

Education at a Glance 2009: OECD Indicators

Summary in English

- Education at a Glance is the OECD's annual compendium of internationally comparable statistics on education.
- The 2009 edition looks at how education systems continue to expand, with nearly twice as many people graduating from university in 2007 than in the mid 1990s.
- In the context of an economic downturn in which resources are constrained but the need to invest in human capital is high, the 2009 edition also looks at educational processes, financing and outcomes that determine whether education systems deliver value for money.

Making it count: investing scarce resources effectively in expanding education systems

In an economic downturn, the pressure for education systems to work effectively is intensified from two directions. On the one hand, constraints on resources often increase. On the other, investment in human capital becomes even more important, as the acquisition of relevant skills and competencies will be an essential precondition for economic recovery.

Education at a Glance 2009 gives a detailed overview of how education systems have continued to grow, of their outcomes, of how they are funded and of how they are organised. These data allow a wide range of analyses of the degree to which these systems provide value for money and deliver desired outcomes effectively.

Expansion continues

For the last decade now, the volume of educational activity has been expanding rapidly. In particular, the number of people participating in education beyond compulsory schooling has grown from a small minority to the vast majority. This expansion continues, as near-universal participation at upper-secondary level is followed by ever-wider enrolment in tertiary-level institutions. In 2007, one-third of the youth cohort (25-34 year-olds) have attained a tertiary level qualification and in some countries (Canada, Japan, Korea and the partner country the Russian Federation), over 50% of the youth cohort have attained a tertiary education (Indicator A1).

Education at a Glance quantifies this expansion in terms of enrolment rates at different ages, years of study, qualification rates and the attainment profile of the adult population. On each of these measures, there has been a large overall expansion since 1995, but countries differ considerably in terms of the size of the rise and the degree to which it has been sustained in the later part of this period.

The enrolment rate (**Indicator C1**) for 15-19 year-olds in OECD countries in 2007 is 81%, up by eight percentage points since 1995. While in many countries where upper secondary enrolment was already near-universal in the mid-1990s there has been little change, countries such as the Czech Republic, Greece, Hungary, Ireland and Poland have seen recent rapid growth to very high enrolment levels, while Mexico and Turkey have also expanded enrolments rapidly but still have only half of this age-group studying. A similar expansion – by seven percentage points – in the enrolment rate at age 20-29 means that on average, one in four people in their 20s are studying. In the Czech Republic, Greece and Hungary, the proportion has more than doubled since 1995, and in all countries except Portugal and the United Kingdom there has been some growth.

These participation rates are matched by rising qualification rates (**Indicators A2 and A3**). Here, the most striking change has been in the proportion of the population completing a university-level first qualification, classified as Tertiary Type A - the dominant form of tertiary education. By 2007, 39% reached this level on average across OECD countries, almost twice as many as in 1995. There have been rises in every country, but the increases and their timing varied considerably. In Denmark, Finland, New Zealand, Norway and Spain, rapid rises from 1995 to 2000 were followed by a slowing of the increase or even (in New Zealand's case) a fall in the following seven years. But in contrast, the rise has been concentrated in the later period in Greece (even considering a decrease in the last three years), Japan, Portugal and Sweden. This is also the case in the Czech Republic and Switzerland where the graduation rate almost tripled between 2000 and 2007. Thus, some countries continue to transform their tertiary education systems in terms of the proportion of the population served, while for others there has at least been a pause in the rate of expansion.

The long-running increase in qualification rates now means that younger adults are generally more qualified than older adults (**Indicator A1**). For example on average nearly 80% of 25-34 year-olds but only just over half of 55-64 year-olds have attained upper secondary education. In some cases such as Greece, Ireland and Korea, the overwhelming majority of younger workers but only a minority of those approaching retirement have been educated to this level. Attainment of tertiary education has risen between these age groups from an average of one in five to above one in four.

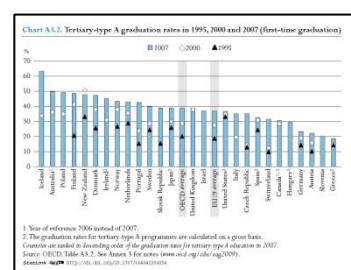
Three particular features of this expansion are:

- A wide gender gap in favour of females in some countries, but not in others. For example in Finland, Greece, Hungary, Norway, Poland the Slovak Republic and Sweden, around twice as many females as males gain Tertiary Type A qualifications, and in Iceland it is even more than twice as many. In Austria, Germany and Switzerland on the other hand there is no gender difference and in Japan more males than females qualify at this level (**Indicator A3**).
- An ever growing role played by study abroad. From 2006 to 2007, international students increased by 3.3% to over 3 million tertiary students (**Indicator C2**).
- The influence in some countries of population growth, which puts additional strains on the higher education system, for example in Ireland, Spain and Turkey.

The quality of educational outcomes

While qualifications are an important signal of successful completion of study programmes, *Education at a Glance* shows a range of other outcomes of education, including the acquisition of knowledge

Chart A3.2 : Tertiary-type A graduation rates in 1995, 2000 and 2007 (first-time graduation)



and skills, levels of employment and wages and social outcomes.

Studies such as the Programme for International Student Assessment (PISA) directly measure the knowledge and skills that students have acquired. In this edition, a new PISA measure is introduced, focusing on students who have acquired a high level of scientific competence at age 15 (**Indicators A4 and A5**). Many of these students will go on to work in science-related professions that are important for a nation's economy. This indicator shows wide country differences in the percentage of top science performers. Such students are characterised by enjoyment of and other positive attitudes towards science. About a quarter of them have below average socio-economic status for their country, showing that social disadvantage is not an insurmountable obstacle.

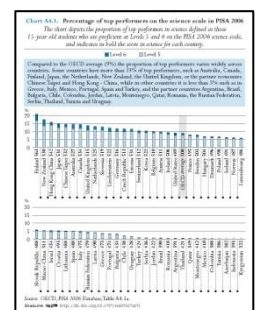
The consequences for work chances are more important than ever in today's difficult labour market. Those with below upper secondary education face a higher unemployment risk during a downturn than the better-qualified (**Indicator A6**). Moreover, young people with lower qualifications who become unemployed are much more likely to spend a long time out of work: in most countries over half of low-qualified unemployed 25-34 year-olds are long-term unemployed (**Indicator C3**). And those in work enjoy high wage premiums for completing tertiary education – over 50% in most countries – and in some countries these premiums have grown (**Indicator A7**). On average across OECD countries, a tertiary education generates a net present value approximately twice that of an upper secondary or post-secondary non-tertiary education (**Indicator A8**).

Such economic outcomes are this year complemented by a new social outcome indicator (**Indicator A9**). The focus is on three aspects that reflect the health and cohesiveness of society: self-assessed health, political interest and interpersonal trust. All of these social outcomes have a positive relationship to educational attainment, but they differ in terms of which level appears to confer the greatest advantage. Students who complete upper secondary education are much more likely to report good health than those who do not. Increase in political interest and the belief that most people try to be fair are in contrast more related to the attainment of a tertiary level of education.

Financing education

The level of spending that countries devote to education is partly related to national resources, although the correlation between spending per student and GDP per capita is clearer at the primary and secondary than at the tertiary level (**Indicator B1**). Overall expenditure rose in the last decade, in almost half of countries faster than GDP (**Indicator B2**). Below tertiary level this has led to sharp increases in spending per student, but at the tertiary level, spending increases have not always kept up with the rise in student numbers, so spending per student has

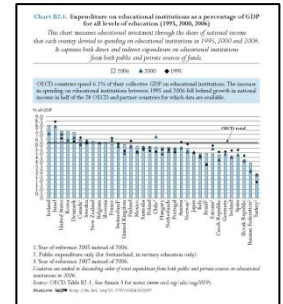
[Chart A4.1 : Percentage of top performers on the science scale in PISA 2006](#)



fallen in one third of OECD and partner countries (**Indicator B1**).

Spending on education continues to use a large proportion of public resources, although its share of public budgets varies from 22% in Mexico to less than 10% in Germany, Italy and Japan (**Indicator B4**). With pressures to find alternative sources of finance, spending from private sources is growing faster than public spending on education in most countries. Although on average 85% of overall educational spending comes from public sources, the share is much smaller for tertiary education in some countries, with private sources now providing the majority of funding in this sector in Australia, Canada, Japan, Korea, the United States and partner countries Chile and Israel (**Indicator B3**). An important reason for this is contrasting levels of annual tuition fees: while in seven OECD countries they are nonexistent, one-third of countries charge more than USD 1 500 (**Indicator B5**).

Chart B2.1 : Expenditure on educational institutions as a percentage of GDP for all levels of education (1995, 2000, 2006)



Teaching and learning conditions

To make education systems effective, the right teaching and learning conditions need to be put in place. Part of this is a resourcing issue. Across OECD countries, the average class size in primary education is slightly more than 21 students per class (**Indicator D2**). It exceeds 25 per class in only 3 OECD member countries, and since 2000 there have been significant falls in class sizes in some of the countries where they were highest, notably Korea and Turkey.

An aspect of resourcing teaching and learning where there is greater variation than for class size is teachers' salaries (**Indicator D3**). After 15 years of experience, primary school teachers' salaries vary from more than twice GDP per capita in Korea to below 75% GDP per capita in Iceland, and Norway, and partner countries Estonia and Israel.

The organisation of teaching also varies greatly, with number of annual teaching hours in public primary schools below 650 in Denmark, Hungary, Turkey and the partner country Estonia but 1 080 in the United States. (**Indicator D4**).

A new set of indicators from the OECD's Teaching and Learning International Survey (TALIS) allows teaching to be considered in greater detail (**Indicators D5 and D6**). This is the first international survey to focus on the learning environment and the working conditions of teachers in schools, based on responses by lower-secondary school teachers and principals in 23 countries.

Teachers in TALIS report that receiving evaluation and appraisal and feedback has a positive influence in their job satisfaction, leads to changes in their teaching practices, and significantly increases their development as teachers. But a number of countries have a relatively weak evaluation structure and do not benefit from these practices. One-third or more of schools in Austria, Ireland and Portugal had no form of school evaluation in the previous five years. On average across TALIS

countries, 22% of teachers did not receive any feedback or appraisal in the previous five years. This figure is over 45% in Italy and Spain (**Indicator D5**).

TALIS also looked at teacher practices, beliefs, and professional attitudes (**Indicator D6**). Although on average teachers in most participating countries spend almost 80% of their lesson time on teaching and learning, teachers in most countries lose valuable lesson time through disruptions and administrative tasks. Teachers are more inclined to regard students as active participants in the process of acquiring and constructing knowledge than to see the teacher's main role as the transmission of information and demonstration of "correct solutions". However, in the classroom, teachers in all countries put greater emphasis on structured approaches to learning, with explicitly stated learning goals, rather than on more student-oriented approaches.

Chart D6.1 : Distribution of time spent in the classroom during an average lesson (2007-08)



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