalities can be exacerbated when fiscal capacity differs (Chetty and Friedman, 2011). In Shanghai-China, each district runs its own schools using local finance, but the municipal government maintains strong monitoring to ensure parity in school funding (OECD, 2011c). As for schools, evidence points to autonomy in areas where school-level knowledge is more relevant, such as managing their personnel, while the central level should control resource levels and performance standards.

2.5. Design equivalent upper secondary pathways to ensure completion

Challenge: ensuring upper secondary completion

Upper secondary education is a strategic level of education for individuals and societies, representing a pivot between a basic educational foundation and a move into advanced study or employment. Upper secondary is the last stage of education enrolling the great majority of young people. Around 80% of young people in OECD countries gain upper secondary qualifications, and some groups are at bigger odds of dropping out than others, including more disadvantaged students, migrants and boys (OECD, 2011a). Ensuring completion of upper secondary education for all is a key step for equity.

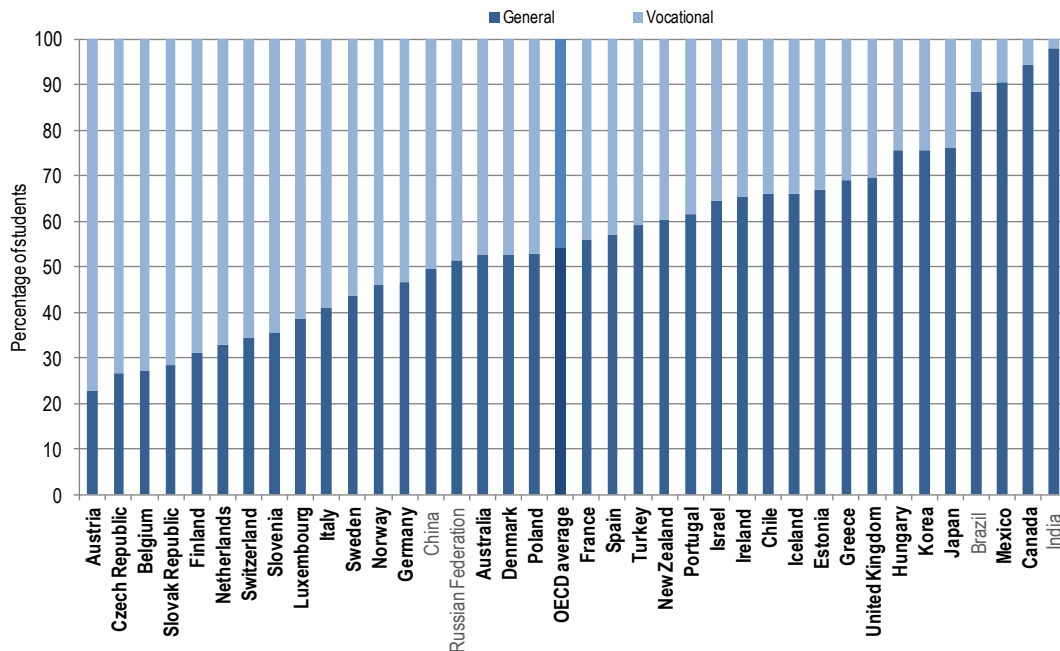
Evidence: the design of upper secondary can support greater equity

Upper secondary often represents a challenging change for students as it gives them the opportunity to choose the content of their studies to a significant extent. In most OECD education systems, these different options are structured in academic or vocational education and training (VET) programmes. Although dropping out it is the result of a long process of student disengagement, evidence shows that the attractiveness and relevance of the pathways offered to students in upper secondary are essential to motivate them to stay in education. Different pathways may stratify students and offer possibilities of variable value depending on the quality and outcomes, whether for the labour market or for further studies. Some programmes may not allow students to transfer from one track to another, or may be terminal, which can result in dead ends for students who may have made wrong choices earlier on, changed interests or want to re-enter the education system.

Although almost half of the students in upper secondary education are enrolled in VET programmes (OECD, 2011a), this average masks significant differences between countries (Figure 2.5). VET programmes have tended to suffer from a poor reputation in many countries, as these seemed to be of limited relevance for the labour market and a weak option in upper secondary education (OECD, 2010d). For instance vocational tracks tend to concentrate students with lower socio-economic backgrounds, and to have higher dropout rates (OECD, 2007). Students enrolled in VET at age 15 in most OECD countries do not tend to perform as well according to PISA 2009 as those attending non-vocational tracks, after controlling for gender and a number of family characteristics (OECD, 2011a).

Figure 2.5. Enrolment in upper secondary education by programme orientation

Students enrolled in general or vocational education and training programmes (2009)



Source: OECD (2011a), Education at a Glance 2011: OECD Indicators, OECD, Paris.

Policy options to design equivalent and diverse upper secondary education pathways

- Promote the development of different education pathways –academic and vocational training (VET) that have equivalent value for further study or the labour market. Upper secondary should respond to the needs of students and the labour market through the flexible combination of vocational and academic choices (Sahlberg, 2007). Equivalence between pathways would ensure that students can choose between a range of choices in upper secondary and that VET is not perceived as a second best option. In many cases, equivalence implies improving the quality and relevancy of VET to provide a mix of generic and technical skills for those who may have difficulties with school and more academic learning. It also means ensuring transferability between programmes to avoid dead ends and pathways which lock individuals out of further learning options.*

Box 2.5. Revamping technical education in Singapore

One of the main sources of Singapore's competitive advantage is the ability of the government to manage supply and demand of education and skills. In 1992, Singapore reviewed its vocational education and decided to transform and reposition it so that it was not seen as a place of last resort. They created the Institute for Technical Education (ITE), which transformed the content, quality and image of vocational education. ITE's founders brought in leaders with a broad vision and staff committed to caring for students. They revamped the curriculum and workforce certification system, developed courses in new industries and consolidated existing technical campuses into three mega campuses with a sophisticated technology base and close ties to international corporations. To combat the societal prejudice against less academically-inclined students, ITE promoted and rebranded its kind of "hands-on, minds-on, hearts-on" applied learning. The result has been a doubling of enrolment since 1995, and ITE students now constitute about 25% of the post-secondary cohort. More than 82% of students in 2009 completed their training and are placed in jobs. Pay levels for ITE graduates have also been strong, and the ITE track is now seen by students as a relevant pathway. Part of the reason for the success of the technical education at ITE is that students get a strong academic foundation early in their academic careers so they can acquire the more sophisticated skills required by leading edge employers.

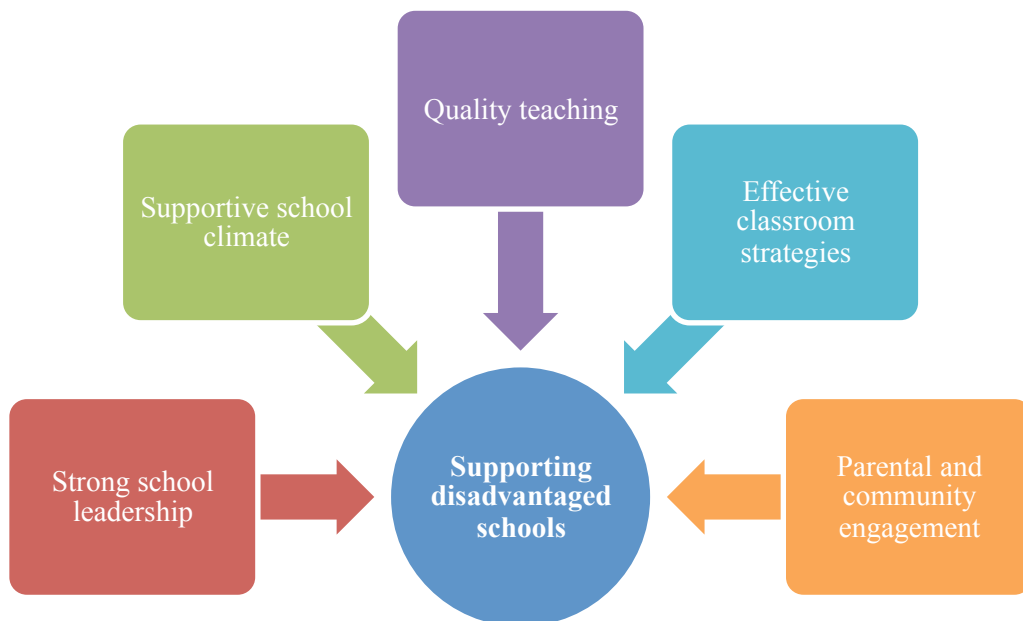
Source: OECD (2011c), *Lessons from PISA for the United States*, Strong Performers and Successful Reformers in Education, OECD, Paris.

- *Ensure the availability and quality of guidance and counselling.* Guidance and counselling services are fundamental to help students make an appropriate educational and career choice, particularly in systems that offer a range of vocational and general studies leading to further study, work or combinations of the two (OECD, 2004). Existing guidance tends to be more focused on academic choices than on occupational ones and needs to engage more fully with the world of work in order to ensure their advice is accurate and appropriate, and specifically to give students the opportunity to try out future professions. Many OECD countries have introduced related initiatives. In Ireland, enhanced guidance and counselling targeted at supporting junior secondary students is provided in schools with the highest concentrations of disadvantage (Irish Ministry of Education, 2011).
- *Targeted measures to prevent dropout: flexibility and incentives.* Upper secondary is crucial, and probably one of the last opportunities education systems have to encourage and support students to stay in education – even past the age of compulsory schooling – to improve their skills and their long-term prospects. Attractive alternatives in secondary education can provide opportunities for these students to complete this stage and reduce dropout. Some countries have introduced the concept of an education or training guarantee until the age of 18, among which Austria, New Zealand, and United Kingdom (OECD, 2010e) and others seek to guarantee a given basic education level (Australia and Netherlands). Also, a few countries, such as Mexico, Spain, and Great Britain (United Kingdom), have provided financial incentives to encourage poorer students to stay in school or improve their performance.

3. IMPROVING LOW PERFORMING DISADVANTAGED SCHOOLS

In most OECD countries, students' attainment is typically lower in schools where most of the students come from disadvantaged backgrounds (OECD, 2010a; OECD, 2010f), because students' socio-economic background has a strong impact on their performance and many disadvantaged schools are unable to counteract its negative impact, and may even accentuate it (OECD, 2010a; Bjorklund and Salvanes, 2011). This section presents five policy recommendations that are relevant for all schools, but have shown to be particularly effective in supporting the improvement of low performing disadvantaged schools.

Figure 3.1. Policies to support disadvantaged schools and their students



While all countries have extremes of performance within schools, in most countries the differences between schools are also wide and explained in significant part by the social mix of students across schools. A disadvantaged student has a better chance of success if he or she is in a school with students who have high expectations and are intellectually engaged (Hanushek and Woessmann, 2006, Ammermüller, 2005). For example, in Hong Kong-China large variation in performance is observed between schools, but only a small part is related to students' socioeconomic backgrounds (See Figure 3.2). Also, schools with higher proportions of disadvantaged students are at greater odds of suffering from a myriad of social and economic problems that can inhibit their learning. In addition, a higher share of disadvantaged students can have adverse effects on the school climate and increase the complexity of their learning needs (Lupton, 2004).

Sometimes schools' ineffectiveness stems from the schools' inadequate response to student needs, insufficient support for staff, or poor management and professional practice. Often disadvantaged schools lack the ability to attract and retain competent staff (Harris and Chapman, 2004; Muijs *et al.*, 2004) and provide them with access to useful professional development opportunities (Leithwood, 2010). Suitable systemic support for schools is, in many cases, insufficient, and schools find themselves alone, trapped between demanding learning environments and inadequate

support systems. Therefore, systemic support is key for improvement. Two successful strategies in Ontario (Canada) and Shanghai-China are described in Box 3.1.

Box 3.1. Systemic support in Ontario (Canada) and Shanghai-China

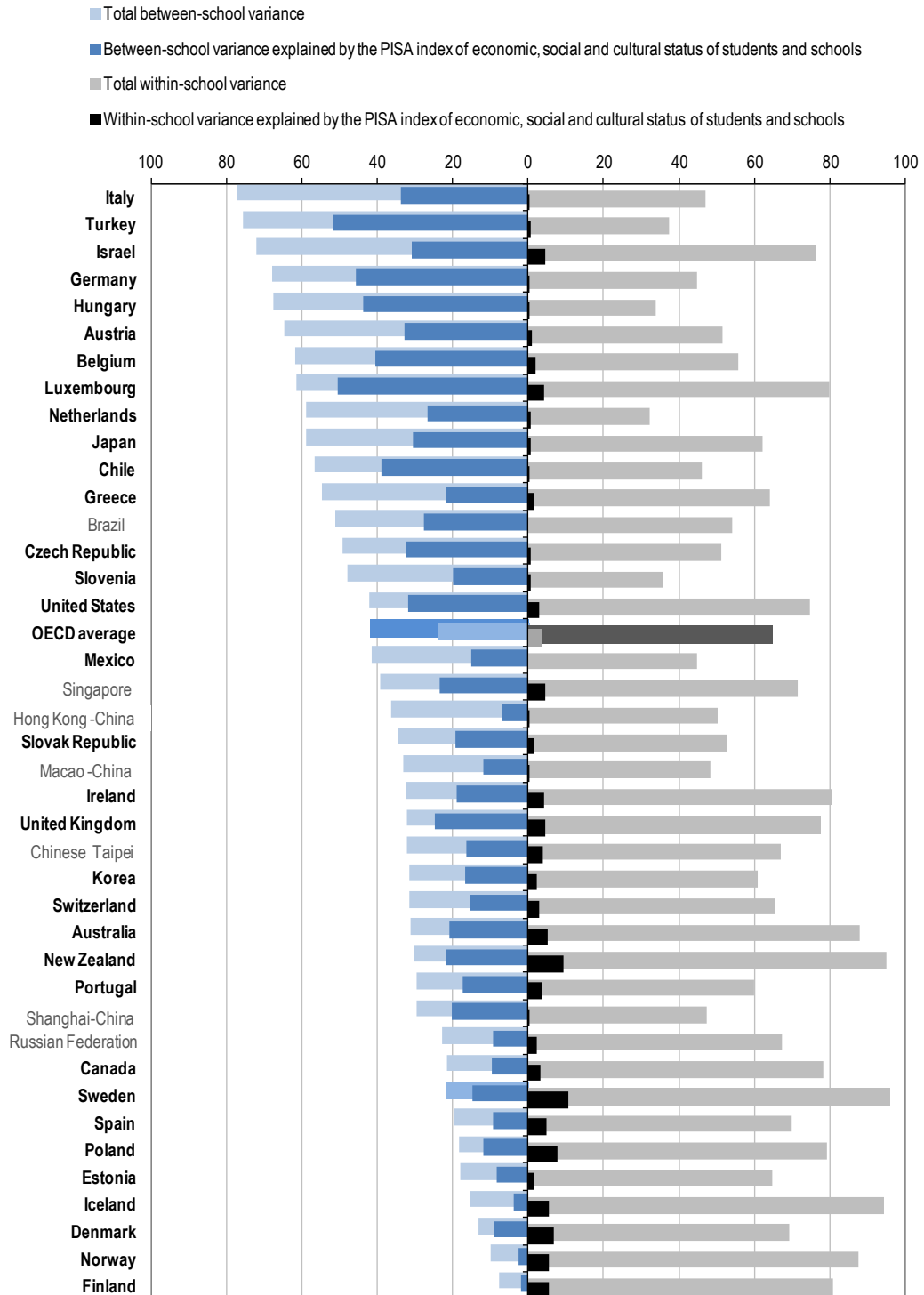
In **Ontario (Canada)**, the Focused Intervention Program (OFIP, since 2006/07) provides targeted support to primary schools that have “experienced particular difficulties in achieving continuous improvement”, measured through results on provincial assessments of reading, writing, and mathematics (grades 3 and 6). OFIP funds are used for professional development, additional student and professional learning resources, literacy and numeracy coaches, and teacher release time for collaboration and additional training. In 2006/07, schools qualified for OFIP support if less than 34% of students reached provincial standard in grade 3 reading. In addition, since 2009/10, resources from the OFIP programme were extended to over 1100 schools in which less than 75% of students met provincial standards in the grades 3 and 6 assessments. From 2002/03 to 2010/11, the number of schools with fewer than 34% of students achieving at provincial standard in grade 3 reading was reduced by two thirds (from 19% to 6%), showing significant success in reducing the number of primary schools in which students fail.

In spite of the considerable social and economic inequalities, **Shanghai-China** has managed to obtain high average scores and low variability in school performance in PISA with efforts to improve the school system by converting “weaker schools” into stronger schools. Measures included i) systematically upgrading the infrastructure of all schools to similar levels, ii) establishing a system of financial transfer payments to schools serving disadvantaged students and transferring high-performing teachers from advantaged to disadvantaged schools, either temporarily or permanently, iii) pairing high-performing districts and schools with low-performing districts and schools, where the authorities in each exchange, discuss their educational development plans with each other work together to deal with problems and share their curricula, teaching materials and good practices, iv) commissioning “strong” public schools to take over the administration of “weak” ones and sending a team of experienced teachers to lead in teaching. These arrangements not only benefit weak schools but also strong schools, for example providing the latter with more opportunities to promote their teachers (OECD, 2011c).

Source: OECD (2011c), *Lessons from PISA for the United States*, Strong Performers and Successful Reformers in Education, OECD, Paris.

Figure 3.2. Differences in reading performance between and within schools

Variation in reading performance between and within schools, and variation explained by the school's socio-economic intake as a percentage of the variance in student performance in PISA (2009)



Source: OECD (2010a), PISA 2009 Results: Overcoming Social Background: Equity in Learning Opportunities and Outcomes (Volume II), OECD, Paris.

3.1. Strengthen and support school leadership

Challenge: disadvantaged schools may lack the leadership needed

As low performing disadvantaged schools often lack internal capacity to improve (Muijs, 2007), high quality school leadership is a key prerequisite for their improvement. They can play a determinant role and contextualise improvement strategies to the particular challenging circumstances of these schools (Baker and Cooper, 2005). In these schools, existing school leaders need to be supported and/or trained – or to be replaced with new, effective leaders. A combination of external support and internal development is often necessary to generate positive change and improvement.

Evidence: school leadership is key for improvement

School leaders are the starting point for school transformation. Effective school leadership is identified as crucial to student outcomes, second only to the quality of teachers (Augustine *et al.*, 2009). Principals have to set high expectations for all students and teachers to succeed (Matthews, 2009). Pont, Nusche and Moorman (2008) highlight four core responsibilities of school leadership that are particularly applicable to low performing and disadvantaged schools: i) supporting, evaluating and developing teacher quality ii) goal-setting, assessment and accountability iii) strategic financial and human resource management and iv) collaborating with other schools.

School leaders in low performing disadvantaged schools are not always adequately selected, trained and supported. As most candidates to school leadership positions have a background as teachers, they are not necessarily prepared as pedagogical leaders, and they may lack the financial and human resources management skills required. In addition, in many countries there is lack of clarity about the school leaders' core tasks and responsibilities. In the case of low performing disadvantaged schools, the situation is further complicated as often, there are not many candidates to become principals, and it may be those with lesser experience and relevant qualifications who take up the post.

Policy options to support school leadership

- *Develop and strengthen school leadership training for low performing disadvantaged schools.* Leadership knowledge, skills and dispositions that will lead toward school improvement have to be developed through leadership preparation programmes or specific modules designed specifically to improve low performing schools. In addition to developing capacity to lead low performing disadvantaged schools, school leadership training programmes should also offer specialised and specific knowledge and skills to understand these schools' specific circumstances, and how to respond to them (Day *et al.*, 2009). In the same way, they also need to be prepared to successfully engage parents and the wider community as active allies for school improvement (see also policy point 5).
- *Provide coaching, mentoring, and networks for school leaders.* School leaders – especially novice ones – in low performing disadvantaged schools are very likely to need extra support. Coaching programmes consist in pairing novice and experienced school leaders, in order to support the inexperienced school leaders in the search for strategies to solve problems (See Box 3.1). Ideally coaches should have experience and demonstrated success in schools with the same characteristics as those in which the new school leader is operating (Morgan and Hawkins, 2004).

In addition, schools cannot achieve transformation by acting alone: networks can provide the impetus for improvement (Caldwell, 2010). Different forms of networks can support and

contribute to the improvement of schools in challenging circumstances (Hadfield and Jopling, 2006) by disseminating good practices across the systems through shared purpose and pooled resources, and consolidating a professional identity (Morgan and Hawkins, 2004).

- *Develop strategies to attract and retain competent leaders in low performing disadvantaged schools.* Having good working conditions and systemic support is key to attracting and retaining competent leaders in disadvantaged schools. Carefully linking salaries to school level factors and making balanced use of performance-related rewards and incentives are options, where there are difficulties in attracting leaders to disadvantaged schools. In Korea for example, becoming a school leader in a low performing disadvantaged school is well regarded by the profession, and well rewarded financially. Often, leaders for these schools are recognised as among the best performers.
- *Provide systemic support to transform low performing disadvantaged schools.* Transforming low performing disadvantaged schools may require both the restructuring and re-culturing of schools (See Box 3.1). First, strategies need to be context-specific to fit schools' specific circumstances (Harris and Chapman, 2004, MacBeath *et al.*, 2005). It is preferable for these strategies to be developed from within the school by existing staff, who then own the improvement process. In the Netherlands for example, persistently low performing schools are identified by the inspectorate. After defining an action plan, the school and the inspectorate work as a team to implement it (Akkerman, *et al.*, 2011). Second, improvement may require additional resources. Third, the timetable can be reorganised to allow release for professional learning teams and for the collaborative planning of strategies for improvement. Fourth, external support and merit recognition can give the schools confidence to improve. Finally, splitting low performing disadvantaged schools, merging small ones and closing recurrently failing ones can be relevant policy options in certain contexts.

3.2. Stimulate a supportive school climate and environment for learning

Challenge: disadvantaged schools are at greater risk of dysfunctional school climates

The level of student disadvantage has been linked to children's behaviour in school: low socio-economic status increases the chance that children will demonstrate behavioural problems (Webster-Stratton and Reid, 2001; Thomas *et al.*, 2008). Classrooms and schools with a high proportion of disruptive, aggressive students significantly undermine classroom quality (Barth *et al.*, 2004, Thomas *et al.*, 2008) and allow teachers less time to devote to teaching and learning (Murphy, 2010).

Evidence: schools' climate and relationships strongly influence student engagement

Positive school environments and climates are key to learning. Results from PISA 2009 suggest that school climates characterised by expectations of high performance, readiness to invest effort and good teacher-student relationships tend to achieve better results (OECD, 2010b). Research has also indicated that a sense of connectedness to teachers and student peers in school is associated with multiple indicators of academic motivation and engagement, particularly emotional engagement (Wang and Holcombe, 2010). Students, especially disadvantaged ones, learn more and have fewer disciplinary problems when they feel that their teachers are dedicated to their success.

The organisation of learning also has an impact on disadvantaged students. The cumulative effect of summer learning differences is a primary cause of widening achievement gaps between disadvantaged and more advantaged students (Smith and Brewer, 2007), because typically disadvantaged children have poorer learning opportunities outside school. For instance, a shorter summer vacation in Japan enables students to retain more over the summer than their peers in the United States that have a longer break (OECD, 2011c).

Smaller classes and school size are beneficial for disadvantaged students. This is particularly the case in the early years (Krueger, 2002), and some evidence signals that smaller class sizes may allow more positive teacher-student relationships. However, there seems to be no effect of class size on the cognitive skills acquired by students (Wossmann and Schütz, 2006), although new evidence shows that small classes can make a difference for disadvantaged students (Piketty and Valdenaire, 2006). As for school size, evidence suggests that, on average, variations in school size make quite small differences to student success (Bloom *et al.*, 2010; Hattie, 2009; Faubert, 2012), but in certain settings smaller schools may foster more student engagement and sense of belonging than larger schools (Crosnoe, Kirkpatrick and Elder, 2004; Roeser, Urda and Stephens, 2009).

Policy options to develop positive school climates and environments for learning

- *Prioritise the development of safe and positive environments adequate for learning.* Positive classroom climates can be developed by enhancing positive teacher-student and peer relationships and avoiding an emphasis on discipline alone. These include prioritising programmes that foster academic performance, well-being and mental health; strategies to enhance teacher-student relationships such as using positive feedback and reinforcement (Harrop and Swinson, 2007) as well as individualised attention (Levin, 2008); a more sustained and in-depth analysis of disruptions and misbehaviours (Gray, 2000) with a cautious use of authoritarian discipline, and the design of anti-violence curricula for disadvantaged schools.
- *Promote and use data to identify at risk students – and intervene early.* High absenteeism, behavioural problems and course failure (MacIver, 2009) are strong predictors of both

student disengagement and school failure, and they can be used to identify students very early on and support them (Kieffer, Marinell and Stephenson, 2011). In the Netherlands, 85% of schools use a “learning monitoring system”, which contains test results and is used to monitor students’ progress and development (Akkerman, *et al.*, 2011).

- *Provide disadvantaged schools with a continuum of support for struggling students.* Ensuring that disadvantaged schools provide their students with adequate and timely support is essential to enable struggling students not only to stay at school but to get the most of their schooling years. These include counselling, mentoring or smoothing transitions through the different levels of education.
- *Explore different and additional ways of organising the learning time in the school.* Different learning time options can include the organisation of after-school and holiday programmes, study support or breakfast clubs (Mahoney, Lord and Carryl, 2005; MacBeath *et al.*, 2005). However, these should be redesigned as disadvantaged children are less likely to participate in these activities, for several reasons including costs, access, and limited knowledge on how to participate (Horgan, 2009). In addition, in some cases schools’ learning time can be organised differently, changing the number of hours per day and/or days per week. In Ireland, the School Completion Programme offers different activities, such as breakfast clubs, after-school support, homework clubs, holiday programmes or social and personal development programmes (Irish Ministry of Education, 2011).
- *Combine smaller classrooms and smaller schools with effective learning practices.* The improved learning environments made possible by smaller schools and smaller classes include better student-teacher relationships and more use of individual instructional approaches. These rely on the frequency and quality of interactions: individualised instruction, regular formative assessment, better use of space, different grouping strategies and activities. Different options can include keeping the same set of students for several years, extended time with the same teacher or group of teachers (“looping”), and interdisciplinary teaching.

3.3. Attract, support and retain high quality teachers

Challenge: high quality teachers do not always reach disadvantaged schools

Although teachers can make a difference on students' performance, disadvantaged schools are not always staffed with effective teachers. Schools in rural and remote settings, together with schools with higher proportions of disadvantaged children and children from ethnic and minority language backgrounds are the less preferred by teachers in Australia (Michaelson, 2006), Japan (Gordon, 2006), New Zealand (Ritchie, 2004) and the United States (Hanushek, Kain and Rivkin, 2005). Schools in these settings are more likely to have higher turnover and staff shortages (Ingvarson and Rowe, 2007), depending on how teachers' careers are managed and on financial incentives, and students tend to find themselves in classes with the least experienced and least qualified teachers (OECD, 2005).

Evidence: effective teachers are vital

Effective teachers are particularly important for disadvantaged schools and their students. First, highly competent teachers can have large positive effects on student performance, strong enough to close achievement gaps between disadvantaged and advantaged students. Second, they may help low performing students to catch up and improve. While effective teaching is particularly helpful for lower performers, they are often the least likely to receive it (OECD, 2005; Darling-Hammond, 2000 in Field, Kuczera and Pont, 2007).

Policy options to attract, support, and retain high quality teachers

The key to the success of some countries – such as Finland and Korea – which combine equity and high performance, resides in ensuring excellent teachers for all students (OECD, 2011c). It is therefore fundamental to design mechanisms to attract competent and qualified teachers to disadvantaged schools. This issue reflects several challenges: how to expand the pool of qualified teacher candidates, recruit teachers to the places they are most needed, and retain qualified teachers over time (Rice, Roellke and Sparks, 2009). Singapore is notable for its comprehensive approach to selecting, training, compensating and developing teachers and principals (OECD, 2011c). Also, the best teachers work with the students who are having the greatest difficulty reaching Singapore's high standards. Similarly, in Japan, officials in the prefectural offices allocate good teachers to schools with weak faculties to make sure that all students have equally capable faculties (OECD, 2011c).

To respond to disadvantaged school's needs, it is also important to improve the diversity of teachers. Teachers with similar backgrounds to their students can serve as powerful role models for students, potentially motivating them further (OECD, 2010e). To this end, there must be a policy for attracting and retaining diverse student teachers into the teaching force.

- *Align teacher education programmes with the needs of disadvantaged schools.* Both initial teacher education and continuous professional development are critical to ensure that teachers acquire the skills and knowledge which allows them to be responsive to every classroom situation. This is especially the case for teachers in disadvantaged schools, confronted with very heterogeneous groups of students in terms of abilities as well as socioeconomic backgrounds, and consequently face more challenging educational demands (OECD, 2010h). For teachers working in disadvantaged schools, it is essential to tackle issues systematically, including not only content and pedagogical matters but also other issues related to learning environments (e.g. dealing with parents and discipline aspects).

- Teacher education must include some context-specific content in order to prepare competent teachers for disadvantaged schools (Musset, 2010). This includes reinforcing initial teacher preparation programmes, developing teachers' capacity to diagnose student problems and to understand the context of the schools where they teach; and practical field experiences. For example, in Finland, all teachers are trained in diagnosing students with learning difficulties and in adapting their teaching to the varying learning needs and styles of their students (OECD, 2011c). Professional development can improve the quality of existing staff and adapt the teachers' skills and knowledge to the school's and students' needs. Professional development is more effective when it is sustained (for as long as it is needed), systematic and aligned with the school's needs and goals (Darling-Hammond, 2010; Musset, 2010).
- *Provide mentoring to teachers in disadvantaged schools.* Induction and mentoring may improve teacher effectiveness, increase retention of novice teachers, diminish the negative effects of inexperience and increase retention of novice teachers (Smith and Ingersoll, 2004), lower the attrition rate (Johnson and Birkeland, 2003) and reinforce their integration into the school staff.. Mentoring is especially important for new teachers in disadvantaged schools as it can help them understand the main challenges and develop adequate pedagogical and relational strategies to respond to students' needs faster (Charles A. Dana Center, 2002). Box 3.2 summarises promising examples of mentoring and induction programmes.

Box 3.2. Selected examples of mentoring and induction programmes

Japan: Induction centres provide all new teachers with in-service training; in schools, teachers regularly observe other teachers and receive feedback on their own demonstration lessons. Teachers also complete an action research project investigating a classroom lesson.

New Zealand: All teachers receive 20% released time during their first two years teaching to participate in the Advice and Guidance programme, in which an experienced teacher leads a peer support group of new teachers, and novices regularly observe other teachers.

Shanghai (China): All new teachers participate in workshops, mentoring, peer observation; they also, analyse lessons in groups with experienced teachers, join teaching research groups with more experienced teachers to discuss teaching techniques, and can be recognised for excellent teaching as novices through district-organised competitions.

Source: Wong H., T. Britton, and T. Ganser (2005), "What the World Can Teach Us About New Teacher Induction," Phi Delta Kappan, Vol. 86, No. 5, pp. 379-384.

- *Improve working conditions to ensure that teachers are successful in disadvantaged schools.* Supportive working conditions can retain effective teachers in disadvantaged schools. Principal support, collaboration with colleagues and adequate resources play a significant role in teachers' decisions to stay in disadvantaged schools and therefore may improve teacher retention in these schools (Allensworth, Ponisciak and Mazzeo, 2009). Improving working conditions to take into account disadvantaged schools' specific characteristics should also include providing time and facilities for meetings, common planning time, additional support and resources.
- In countries as different as Finland, Japan, or Shanghai-China, all teachers are concerned by the quality of teaching (OECD, 2011c). Teachers work together to produce better lessons in engaging students in the work and conveying the knowledge and skills specified in the

syllabus. Those who are less effective are under considerable pressure from their colleagues to improve their practice, by observing their most capable colleagues and receiving feedback on their practice, especially on the new lessons they are creating.

- *Ensure adequate financial incentives to attract and retain teachers in disadvantaged schools.* Teachers' views of disadvantaged schools as more difficult places to teach seem to have a major influence on their decisions to change schools (Hanushek, Kain and Rivkin, 2004). Most OECD countries offer incentives, such as additional yearly or one-time bonuses, as a reward for teaching in a disadvantaged and/or remote area. Incentives need to be large enough to make a difference and be combined with appropriate support and development to effectively improve teacher quality and student achievement in disadvantaged schools. For example, Korea offers an additional stipend and lower class size to teachers who work in disadvantaged schools (Darling-Hammond, 2010). Box 3.3 offers some examples of relevant incentive programmes. In addition, working in disadvantaged school should be valued formally in the teacher career path.

Box 3.3. Incentives for teachers in North Carolina (United States) and Korea

North Carolina: In the United States, North Carolina offered between 2001 and 2004 a retention bonus (\$1 800 US) for certified mathematics, science and special education teachers in high-poverty and low-performing schools. Overall, the bonus programme reduced teacher turnover by 17%, a cost saving of approximately USD 36 000 for each teacher who chose not to or delayed leaving or moving schools.

Korea: All teachers are held to high standards, which contribute to the country's high levels of performance and equitable distribution of teachers. Other contributing elements are the highly respected status of teachers, job stability, high pay, and positive working conditions, including high levels of teacher collaboration (Kang and Hong, 2008). Low socio-economic status students in Korea are *more* likely than high socio-economic status' students to be taught by high quality mathematics teachers. Multiple incentives are offered to candidates who work in high need schools, including additional salary, smaller class size, less instructional time, additional credit towards future promotion to administrative positions, and the ability to choose the next school where to work in.

Sources: Akiba, M., *et al.* (2007), "Teacher Quality, Opportunity Gap, and National Achievement in 46 countries", *Educational Researcher*, Vol. 36, pp. 369-387; Kang, N., and M. Hong (2008), "Achieving excellence in teacher workforce and equity in learning opportunities in South Korea", *Educational Researcher*, No. 37, pp. 200-207; OECD (2011c), *Lessons from PISA for the United States, Strong Performers and Successful Reformers in Education*, OECD, Paris; Clotfelter, C., *et al.* (2008), "Teacher Bonuses and Teacher Retention in Low Performing Schools: Evidence from the North Carolina USD1,800 Teacher Bonus Program", *Public Finance Quarterly*, Vol. 36, No. 1, pp. 63-87.

3.4. Ensure effective classroom learning strategies

Challenge: tackle low expectations for disadvantaged students

Students differ in the way they learn depending on ability, conceptions of learning, learning styles and strategies, interest, motivation, self-efficacy beliefs and emotion, as well as in their linguistic, cultural and social backgrounds. Students bring to the classroom different prior knowledge that substantially influences their learning process, and there is a constant and complex interaction between capacity and experience that shapes learning (Hinton and Fischer; Schneider, Keesler and Morlock, in Dumont, Istance and Benavides, 2010). As a result, students learn at different paces (Comber *et al.*, 2001) and teachers in disadvantaged schools have to adjust to these and develop diversified pedagogical practices to cater for this wide variety of learning needs.

Yet, often, across countries many disadvantaged schools are staffed by teachers and administrators who, with the best of intentions, have low expectations for the academic achievement of their students (Gray, 2000). Such expectations have negative consequences for the nature of the learning experienced by students, the quality of instruction provided by teachers and, last but not least, for the self esteem of students, their aspirations, and their motivation to learn (Leithwood, 2010; Dumont, Istance and Benavides, 2010).

Evidence: certain pedagogical strategies are more effective for disadvantaged students

Classroom teaching and learning practices are the most critical factor in the achievement and engagement of students (Black, 2007). Evidence points to concrete classroom practices that can improve the learning conditions of all students, reinforce equity and advance the learning agenda in disadvantaged schools. A recent review of international evidence on learning points to designing learning-centred, structured and well-designed, personalised, inclusive and social environments to deliver effective learning (Dumont, Istance and Benavides, 2010).

Disadvantaged students benefit in particular when instruction, assessment, and curricula are systematically intertwined. Research encourages teachers to develop a large repertoire of pedagogic approaches adapted to the students' needs and careful planning of its implementation, and using both direct and student-oriented instruction methods. While there is no consensus in the literature on which approach is better, an over-reliance on either approach is not recommended (OECD, 2008; Rowe, 2007).

Arranging students in particular group structures can lead to both improved student engagement in the lesson and improved student achievement. Co-operative learning methods, which involve placing students within the same class in small, temporary groups with mixed abilities focusing on tasks that require them to rely on each other's skills, tend to work equally well for all types of students (Slavin, 2010). Both summative and formative approaches are valuable and both are considered integral in the learning process. Also, research shows that the curriculum should be common and set high expectations for all, be linked to clear learning goals, and be connected to the next education (or professional) level.

Policy options to support effective classroom practices in low performing disadvantaged schools

- *Ensure that school plans combine diversified and flexible pedagogic strategies with assessment.* Schools need to have guidelines that promote the use of both direct and student centred instruction methods and both summative and formative assessment (Faubert, 2012). Direct learning approaches are most useful when teaching students basic knowledge and

skills and student-oriented approaches when students have developed an adequate knowledge base.

Formative assessment can fuel learning when it is well designed. Student confidence improves with useful, systematic and detailed assessments that are consistent with the learning objectives and foster the learners' involvement. Disadvantaged schools can benefit from the use of a combination and well-designed set of summative and formative assessment tools (Faubert, 2012). To support the use of assessment, teachers need diagnostic and assessment tools that allow them to monitor and respond to children learning needs. Assessment needs to be followed by feedback, and summative assessments should be used in a formative manner. Teachers should receive training on how to carry out formative evaluation of their own learning programmes.

- *Ensure a curriculum with high expectations, aligned with instruction and assessment.* Strategies for low performing disadvantaged schools to improve require a coherent and balanced curriculum that provides the basis for each student to learn to high standards, combined with the appropriate support to help each student achieve his or her potential (Riley and Coleman, 2011). The curriculum has to be coherent and well articulated along the different educational stages. These high expectations can be complemented with supportive structures and services: positive learning environments offer strong instructional and emotional support (Hamre and Pianta, 2005). For example, in the United States a curricular measure that seems to have a great impact is placing low achievers in advanced programmes rather than lowering the expectations with university preparatory programmes such as Advancement via Individual Determination (AVID).

Box 3.4. From teaching to learning in Singapore and Hong Kong-China

In 2004, **Singapore's** Prime Minister introduced the idea of "Teach Less, Learn More" to promote a different learning paradigm in which there is less dependence on rote learning, repetitive tests and instruction, and more on engaged learning, discovery through experiences, differentiated teaching, learning of lifelong skills, and the building of character through innovative and effective teaching approaches and strategies. A review in 2008 concluded that the Singapore education was strong in literacy, maths and science, but improvements were needed on the soft skills that enable future learning.

At the end of the 20th century, **Hong Kong's** education system faced a multitude of structural crises, partly due to the efforts to accommodate more children and partly due to changes in society's expectations for education. A major curriculum reform to reflect these changes in society was undertaken shifting the focus from "teaching" to "learning" and emphasizing the process of learning rather than memorising facts. The reform has partially released the curriculum from examination pressures of universities and manpower needs of the economy. A new subject called "Liberal Studies" in secondary education consists in learning experiences with timetabled slots, broad topics and flexible assessment. It aims at developing high-order or critical thinking by asking sensible questions; finding directions for analysis, synthesis and conceptualisation; and proposing hypotheses or theories.

Source: OECD (2011c), *Lessons from PISA for the United States, Strong Performers and Successful Reformers in Education*, OECD, Paris.

3.5. Prioritise linking schools with parents and communities

Challenge: parents of disadvantaged students may be less involved in their children's education

The family is the first and primary social system in which young children begin to acquire the fundamental cognitive and social skills necessary for school (Machida, Taylor and Kim, 2002 in OECD, 2010c; Heckman, 2008). Parents' educational expectations for their children are one of the key mechanisms through which they influence their children's schooling careers. Parents can play a vital role in their children's learning and development by engaging as "learning" partners from the earliest age, during the school years and into youth.

Compared to more affluent parents, disadvantaged parents are less likely to be actively engaged in their child's schooling (West, 2007) and this also seems to be the case for migrant parents (OECD, 2010c). Lower levels of parental engagement may be influenced by pressures derived from economic and social difficulties, lack of flexible work hours, extremely long work hours or single parenting. Also, some migrant parents may not speak the school's language fluently and may have little formal education, making it difficult to participate in and monitor their child's schooling progress. In addition some parents feel uncertain of their role in school and their child's education or unaware of its relevance (Leithwood, 2010).

Evidence: parental engagement fosters positive outcomes for students

Greater parental involvement in education encourages more positive attitudes towards school, improves homework habits, reduces absenteeism, disengagement and dropout and enhances academic achievement. Parental engagement in education mostly happens through two vectors (OECD, 2010f): the support parents give to their children at home, such as discussing school activities and helping with homework, and in-school activities, such as taking part in parent-school meetings and other school activities (Nusche, 2009; Dumont, Istance and Benavides, 2010). High achieving students in disadvantaged schools are more likely to have parents involved in their learning at home and actively participating in their schooling (Ingram, Wolfe and Lieberman, 2007).

Policy options to link schools with parents and communities

Specific policies should be designed to ensure that disadvantaged schools have the capacity to engage parents in ways that are meaningful and supportive of their children's achievement, especially those who may require extra support to engage in their child's learning. To be effective, efforts have to be aligned with school goals and activities (Schenider *et al.* in Dumont, Istance and Benavides, 2010) and be perceived as positive by all parties.

School failure needs to be understood in an ample way, as the failure of the whole education system in providing an education of quality to all (OECD, 2012a). In this regard, in Japan effort rather than ability is considered to be the main explanatory factor of student achievement. This implies that responsibility for failure is not only individual but also depends on the environment, which motivates further parents and teachers to ensure students' progress in school (OECD, 2011c). To bolster collective support:

- *Ensure schools have the capacity to support parental involvement with specific communication strategies.* Good communication between parents and schools allows better coordination between the learning activities carried on between school and home. Effective strategies i) use diverse communication channels as formal arrangements to link parents and schools may not work for disadvantaged groups (Field, Kuczera and Pont, 2007), ii) relay the

information to parents in a balanced way (Field, Kuczera and Pont, 2007) as if the only information reaching home is bad news, there will be little chance of winning support from parents for the efforts being made at school, iii) proactively and systematically identify and try to engage families who are not yet involved in their children's schooling and iv) provide clear guidelines on how parents can contribute to their child's schooling.

- *Support the building of links between schools and their communities.* Communities can offer a wide range of valuable resources for disadvantaged students and schools, such as volunteer tutors, adult mentors and enrichment programmes for students (Furco in Dumont, Istance and Benavides, 2010). Mentoring migrant students, especially by mentors of migrant backgrounds, is often found to be an effective approach in providing additional educational support and raising the self-confidence of immigrant students (OECD, 2010c). In return, schools can become resource centres for community development (Field, Kuczera and Pont, 2007). They can work closely with community health, recreation, youth, police and other local institutions to address external student and family obstacles to students' learning.

Evidence shows that such extensions of school services attract families that would otherwise be unwilling to be involved. In Ireland, home school liaison coordinators targeting disadvantaged students promote partnership and collaboration between parents and teachers by working with staff to develop a spirit of collaboration and organising locally based activities to encourage greater contact between parents (Irish Ministry of Education, 2011). In the Netherlands, community schools have been created to integrate out-of-school services, such as childcare, health and welfare services, sports and cultural institutions. This is particularly beneficial for disadvantaged students as it provides them with an out-of-school environment more conducive to learning (Akkerman, *et al.*, 2011).

4. POLICY IMPLEMENTATION STRATEGIES: EQUITY TARGETS

A strategy for improvement can benefit from targets

Improving system-wide educational outcomes is a complex task, requiring an approach that addresses many, if not all, major components of the system. Designing the right policies to improve equity and reduce school failure is essential; but having well-developed means for turning those into action across large numbers of schools is key for successful implementation (OECD, 2010g).

Collaboration and engagement of key stakeholders in the policy design and implementation process is to be ensured. With the move to greater school level autonomy and decentralisation in many systems, not all important policy issues are under the responsibility of central or local authorities. Indeed education governance in OECD countries is spread among an increasing range of stakeholders, making coordination, cooperation, effectiveness and accountability more important than ever before.

A small number of clear, priority and measurable goals should be introduced to ensure focus and get system alignment on the policies designed. The success of improvement strategies can be measured against them, and they can help rising and clarifying expectations of what can be achieved. Often policies fail because there are many different concurrent elements and players with unconnected initiatives. Targets are an effective mean to align efforts in contexts of a high degree of autonomy or when many actors and stakeholders are involved. Indeed, targets are often combined with autonomy, allowing flexibility to harness local knowledge on how to best allocate resources, while leading to system-wide improvement and achieving desirable outcomes.

Box 4.1. Benchmarking in the European Union

In the **European Union (EU)**, the Education and Training 2020 strategy for improvement includes 5 measurable targets:

- To reduce the percentage of early school leavers to no more than 10%;
- To cut the percentage of low-achieving pupils in reading by at least 20%;
- To ensure that at least 85% of young people complete upper secondary education;
- To increase the number of university graduates in mathematics, science and technology (MST) by at least 15%, and to decrease the gender imbalance in these subjects;
- To have 12.5% of adults (25-64) participate in lifelong learning.

These benchmarks are used to inform and guide evidence-based policy making and as a means to monitor progress towards commonly agreed strategic objectives, both at the EU and national levels. Every year a progress report with detailed analysis and national statistics in each of the areas identified by the indicators and benchmarks is published. Every two years, countries submit a national report describing their progress and the EU assesses developments towards the targets and reviews the strategy taking into consideration both annual and country reports.

Source: European Commission, http://ec.europa.eu/education/lifelong-learning-policy/doc34_en.htm.

In parallel with setting goals or targets, systemic support to help reach these goals in schools needs to be designed. This refers to the importance of setting high curriculum standards and aligning the support system for schools, their leaders and teachers, the financing and resources, and the role of different players. In addition, there needs to be a venue for ongoing dialogue and communication with

all those involved in the policy reform that includes government, teachers, school leaders and parents, students, and key economic and civil society representatives.

Setting effective targets

Targets are a powerful catalyst for improvement. However, its success depends on the capacity to align efforts towards the goals, which requires carefully setting them to ensure their effectiveness. For example, successful systems are careful to avoid an overemphasis on standardisation, narrowing the curriculum and other distortions of teaching practices (OECD, *forthcoming*). Box 4.1 lists properties that are common to effective targets.

Box 4.2. Properties of effective equity targets

- **Numerical:** Progress must be measurable. Numeric values provide a metric for gauging progress towards goals and facilitate comparisons over units of observation and time.
- **Few indicators:** A limited number of targets will gather the necessary attention and resources on its achievement.
- **Related to student outcomes:** Targets should be results-oriented (grades, qualification levels, gain and growth, improvement) rather than focused on inputs or processes.
- **Clear and time-bounded:** It should be easy for the public to relate targets to shared goals, interpret results and hold the education system accountable. Also, a time for completion need to be defined.
- **Ambitious but achievable:** Targets should raise the bar, leading systems towards improvement but within credible boundaries of achievement. Targets need to be continuously reviewed and refined on the basis of experience and results.
- **Broad:** Targets should be defined in a way that establishes the right incentives for improvement and prevents teaching focused only on assessment.
- **Actionable:** Targets should allow drawing concrete actions for improvement, enabling professionals to take actions towards its accomplishment.

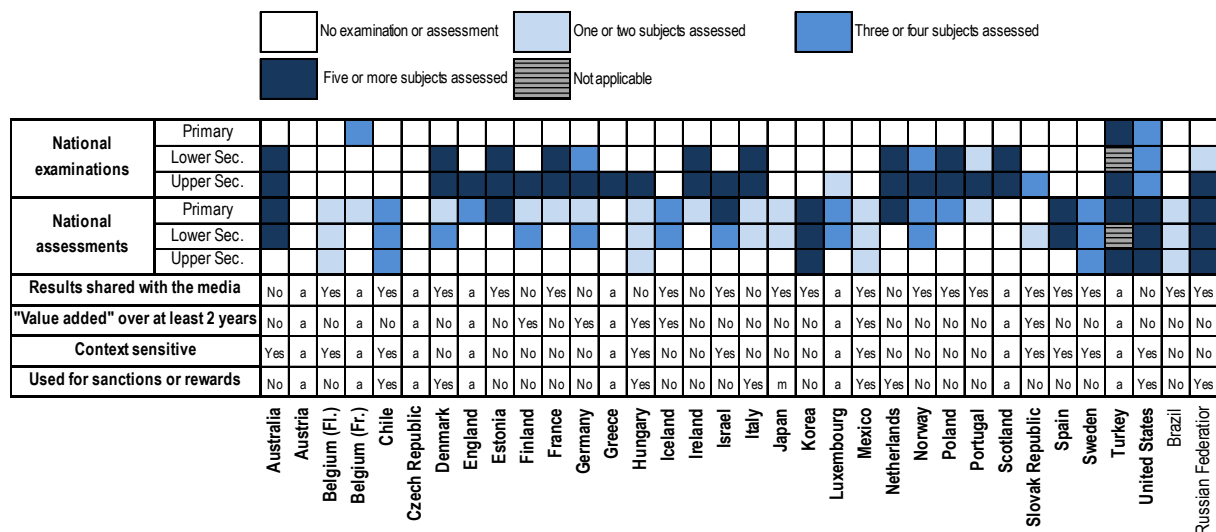
Source: OECD (2010g), *Improving Schools: Strategies for Action in Mexico*, OECD, Paris.

Many OECD countries have introduced targets for equity in education, but the types of outcomes measured differ across countries. Setting targets on minimum standards is common across OECD countries and indicators of basic reading skills and dropout are relevant equity targets (Field, Kuczera and Pont, 2007). Ontario (Canada) has set targets in both basic skills and dropout, as it aims at increasing the provincial passing rate in literacy and numeracy from 55% to 75%, and at raising upper secondary graduation rates from 68% to 85% (OECD, 2011c). Similarly, in the Netherlands, the government has committed to reduce the number of students who drop out from 41 800 in 2009 to 25 000 in 2016 (Akkerman, *et al.*, 2011). Targets can also be focused on specific groups. For example, halving the gap for indigenous students in reading, writing and numeracy is one of the targets of the Australian education system (Santiago *et al.*, 2011).

Measuring progress and increasing accountability

The methods employed to gather information in order to monitor progress vary across countries. Some countries use administrative data, such as indicators on qualifications or inspections ratings, to set goals. However, students' assessments, including examinations, can provide a more accurate measure of learning outcomes and teaching performance (Field, Kuczera and Pont, 2007). To this end, two-thirds of OECD countries have introduced student assessments at lower secondary education (See Figure 4.1). Indeed, targets can be benchmarked to international assessments that put national performance into a broader perspective and benefit from international best practice.

Figure 4.1. Performance accountability in public schools (2009)



- Information on how results are shared and features used when reporting these refer to national assessments in upper secondary education, with the exception of Denmark, Estonia, France, Germany, Ireland, Italy, the Netherlands, Norway, Poland, Portugal, Slovak Republic, the United States and Russian Federation, where these are based on national examinations only. The "a" stands for category not applicable.

Source: OECD (2011a), Education at a Glance 2011: OECD Indicators, OECD, Paris.

Establishing clear boundaries on the extent to which the results can inform decision-making is crucial to prevent a flawed implementation and effectively align the incentives of all actors (OECD, *forthcoming*). In addition, it is also relevant to consider limitations as raw national assessment results in selected subjects should not be taken as complete measures of student achievement or progress, and even less so of teacher or school quality (OECD, *forthcoming*). For these reasons, many education systems use value added measures, contextualize results with measures of socio-economic conditions and do not use results to provide sanctions or rewards.

A controversial issue is whether school-level examination results should be published. While overall results should be widely publicised at the national level, it is less clear whether school-level results should be made available to the public. On the one hand, results can provide valuable feedback to teachers and school principals for improvement and point to best practices. On the other hand, results serve as a powerful instrument of public accountability.

Instruments such as rankings of schools can pose challenges to equity-related policy goals, particularly where opportunities for school choice are provided. Advocates argue that publication of

school results can spur innovation and improvement as well as enable parents to make better-informed choices and increase transparency. Detractors complain that publication can further stigmatise weak schools and their students. Education authorities need to be prepared to manage and respond to the public debate that will follow publication, contextualising the results and put into place measures to level up disadvantaged schools and raise the overall quality of the system (Field, Kuczera and Pont, 2007).

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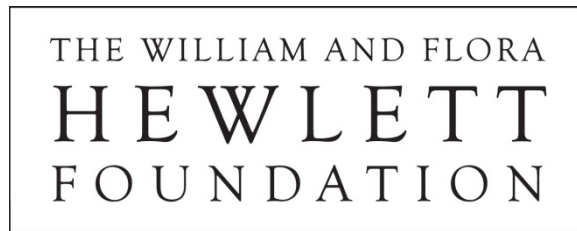
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