As countries struggle to respond to economic, environmental and social transformations – including technological advances, climate change and migration – intellectual capital has become the most valuable asset of our time. The core of intellectual capital is knowledge, and the development and transfer of knowledge is the primary mission of higher education. Tertiary education thus plays a central role in helping people and societies confront and cope with these profound changes.

The demand for higher-order skills and competencies is both economic and social. The employment rate of adults with a tertiary degree is about 9 percentage points higher than for those with upper secondary education only, and they earn on average 57% more. Tertiary-educated adults are also more likely to be in good health, take care of the environment, or participate in public life.

Yet with these great strides comes greater uncertainty. Although the rise of artificial intelligence is expected to result in increased productivity in a number of sectors, it is also fundamentally changing the way some jobs are carried out. While widespread access to information has made it easier to learn than ever before, it has also accelerated the pace of change, leaving many wondering how to adapt and struggling to keep up. Globalisation, while providing many opportunities, has also triggered fierce competition for skills.

Countries have responded to these challenges by expanding access to education and learning. Financial support mechanisms have alleviated some of the burden of pursuing additional studies, promising high returns and flexible reimbursement options. The traditional linear progression through education, from primary through tertiary, is being gradually replaced by a more holistic vision of lifelong learning. As market demand for skills evolves quicker than some educational institutions may anticipate, many of these institutions are promoting flexible pathways into tertiary education and seeking partnerships with other players, including employers, industry and training institutions. While these policies help promote tertiary education to a growing share of adults, educational institutions must balance larger enrolments with the need to contain costs, and maintain the relevance and quality of their programmes.

Meeting the demand for higher-order skills

Recognising these challenges, this year’s edition of *Education at a Glance* focuses on tertiary education. It shows that the demand for tertiary skills in the labour market remains strong in spite of the increasing supply of graduates, and that the earnings advantage of tertiary-educated adults grows with age and professional experience. Bachelor’s programmes remain the most common route of entry into tertiary education: the share of young adults attaining a bachelor’s degree - 24% - is larger than it has ever been.

Ensuring the right supply of skills in a rapidly changing world is challenging. Adult participation in education and training is on average 40 percentage points lower among low-educated adults – those that need it most – than it is for highly educated ones. Still less than 15% of new entrants to bachelor’s programmes study engineering, manufacturing and construction and less than 5% study information and communication technologies – even though these fields are most commonly associated with technological progress and yield the best labour-market outcomes.

The share of the population attaining a master’s or doctoral degree has remained constant across generations. These degrees continue to be in high demand and offer attractive returns on the initial investment. While the average annual cost is similar to that of a bachelor’s degree programme in more than half of OECD countries, graduates of these programmes earn 32% more, on average.
Tertiary education admissions systems are pivotal in ensuring that upper secondary students make a smooth transition to tertiary education. More than half of countries and economies have open admissions into public tertiary education systems, whereas other countries use selective criteria, such as academic performance, examinations and, in some cases, upper secondary programme orientation. Selective systems may seem more effective in ensuring that students actually complete a degree by enabling only those students with the required skills to enter. However, completion patterns can be similar across countries with very different admissions systems. Only 39% of bachelor’s degree students graduate within the theoretical duration of their programme; another 28% do so during the following three years, on average across countries with data.

This all comes at a cost. Between 2005 and 2016, spending on tertiary institutions increased at more than double the rate of student enrolments to about USD 15 600 per student on average across OECD countries. Across the majority of OECD countries, private sources have been called on to contribute more as countries introduce or raise tuition fees. Most of this increase in spending has been devoted to core education services; the number of academic staff at the tertiary level increased on average by about 1% over this period, almost on par with the number of students enrolled.

**Refining – and redefining – education pathways**

While education helps individuals acquire the skills needed to contribute to society, the expansion of tertiary education will only be sustainable if it balances the supply of graduates with labour market needs. Easy access to funding and open admissions risks promoting tertiary education at the expense of other, much-needed vocational and professional qualifications, which are often perceived as less attractive pathways.

The Sustainable Development Goal on education (SDG 4) reminds us of the importance of equal access to quality education and lifelong learning opportunities, whatever those may be. The Goal recognises the many alternative paths young people and adults can take to acquire the necessary skills to ease their transition into the labour market and live better lives. In particular, SDG 4.3 aims to “by 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university”. The SDG 4 agenda provides a range of indicators to measure participation in education and the skills acquired throughout a lifetime, encompassing levels in and outside of compulsory education, and considering a wide range of programmes that include both formal and non-formal education.

This edition’s chapter on the Sustainable Development Goals describes the pathways that young people take throughout their journey: the transition from secondary to higher levels of education and from education into the labour market. It finds that, on average across OECD countries, about one in six 15-24 year-olds are enrolled in vocational programmes. The attainment gap among young tertiary-educated adults and those with upper secondary has narrowed. In 2018, the share of young adults with an upper secondary or post-secondary non-tertiary qualification, 41%, is almost equal to the share attaining tertiary education, 44%.

Everyone hopes to be able to choose from among solid, well-paying career opportunities, enjoy a smooth progression through that career, and find a sense of purpose in life. As education leaders, it is our responsibility to help students sort through the breadth of opportunities and make informed decisions about their future. It is also our responsibility to make a broad range of pathways attractive to students and equip them with the skills to navigate through an unpredictable and changing world. To achieve this, we must expand opportunities, broaden the options of programmes and qualifications, and build stronger bridges with the labour market. This also means investing in student orientation and guidance so that each student finds his or her place in society and can contribute to his or her full potential. Only then will students be able to acquire the knowledge that can carry them forward, the kind of knowledge that can change their lives.

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