4

# Policy Recommendations

This concluding chapter recommends measures teachers and school systems can take to ensure that students' expectations of their future are well-aligned with their prospects, including by encouraging teachers to use grading practices that are objective and criterion-based, working with employers to create a smooth transition from upper secondary school into the labour market, and establishing well-defined paths to enter university.

Students who hold ambitious – yet realistic – expectations about their educational prospects are more likely to put effort into their learning and make a better use of the educational opportunities available to them to achieve their goals. Therefore educational expectations, in part, become self-fulfilling prophecies. When comparing students who have similar levels of skills and competencies and attitudes and behaviours, those who expect to graduate from university are more likely than those who do not hold such expectations of eventually obtaining a university degree. Countries and economies vary widely in the extent to which their students expect to graduate from university: in nine of the 21 participating countries and economies, over 50% of 15-year-old students expect to complete a university degree. In Korea, as many as four out of five students expect to do so. Between 2003 and 2009, many of the countries and economies that distributed the Educational Career questionnaire (ECQ) saw a substantial increase in the proportion of 15-year-olds who expect to obtain a university degree. This increase was particularly strong in New Zealand and Poland. Educational expectations generally reflect students' skills and abilities: on average, better-performing students are more likely to expect to obtain a university degree than poorly performing students. However, countries vary widely in whether students' skills match their expectations.

In many of the countries and economies examined in this report, academic performance is strongly associated with the expectation of graduating from university. Across all countries and economies, some students – notably socio-economically disadvantaged students and students with an immigrant background – have lower levels of proficiency. Inequalities in academic performance may therefore automatically translate into disparities in educational expectations. Girls and advantaged students are more likely than their peers to expect to complete a university degree. However, in all participating countries and economies, academic performance is only one of the factors that contribute to inequalities in expectations. Boys and socio-economically disadvantaged students are less likely than their peers to expect to graduate from university, even when they perform at the same level as their peers. To the extent that such inequalities in expectations constitute a barrier to eventual enrolment and graduation, they pose a serious challenge for countries because of the loss of human capital and skills potential they represent.

Many students who are highly proficient do not expect to graduate from university, while many low-achieving students expect to do so. Highly proficient students who do not expect to graduate from university may signify a loss of talent to the economy and society because these students' full potential may be unrealised if they end their educational training upon finishing upper secondary education. Countries with a high proportion of high-performing students who do not expect to continue onto higher education should promote higher expectations among these students through higher levels of engagement with school and meritocratic sorting into curricular programmes.

By contrast, many countries and economies have a high proportion of low-performing students who expect to complete a university degree, in circumstances where their academic skills pose a difficult challenge for these students to fulfil their expectations. While promoting expectations of completing university is important because it may help to motivate students to put forth the effort to learn in school, school systems should capitalise on these students' motivation towards learning to create the foundational skills to allow them to succeed in university. Countries and economies should thus provide the opportunities for these students to succeed through rigorous academic training and promoting engagement with school, both of which are factors associated with improvements in performance among low-performing students.

Expectations are important because they shape students' educational careers. School systems can promote the expectation of completing university and help create the pool of skilled workers needed to meet the growing demand for high-level skills. The education sector also needs to cater to the educational needs of the sizeable group of students who expect to complete their studies at the upper secondary level. This group of students needs an upper secondary education that facilitates a smooth transition into the workplace. Education systems also need to address inequalities in performance that are reflected in inequalities in educational expectations. In these cases, opportunities for social mobility are limited, and the economy can lose potentially valuable workers to an intergenerational cycle of deprivation and low expectations.

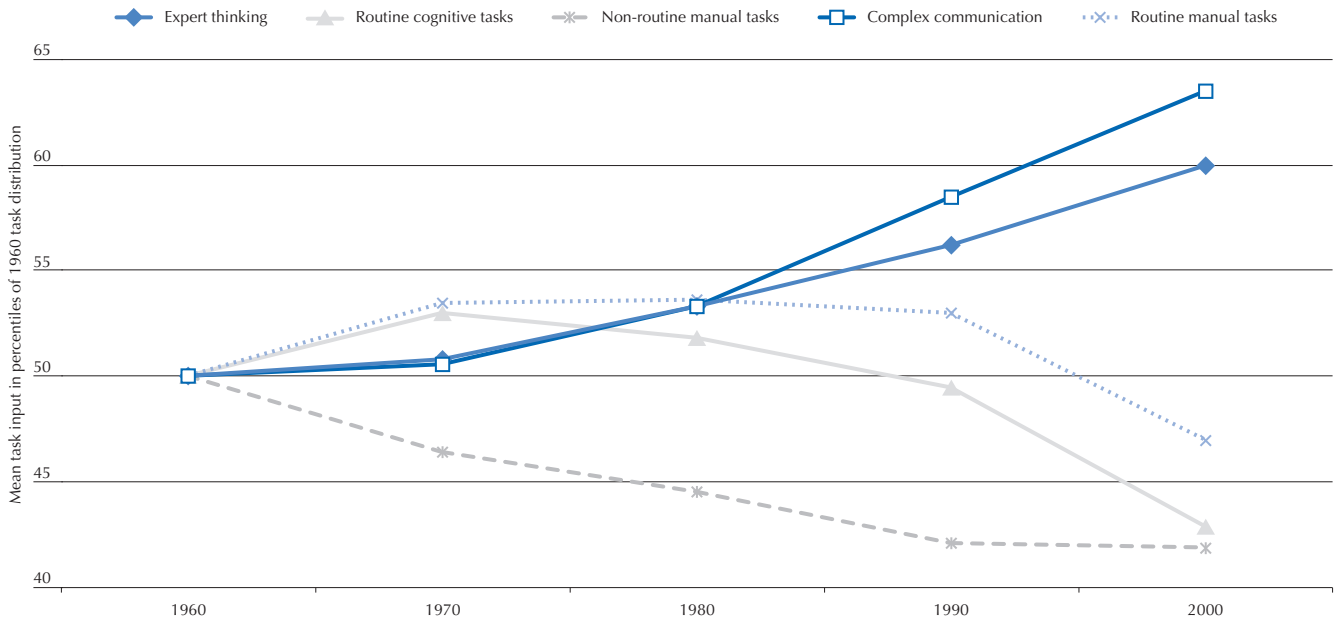
In many countries, university expectations do not match actual graduation rates and this mismatch may signal the pressures that higher education systems will face in meeting the demands for higher education. Most countries still must determine how to promote ambitious, yet realistic, expectations so that students reap the benefits of education and there is a good match between the supply of and the demand for the kinds of skills the economy needs to thrive. A good balance also means that only those students who will be able to meet the demands of a university education enrol in university. Nowadays many countries have completion rates that are much lower than enrolment rates (OECD, 2011) and such "brain drain" is costly: since these individuals do not work, they do not pay taxes, and providing university education is expensive. Completion rates are unlikely to reach 100%; in fact, a certain degree of incompletion is desirable inasmuch as it allows for students to change to different programmes if they need to. However, over-educating students – having more students who graduate from university than the economy can absorb – is also expensive, as workers quickly loose the skills they do not use (Desjardins and Warnke, 2012).

Managing educational expectations is a key challenge for education systems that has important consequences for economic growth, labour-market efficiency and the welfare state. In recent decades there has been a rapid surge in the number of university graduates; in some countries, like Korea, this increase has been faster and more dramatic than in others (OECD, 2011). The increase

in university graduates is, in part, the education sector's answer to the growing demand for high-level skills, such as expert thinking and the ability to solve problems for which there is no rule-based solution (Autor et al., 2003). The increase in the supply of highly educated workers has also spurred growth in new value-added areas of the economy. These are independent agents of economic growth and not simply conditions in which growth occurs. Although it is difficult to forecast what skills will be needed in the labour markets of the future, it is most likely that the service sector will continue to absorb an increasingly high share of workers with the skills set that only a university education can provide (Figure 4.1). However, to be able to thrive, modern economies need a balanced set of skills, and not all students have the potential and willingness to complete a university degree or want to enter occupations that require a university education.

▪ Figure 4.1 ▪

**Trends in routine and non-routine tasks in occupations in the United States, 1960 to 2002**




*Source:* Based on Autor, Levy and Murnane (2003), "The Skill Content of Recent Technological Change: An Empirical Exploration", *The Quarterly Journal of Economics*, Vol. 118, No. 4, pp. 1279-1334.

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The set of skills students master by the time they complete their compulsory education influences the choices they make about whether they will leave the formal education sector, enter the labour market or continue their studies to pursue a university degree. One of the ways in which academic excellence influences the educational choices of students is by steering students' educational expectations. Yet, academic performance is only one of the factors that shape such expectations. Many countries now recognise, through PISA results, that the acquisition of foundation skills is crucial for their populations to remain competitive in a global economy (OECD, 2012). The fact that many countries saw major improvements in the skills and competencies of their average 15-year-olds between 2000 and 2009 shows that educational reforms can positively influence the outcomes and prospects of their students. This report illustrates, however, that many countries still face a significant challenge in aligning educational expectations with the opportunities available in the education system and the labour market.

One component that shapes students' educational expectations is school marks. Countries can steer students into different educational and occupational paths, but they can also use marks and grades to determine students' educational choices because marks are the primary relevant source of information for students about their success in school and their potential for success in further education. Just as countries vary markedly in how they structure students' educational careers to enter specific occupational paths (as in Austria and Germany) or remain flexible and offer the possibility of returning to formal education at any point (as in Canada and the United States), education systems vary in the way they give marks. For example, some education systems have different marking systems across schools, regions or school levels (e.g. Macao-China, Mexico and New Zealand); in others, teachers use common scales – for example, from 1 to 5 in Austria, Hungary and Serbia; from 1 to 6 in Croatia, Poland and the Slovak Republic; from 1 to 10 in Iceland, Italy and Latvia; from 1 to 100 in the Flemish Community of Belgium, Ireland, Singapore and Trinidad and Tobago, or from 1 to 20 in Portugal (ISCED level 3 programmes). Countries and economies also vary in what they determine to be a passing mark, in how marks are distributed, and in what is rewarded by marks. Most important, countries with a discreet distribution of passing marks, whereby each

value is associated with clear criteria and no mid-points are allowed (e.g. "satisfactory", "good", "very good", "excellent") have more nuanced differentiations among students, because teachers and schools do not concentrate their marks on only one part of the scale.

Since many 15-year-old students have only limited understanding of their underlying skills and potential to succeed in higher education and in the labour market, marks indirectly determine the educational opportunities that students expect to pursue. In fact, school marks are an important source of information for students about their potential success in a university environment, and students use this information to form their educational and career expectations. Moreover, in many countries and economies, marks directly determine the educational opportunities available to students and thus contribute to students' eventual educational attainment and labour market prospects because, in many countries, student marks help to determine access to higher education.

In all participating countries and economies, teachers tend to reward academic proficiency and other behaviours that are positively related to students' engagement with school and study habits. These generally promote student learning and intrinsic motivations to learn. Student engagement, attitudes towards learning, and use of learning strategies may also contribute to students' future learning, labour-market performance and overall well-being. This report also suggests that teachers give higher-than-expected marks to girls and socio-economically advantaged students, possibly because they tend to reward, on top of performance and the set of attitudes and behaviours that are measured by PISA, other attitudes and behaviours that girls and advantaged students are most likely to adopt. Whatever the reason, inequalities in marking practices may lead to inequalities in educational expectations, and, later, to inequalities in educational attainment and labour-market outcomes, thus perpetuating social disparities and reducing opportunities for upward mobility, especially among disadvantaged boys.

The report also shows that grading practices matter, as students use marks to shape their educational expectations. However, the report also suggests that teachers reward different sets of factors through marks which, in some cases, have little to do with students' mastery of skills or attitudes and behaviours that foster learning.

What can teachers do? Teachers can use grading practices to positively influence their students' educational trajectories. For example, teachers can develop in-class assessments throughout the year that clearly explore student mastery of different sets of skills; and they should mark such assessments on the basis of proficiency in those specific skills, including both cognitive and non-cognitive skills. Teachers and schools can best serve their students if they use grading practices that are objective and criterion-based, whereby students are graded according to absolute levels of mastery rather than according to students' performance relative to their peers. They should also accompany quantitative grades with in-depth qualitative evaluations that explore students' progress, strengths and weaknesses, giving students the tools to develop the skills that matter for eventual success in further education and beyond.

What can school systems do? They can encourage effective grading practices and align them with broader assessment policies. Because marks may have important consequences for students and provide incentives that guide student behaviours and attitudes towards school and learning, effective grading practices may promote the kinds of classroom dynamics that enhance learning. School systems can also evaluate how school marks fit with their broader assessment policies. Given that practically all schools use marks to evaluate students, marks should be an important part of the general policy regarding assessment. An integrated policy of assessment that covers student marks and standardised assessments will highlight the different forms of assessment and the complementary nature of, for example, standardised assessments and criterion-based assessments conducted at the school level. An integrated assessment and marking policy will also give teachers more clarity on what attitudes, behaviours and mastery of skills should be rewarded through marks, and will allow students to have clearer and more specific information about their standing in the learning process and what steps they should take to enhance their learning experience. School systems should thus promote research that provides a complete picture of the assessments used in their school system, their purpose, and what schools, teachers and students are doing with this information.

The report also emphasises that in some education systems, for example, in Austria, Italy, Poland and the Slovak Republic, teachers in some schools tend to inflate grades; but grade inflation is not a pervasive phenomenon and it does not affect some types of schools more than others. Only in Italy is grade inflation in private schools pervasive and warrants attention. On the other hand, in the majority of countries and economies that participated in the study, students tend to be graded according to the performance of their peers. In these countries, students who attend high-achieving schools receive marks that are lower than the marks they would have received had they attended poorer-performing schools. The literature clearly recommends that marks should be *criterion-referenced* and not *norm-referenced* because comparing students to others in the class promotes unhealthy competition and is shown to reduce motivation for all students (Guskey and Bailey, 2001; Tomlinson, 2005).

Overall, this report identifies a clear dilemma for teachers and educators: while marks should evaluate the knowledge and skills that students have mastered, marks influence not only the educational opportunities available to students but their educational expectations and aspirations as well. The report indicates that teachers reward proficiency, but they also reward a large set of measureable and unmeasurable (at least in the context of PISA) student characteristics. While some of these characteristics undoubtedly promote

educational success and thus, by rewarding them, teachers provide an extra set of useful information to students, other characteristics may have little to do with students' chances of completing a university degree or of excelling in the labour market. As such, inequalities in grading practices may unduly restrict the opportunities some students have to acquire high-level skills and competencies and overcome social inequality.

Findings indicate that university enrolment and graduation rates are surging and today's 15-year-olds are even more likely than previous cohorts to expect to obtain a university degree. At the same time, the labour-market's demand for university graduates has increased markedly, and while many countries are rapidly improving the set of skills their students have mastered by age 15 (OECD, 2010), the average student attending university tomorrow will have a different, and in most cases, poorer set of skills than the average student who attended university a decade ago. The "democratisation of university education" that results from the expansion in university enrolments means that teaching in universities will have to adapt to more diverse student populations attending higher education as primary and secondary school educators are already doing.

The report identifies the need for education systems to strike a careful balance between promoting ambitious expectations among students – because the labour-market demand for high-level skills is surging and will probably continue to grow in the future – and recognising that the "forgotten half" of students who do not expect to complete a university education. For these students, education systems should do more to create a smooth transition from upper secondary school into the labour market by developing clearly marked occupational pathways and providing information, guidance and support so that these students understand the demands of the labour market, particularly the local labour market, and have accumulated the kinds of skills that local employers need. Schools and education systems can create relationships with employers to facilitate students' transitions and employers can gain from the better information schools have about their students to be able to choose workers with less uncertainty.

Finally, while some students benefit from education systems that allow for flexible entrance into university and multiple transitions between higher education and the labour market, other students take this as an opportunity to have a second chance in the future and refrain from putting forth the effort in school and making the choices that would enable them to flourish in the labour market. Setting up well defined structural paths to enter university may lower students' educational expectations and may prevent some students from fulfilling their potential – such as those students who develop the passion and motivation to attend university and acquire high-level skills only when they are older or in vocationally oriented programmes. However, creating these structural paths may help to better align students' expectations with their cognitive and non-cognitive skill sets and with opportunities in the labour-market, and facilitate the match between employers and prospective employees.

## References

**Autor, D.**, **F. Levy** and **R. Murnane** (2003), "The Skill Content of Recent Technological Change: An Empricial Exploration", *Quarterly Journal of Economics,* Vol. 118, No. 4, pp. 1279-1334.

**Desjardins, R.** and **A. Warnke** (2012), "Ageing and Skills: A Review and Analysis of Skill Gain and Skill Loss over the Lifespan and over Time", *OECD Education Working Papers,* No. 72, OECD Publishing.

**Guskey, T.** and **J. Bailey** (2001), *Developing Grading and Reporting Systems for Student Learning,* Corwin, Thousand Oaks, California.

**OECD** (2010), *PISA 2009 Results: Learning Trends: Changes in Student Performance since 2000 (Volume V)*, PISA, OECD Publishing.

**OECD** (2011), *Education at a Glance 2011: OECD Indicators*, OECD Publishing.

**OECD** (2012), *Better Skills, Better Jobs, Better Lives: A Strategic Approach to Skills Policies*, OECD Publishing.

**Tomlinson, C.** (2005), "Grading and Differentiation: Paradox or Good Practice", *Theory into Practice,* Vol. 44, No. 3, pp. 262-269.