

OECD Report: Education at a Glance 2011

EI summary of key findings

UNDER EMBARGO UNTIL 13 SEPTEMBER, 11h00 PARIS TIME!

Introduction

Education at a Glance (EaG) is a leading annual OECD publication on education systems indicators in OECD and partner countries. The findings of the report are based on a broad range of statistical data and increasingly on data from international comparative studies, such as PISA. The report is a key output within the framework of the OECD's Indicators of Education Systems (INES) programme.

OECD has always emphasized that education and human capital are the main driving forces of economic and social development of societies. Now, after decades of education reforms, when access to education has expanded well beyond compulsory education and encompassing the majority of populations in OECD countries, it is time to move beyond simplistic "more is better" approach measuring mainly investment and enrolment data. The report argues that countries are increasingly interested in 'the quality of competences which students acquire' (p. 13)¹. In addition, the OECD reasons that in a globalized economy, the benchmark for success are no longer measured by national standards alone, but by country comparisons with the "best performing education systems" worldwide. The OECD sees its role as central in providing such a perspective, and calls its indicators "catalysts for change". The editorial part of the report cites the "shock effect" of PISA on Germany, and credits the OECD with developing the profile of high performing education systems, which in turn have informed education reforms and policies globally. In general, the indicators are used to broaden up the education debate, previously compromising a narrow circle of experts, to include the wider public. The negative side effects of this development, such as cherry-picking of policies, however, are not acknowledged.

The main purpose of the Education at a Glance reports, according to the OECD, is to address the policy development needs of member governments, providing them, as well as other stakeholders, with selected, reliable, comparative data, organized in a set of indicators. As education policies grow more complex, this task implies more difficulties, challenges and trade-offs. As explained in the foreword, the indicators are constructed to respond to educational issues that are high on national policy agendas and where the international comparative perspective can offer important added value to what can be accomplished through national analysis and evaluation. The indicators are also intended to be as country-specific as is necessary to allow for historical, systemic and cultural differences between countries. Finally, the OECD attempts to present them in as straightforward manner as possible, while keeping the indicators sufficiently complex to reflect multifaceted educational realities. It must be noted that the priorities, defined by OECD, may or may not correspond to the priorities of teaching professionals.

¹ All page references refer to the OECD's *Education at a Glance 2011: OECD Indicators* report discussed in this summary.

Consequently, the size of Education at a Glance is expanding. The 2011 report contains eleven indicators on education outputs and their impact on learning, seven indicators on financial and human resources, five indicators on access to education, participation and progress, and six indicators on the learning environments and organization of schools; twenty nine in total. These are organized in four respective chapters. In addition the report contains three annexes, containing characteristics of education systems, reference statistics and sources, methods and technical notes. OECD highlights the following themes in the announcement of this years' report: analysis of tuition-fee reforms since 1995; the relationship between social background and student performance; school accountability in public and private schools; and job prospects for students in vocational and academic programmes.

While most of the indicators remain markedly consistent over the time, allowing for trend analyses, there are new indicators each year. In the 2011 report, the indicator D5 on school choice (2010) has been replaced by school accountability, adding an overview of national examination systems, reporting procedures and inspection. Indicator D6 on parents influence on education (2010) has been replaced by new indicator on equitability of education outcomes and opportunities, focusing particularly on vulnerable students. Some indicators, such as A5 on how student socio-economic background affects learning and A6 on enjoyment of reading, are exclusively based on the findings of PISA 2009.

For the first time, Education at a Glance includes analysis of education systems in Brazil, China, India, Indonesia, Russia and South Africa.

The statistics used in the 2011 report corresponds mainly to the year 2008, in some cases to the year 2009, so it still lacks the potential evidence on the impact of global financial and economic crisis on education spending.

Below is a brief overview of the reports' key findings in selected areas:

Educational Institutions outputs & the Impact of Learning: Focus on higher education

In the first chapter, Education at a Glance 2011 gives a broad overview of enrolment and attainment statistics, focusing primarily on the attainment figures of tertiary education and its progress over the last decade. As the report demonstrates, there has been a steady increase in the proportion of 25-64 year olds with tertiary education and a decrease in the number of people in this age group without upper secondary level education. Upper secondary education has become a norm. Based on current patterns of graduation, it is estimated that an average of 82% of today's young people in OECD countries will complete upper secondary education over their lifetimes. On average across OECD countries, 37% of 25- 34 year olds have tertiary education, compared to 22% in the age group 55-64 years.

For the first time, the report gives an illustration of how the total population with tertiary education, roughly 225 million including non-OECD countries in the report, looks when distributed proportionally. It shows that almost 50% of world's population with tertiary education in 2009 come from three countries: USA, China and Japan. (Chart A1.4) Despite overall progress, the differences between countries has not diminished when compared with differences for 55-64 year olds, and if

current trends of tertiary attainment for the 25-34 age group are maintained, those countries with the highest levels will grow more while those countries with lowest levels will fall even more behind the OECD average figures. If tertiary education attainment level counts as a proxy for economic success, there is no prospect of levelling the playing field globally.

Changes in education attainment have occurred mainly at the low and high ends of skills distribution and this is explained in part by the fact that lower skilled older labour is moving out of the labour market and higher education has expanded rapidly for incoming generations.

The report argues that this expansion of tertiary education in general has been met with a rapid shift in the demand for skills in most OECD countries. In addition there are strong personal incentives to obtain a tertiary qualification, including higher salaries and better employment prospects. The demand side is explored in the labour-market indicators on employment and unemployment (Indicator A7), earnings (Indicator A8), incentives to invest in education (Indicator A9), labour costs and net income (Indicator A10) and transition from school to work (Indicator C4).

Economic benefits of education & impact on the labour market

The report provides basic evidence that individuals with higher education degree have a higher chance of being employed full-time and remaining so in times of economic downturn. However, the report warns that tertiary programmes tend to have a long time horizon, while shifts in labour demand occur more rapidly. Young people with vocational education appear to be better off, compared to their counterparts with general secondary education, thus the report suggests that money spent on secondary - vocational programmes is a good investment for economic growth. Vocational education also seems to be more responsive to short term labour market demands.

Nevertheless, there remains a significant earning gap. A person with a higher education degree can expect to earn significantly more – up to 50% more than someone with an upper or post secondary non-tertiary level qualification. The report repeats the argument from previous years, that on average, the gross earnings premium for an individual with a tertiary degree exceeds USD 300 000 for men and USD 200 000 for women across OECD countries. It also calculates that the total return (net present value), both private and public, to a man who successfully completes upper secondary and tertiary education is USD 380 000. For women the same figure is USD 200 000, significantly less, however.

As in the past, these figures are used to suggest that, from a policy perspective, large demands for an educated workforce drive up earnings before supply catches up and this sends strong market signals towards individuals and systems for more investment. Whether this investment should come from public or private sources remains unclear, however. OECD comments that in some countries, the labour market may not effectively signal such a demand because of rigid labour laws and pay structures that tend to compress wages across different educational groups.

Early school leavers (without upper secondary level) are considered a major policy problem, as these young people are very likely to not find their place in the labour market. For the first time the report gives a detailed analysis of successful completion rates in secondary education by program and

gender. Remarkably, the report acknowledges that girls on average have overtaken boys in this respect. (Indicator A2)

According to the OECD, tertiary graduation rates indicate a country's capacity to produce workers with advanced, specialised knowledge and skills. Based on current patterns of graduation, it is estimated that an average of 46% of today's women and 31% of today's men in OECD countries will complete tertiary-type A education (largely theory-based) over their lifetimes. Only 39% of women and 25% of men will do so before the age of 30. An interesting feature of this indicator is international students, who increasingly contribute to enrolment and graduation statistics. If these were excluded in the top target countries, the graduation rates of those countries would drop significantly. (Chart 3.4) **The report concludes that expanding tertiary education while maintaining quality is likely to create pressures for current levels of tertiary spending to be maintained or increased. (Indicator A3)**

The report **states that 'faced with an economic downturn and shrinking budgets, governments need to invest in the fields of education that respond to labour-market needs. Parents and students, too, need to choose prospective fields carefully'.(p. 72, Indicator A4) This statement does undermine the concept of education as human right, reducing it to the labour market tool.**

The gender aspect in the report is prominent. Women represent the majority of students and graduates in almost all OECD countries but they largely dominate in the fields of education, health and welfare, and humanities and arts. Men dominate in engineering, manufacturing and construction. The report does not give a clear policy interpretation/guidance in relation to this phenomenon, but comments that governments in OECD countries are concerned about the low number of women undertaking science-related studies. It should be noted that across all education levels women earn significantly less than men, according to the report.

Financial & human resources invested in education

The section on financial and human resources, in line with previous reports, provide statistics on how much is spent per student (Indicator B1), what proportion of national wealth is spent on education (Indicator B2), how big is public and private investment (Indicators B3 and B4), what tertiary fees are (Indicator B5) and on what these resources are spent (Indicator B6) as well as which factors influence the level of spending (Indicator B7).

The report states that OECD countries on average spend USD 9 860 annually per student from primary through tertiary education: USD 7 065 per primary student, USD 8 852 per secondary student and USD 18 258 per tertiary student. Most of this money is spent for core education services, except at tertiary level, where about 30% of investment goes into research and development. It also states that from 2000 to 2008 expenses per tertiary student have risen on average by 14%, compared to remaining stable between 1995 and 2000. Total expenditure in pre-tertiary education has increased on average by 34% between 2000 and 2008, when student numbers remained relatively stable. (Indicator B1)

The main argument is that the high demand for high skills which drives tertiary education expansion and translates into higher quality and costs must be balanced against public cost in other levels,

where there is no such strong private incentives. **The report also argues that the main factors driving up the expenses per tertiary students are teachers' salaries, pension systems, instruction time, materials, reduced class sizes.** (Indicators B7, D1, D4 and C1)

When it comes to total spending in education as part of national wealth, in 2008, OECD countries spent on the average 6.1% of their collective GDP on educational institutions as in previous year and this average exceeding 7.0% in Chile, Denmark, Iceland, Israel, Korea, Norway and the United States. Only nine of 36 countries for which data are available spend 5.0% of GDP or less. The increase of the education spending from 2000 to 2008 has been faster than growth of GDP in 25 out of 32 countries surveyed. On average, these funds come mainly from public sources (83%), except that 30% in tertiary and 19% in pre-primary education come from private sources. However, overall, the report does not report any significant changes compared to the previous year.

One full indicator (B5) is devoted to the issues of tertiary student fees. It is focused primarily on public institutions. In eight OECD countries, public institutions charge no tuition fees, but in one-third of countries with available data, public institutions charge annual tuition fees in excess of USD 1 500 for national students. On the other hand there is an increasing role for public subsidies in various forms, which can be a powerful policy tool for equalizing opportunities and relative cost between low-income and high-income families.

How much are teachers paid?

Burgeoning national debt, spurred by governments' responses to the financial crisis of late 2008, has put pressure on policy makers to reduce government expenditure – particularly on public payrolls. The report acknowledges that even if teachers' salaries represent the largest single cost in school education, policy makers should consider very carefully teachers' salaries as they look both for sustaining quality of education and balanced budget. Interestingly, the report notes that the growth rate in teachers' salaries was lower than the growth rate in GDP per capita in most countries between 2000 and 2008. However, from 2008 to 2009, most countries experienced an increase in teachers' salaries relative to GDP per capita. This is likely to be a result of the sharp slowdown in GDP growth in the aftermath of the financial crisis.

The statutory salaries of teachers with at least 15 years of experience average USD 38 914 at the primary level, USD 41 701 at the lower secondary level and USD 43 711 at the upper secondary level. On average in OECD countries, teachers' salaries at the primary-school level amount to 77% of full-time, full-year earnings for 25-64 year-olds with a tertiary education, while teachers' salaries at the lower secondary level amount to 81% of that benchmark and teacher's salaries at the upper secondary level amount to 85% of it.

Socio-economic background and student performance

OECD's *Education at a Glance 2011* report finds that the difference in reading performance between students from different socio-economic backgrounds is strong, particularly in France and New Zealand, where a student's predicted reading score is most heavily influenced by their socio-economic background. The gap in reading performance between students from different socio-economic backgrounds is also higher than the OECD average in Australia, Austria, Belgium, the Czech Republic, Germany, Hungary, Israel Sweden and the United Kingdom.

These findings are taken from the most recent PISA 2009 cycle results, Volume II *Overcoming Social Background, Equity in Learning Opportunities and Outcomes* which looked at how factors such as socio-economic background and immigrant status affect student and school performance, and at the role that education policy can play in moderating the impact of these factors and creating a more equitable learning environment.

PISA 2009 revealed that after adjusting for socio-economic status, students with an immigrant background (first and second generation) scored lower than students without an immigrant background. These findings are, in part, explained by students with an immigrant background being generally socio-economically disadvantaged, as well as facing more challenges in education, such as language difficulties for first generation immigrants. On average, second generation students outperform first generation students in reading. The report cautions against associating this to the success of integration policies over generations, rather it points to the differences in characteristics of students with immigrant backgrounds.

The report does note that ‘the large gaps in performance and socio-economic background suggest that schools and societies face major challenges in realising the potential of students with an immigrant background’ (p. 92). However, results from PISA 2009 revealed that in countries such as Australia, Canada and Hungary, students from immigrant families score better than, or as well as, students without an immigrant background. This suggests that the variation between countries makes it difficult to draw general conclusions for OECD countries.

PISA 2009 also found, however, that despite strong associations between socio-economic backgrounds and reading performance, one-third of students from disadvantaged backgrounds are considered ‘resilient’ – meaning that they perform better than predicted given their background. In Korea and Shanghai-China this percentage is much higher, at 56% and 67%, and in Finland, Japan and Turkey the proportion of resilient students is also above the OECD average. In Argentina, Austria, Luxembourg and the Russian Federation, however, the percentage of students from disadvantaged backgrounds who perform far better than predicted is lower than the OECD average.

How schools are held accountable?

A new indicator that has been included in the OECD’s *Education at a Glance Report* is Indicator D5 ‘How are schools held accountable’ under Chapter D ‘The learning environment and organisation of schools’. This section describes a combination of mechanisms that countries use to hold schools accountable, which are broadly covered in 3 types of accountability:

- **Performance accountability** – focused on school outcomes rather than processes, and is primarily measured by standardised tests. National examinations are a prominent component of performance accountability at the upper secondary level in the majority of OECD countries, and in 13 countries at the lower-secondary level. National assessments are more common at the lower secondary and primary levels.
- **Regulatory accountability** - defined by external evaluation through school inspections, which cover compliance with rules and regulations, quality of instruction and student

performance. Results from school inspections are most often used to evaluation school performance; although the report notes that their results may also influence the evaluation of individual teachers, and affect decisions about remuneration and bonuses for teachers and school budgets. School self-evaluation is suggested to be less credible to external groups and rather suited for school 'improvement' than 'accountability'.

- **Market accountability** – refers to the competitive pressures on schools, and is defined by school choice, and goes from the assumption that 'funding follows students', creating a financial incentive for schools to attract and retain students (and arguably created a competitive climate between schools, as well as further disadvantaging already under-resourced schools). Most countries report having school choice. Financial incentives for schools and parents include: school vouchers, scholarships, and tuition tax credits. Little is said in the report about the negative impact school choice may have on under-resourced schools, and how school choice could result in segregation based on socio-economic background.

According to the OECD, performance and market accountability have become more important during the past two decades as a result of an increased focus on education outcomes, while at the same time regulatory accountability has declined as a result of decentralised systems and autonomy at the school level.

The report, however, provides a narrow definition of accountability, stating that it refers to 'the interaction in a hierarchical relationship between those who have power and those who are delegated authority' (p.430). It does elaborate by stating that 'the use of the word accountability refers to a system that involves collecting and sharing data, providing feedback and making decisions based on the evidence received' (p. 431), but the latter is not well reflected in the types of accountability referred to by the report (national examinations/assessments, school inspections, and school choice).

The section notes that with the increasing ways in which schools and system-level performance can be measured and the outcomes of schools within or across countries can be compared, more attention is now focused on accountability for outcomes. The section therefore also focuses on outcomes-based accountability forms, without taking into account teacher leadership and professionalism, and does not include forms of assessment that are formative or diagnostic.

In addition, accountability forms such as national examinations/assessments generally focus on math and the national language/language of instruction (reading, writing and literature) first, followed by foreign languages, science and social studies. The assessment of other subject areas is not addressed, suggesting that they may be of lesser importance. In terms of the reporting of national examination results to external audiences, it was found that in 5 countries the results were reported to be used by education authorities to sanction or reward schools.

How equal are educational outcomes and opportunities?

Education at a Glance 2011 outlines a number of factors identified with lower reading performance for 15-year old students. (Indicator D6) Lower reading scores were on average at least 1.5 times more likely for students from socio-economically disadvantaged backgrounds², immigrants compared to non-immigrants, and for boys compared to girls. Students whose parents have low levels of education (less than 12 years of schooling) are between 1.3 and 2.3 times more at risk of lower proficiency in reading.

Education at glance places these findings in a context of labour demands and economic growth, referring to the increased demands higher literacy skills over the past two decades, and the vulnerability of those who do not develop these skills to unemployment and physical and mental health problems.

Interestingly, the report argues for countries to focus on student vulnerability and risk – defined as having a reading proficiency below Level 3 on the PISA reading proficiency scale – which it says is important for setting education goals focused *not* on increasing reading scores on the PISA scales by a certain number of points, but rather on reducing the prevalence of, for example, poor readers by a certain percentage over a particular period. The report therefore calls for ‘reducing the prevalence of vulnerable students by lowering the relative risk for potentially vulnerable subpopulations’ (p.454) rather than aiming at ‘closing the achievement gap’, which is argued, does not necessarily reduce the prevalence of vulnerability.

The report argues that lowering the relative risk for potentially vulnerably students can be achieved by ensuring equitable and inclusive learning environments. The report justly notes that ‘equality of outcomes can only be achieved if disadvantaged students have the opportunity to attend schools with high-quality resources and effective school policies and practices’ (p.451).

More importantly, the report addresses the importance of achieving equality of outcomes through ensuring equity – defined in the report as a ‘fair allocation of resources’, giving importance to school inputs. In a key finding **the report refers to factors which affect educational outcomes, including ‘attending a school with positive student-teacher relations, certified teachers, and a strong infrastructure’** (p. 454).

The importance of inclusive school systems – those that support diversity among all learners - is highlighted in the Education at a Glance 2011 report, which states that: ‘school systems with greater levels of inclusion have better overall outcomes and less inequality’ (p455). Importantly, the report argues that schools systems tend to be inclusive when experienced teachers and material resources are evenly distributed among schools.

An important message in the report is that: **‘in some school systems, inequality is entrenched through the mechanisms in which students are allocated to schools, including tracks that channel students into different schools based on their prior achievement or ability, private schools and special programmes in the public sector’** (p.455). The report claims that the separation of high- and

² Socio-economic disadvantaged backgrounds refers in the Education at a Glance 2011 and the PISA 2009 reports to students ‘whose families were in the lowest quartile (bottom 25%) on the PISA index of economic, social and cultural status in their country’ (p. 452).

low-performing students into different schools and different classes within schools (vertical segregation) as well as residential segregation by urban-rural socio-economic factors (horizontal segregation) negatively impacts equality.

School systems that have low levels of vertical segregation are *vertically inclusive*, and similarly, those systems with low levels of horizontal segregation are *horizontally inclusive*. The report finds that Finland, Iceland and Norway have high levels of vertical inclusivity, while Germany, Hungary, Italy, the Netherlands and Turkey have low levels of vertical inclusion. Further, Finland, Norway, Sweden and Switzerland have high levels of horizontal inclusion (students from different backgrounds are evenly distributed across schools), while Chile, Hungary and Mexico have low levels of horizontal inclusion (high horizontal segregation).

The report notes that achieving equality and equity is possible through policies that address vertical and horizontal segregation, for example by encouraging mix-ability schools, or targeting resources at disadvantaged schools. Contrary to previous Education at a Glance reports, this one does not make the case for school choice, but rather states: 'policies that provide greater school choice could potentially increase horizontal inclusion, but this is not necessarily the case, especially if disadvantaged parents are less able to exercise that choice' (p.456).

Conclusion

In general, as before, Education at a Glance 2011 gives rich and broad analysis of many issues in current education presented in the form of indicators. It contains many themes and topics which were not addressed in this short summary, such as social outcomes of education, student-teacher ratios, teachers' working time, etc.