

## Introduction

**W**hat does it mean for education that our societies are becoming more diverse? What does it mean that ICT is playing an ever larger role in our lives? Does it matter for higher education providers that the share of national wealth spent on research and development is increasing?

This book is about major developments that are affecting the future of education and setting challenges for policy makers and education providers alike. It does not give conclusive answers: it is not an analytical report nor is it a statistical compendium, and it is certainly not a statement of OECD policy on these different developments. It is instead a stimulus for thinking about major trends with the potential to influence education. While the trends are robust, the questions raised for education in this book are illustrative and suggestive. We invite users to look further and to add to this basic coverage examples of trends from their own countries or regions.

### WHAT CAN BE FOUND IN THIS PUBLICATION?

This resource contains 27 trend areas each illustrated by two figures on specific trends. The material is organised in five main chapters focussing on globalisation, social challenges, the world of work, children and families, and technology. While all the trends included are relevant to education, not all relevant trends are in this resource – it is necessarily highly selective. As well as relevance for education, the criterion for selection has been the availability of internationally comparable, through-time evidence. This inevitably biases the report’s coverage towards measurable economic, social, environmental, demographic and educational fields and ones where the measurement has been in place long enough to give a picture of developments over time. Some of the factors importantly shaping education are highly subjective and cultural in content, making them difficult to pin down at any one time, let alone over time, and these are not covered.

The focus is primarily on OECD countries although, where they are available, broader global data are used. The different sources mean that there is no single time frame: in some cases, the trends are charted over a short decade; in some others, longer-term trends are available. The recent global financial crisis is largely outside the scope of this book, given our focus on trends over a longer time frame. The crisis is impacting on developments such as economic growth or poverty and so, where appropriate, we refer to it in this context.

### FOR WHOM IS THIS TOOL RELEVANT?

This tool is relevant for everyone active in the field of education. We have sought to avoid jargon and technical terminology, and the data are presented in an accessible format. Users interested in further reading or in the precise definitions of terms used in the figures and the text are referred to the “find out more” sections at the end of each chapter. Users interested in the data underlying the figures as well as more technical

details of the data are referred to the Excel files that can be accessed by using the links below each figure.

Among those for whom this tool will be most relevant are:

- **Policy makers, officials, advisors, researchers and policy analysts** needing robust trends to reflect on the long-term development of education.
- **Leaders of educational institutions and other stakeholders** involved in setting strategy may well find the trends pertinent to the choices they face.
- **Teacher educators** may wish to use the trends as material for teacher education or professional development programmes to help student teachers consider their futures and professional practice.
- **Teachers** may want to use this book as an aid for professional development and a starting point for reflection on practice and curriculum issues.

There are doubtless others who will find this book relevant; the choice of trends and the treatment given to them in the text, however, are designed especially for those working in the educational field.

## TRENDS SHAPING EDUCATION

In assembling the trends in this book we start with the “big picture” global changes before honing in on societies and labour markets and then the more “micro” level of families and children. We also deal with technology, which affects all these different layers but which we bring together in a separate chapter. Change is happening in all these spheres and levels, much of it interconnected, as summarised briefly below.

### *The dynamics of globalisation*

One of the most important and pervasive trends is globalisation. In essence, globalisation is the widening, deepening and speeding up of connections across national borders. One of the key areas where this occurs is in the economy; where the flow of ever-greater quantities of goods, services and capital is taking place around the globe. People move more freely as well, bringing greater ethnic and cultural diversity to OECD countries. Facilitated by fast-changing technology, information also flows more freely and communication has become far easier between people anywhere in the world. There are global challenges too with climate change a good example, as both the phenomenon and its solutions are global.

The nodes in this global network are cities. By the year 2050 around 70% of the world’s population is expected to be living in cities, and even more than this within OECD countries and the rapidly-emerging economies. People flock to cities because they are the powerhouses of the economy, the places where jobs and wealth are created. Proximity to international transport, availability of telecommunication and the resources to make use of these allow greater links between cities. City life has a distinct quality compared with rural life, to the extent that cities in two very different countries, such as New York City and Shanghai, will tend to have more in common than each would have with rural communities in their own country.

Cities are becoming increasingly important, but so are new countries: Brazil, China, India, Russia and South Africa have become significant powers in the global community.

These countries have large and fast-changing economies and play an increasingly important political role in global affairs, as through, for example, the G20.

Globalisation notwithstanding, in comparing levels of wealth and health the differences between regions of the world remain very large, particularly between the OECD countries and the rest of the world.

### ***New social challenges***

At the same time as globalisation is transforming the world at large, societies are also experiencing significant change. One of the most fundamental trends in OECD societies is that they are ageing, as a result of both higher life expectancy and lower birth rates. Ageing societies experience higher dependency ratios and potentially lower tax revenues, as well as growing pension and health costs. These developments seriously challenge the long-term sustainability of current public and private expenditure including on education; they also raise questions about the retirement age and the place of the elderly in society.

Income inequality is going up across OECD countries. In most of them, all income groups are better off now than ten years ago, but those with higher incomes have tended to gain more. This increased inequality has resulted in higher levels of relative poverty in most OECD countries – not everyone has benefited from the general increase in wealth. Relative poverty (earning less than 50% of the median income in that country) is associated with social exclusion and vulnerability in the labour market. As a relative measure it is not necessarily about subsistence, and there are signs of a decline in the levels of “absolute poverty”.

Increasing individualisation is a trend commonly identified as important in OECD countries, sometimes associated with the erosion of “social capital”, with fewer people actively engaging in community and societal activities. The available data do not confirm this trend in many OECD countries – for instance, more people report belonging to sports or recreational clubs. Moreover, increasing numbers of people are interacting and participating in communities online, as illustrated by the explosive growth of *Facebook* and other social networking sites. Major questions remain, however, about what this means for the quality of social interaction.

General levels of life satisfaction tend to be increasing in OECD countries as reflected in high and growing self-reports of well-being across the OECD and the decreasing numbers of people committing suicide, but the modest increases of reported well-being over time suggest diminishing subjective returns to economic prosperity.

### ***The changing world of work***

Work plays a central part in society, the economy and the lives of individual people, and there is a shifting balance between private and working lives. In general, people in OECD countries spend less time in employment, start working later in life, retire earlier, work shorter hours and more often on a part-time basis. Still, with ICT enabling work to be taken home, longer commutes and (particularly for men) more time spent on household chores, less time in formal work does not necessarily translate in a linear way into greater leisure time. Another commonly-cited development is greater flexibility in the labour market, with people switching either voluntarily or involuntarily more often between jobs. Yet, care is needed not to exaggerate this trend: data presented in this book show

that in several OECD countries there are now more people who have been in the same job for more than ten years than there were twenty years ago.

It is not just the structure of the labour market that is changing but job content is changing, too. The economies of most countries in the OECD are increasingly knowledge-intensive. As transport prices have fallen and trade barriers lifted, a substantial share of the production of basic goods have been taken over by developing countries with lower wage costs. This drives OECD countries seeking to maintain their competitive edge towards the production of goods and services that require high levels of knowledge and skill, creativity and innovation. Growing investment in research and development, as well as the increasing numbers of researchers and higher education graduates across the OECD area, reflect this shift.

One of the most profound long-term trends in OECD societies in the last century has been the changing role of women. Women are much better qualified than in decades gone by and over the past 30 years have overtaken men in completion of upper secondary and tertiary education. The number of women active in the labour market has also gone up considerably, even though they are still more likely to work part-time and to earn less than men.

### ***The transformation of childhood***

The family model that came to be seen as dominant in the 20th century – characterised by a breadwinning father and a mother taking care of the household and a number of children – has never stopped changing. In the past fifty years, families have become smaller, parents are older, and, on average, more prosperous. At the same time, however, parents are more likely to both be active in the labour market as well, further increasing family resources but potentially reducing the amount of time available for children. Increasing numbers of divorces contribute to more complex family environments, and many children live with only one parent.

While families have generally become better-off and there is evidence of educational attainment of children being less dependent on parental attainment, the numbers of children in households characterised by relative child poverty have also gone up. So have the rates of obesity risen sharply and increasing numbers of children are being treated for mental and behavioural conditions such as Attention Deficit Hyperactivity Disorder (ADHD). The expectations adults have of children have intensified as well. Data from the World Values Survey shows that respondents find a whole range of qualities, ranging from hard work to imagination, increasingly important in children.

### ***ICT: The next generation***

In contrast with many of the trends in this book that are more gradual and sometimes linear in the direction of change, the pace of technological development is exponential and its influence often unpredictable. The focus in this book is on ICTs as being particularly relevant to education, rather than other forms of technological change that may be equally significant for countries and organisations.

Some of the most influential technological changes result from the linking of computers into a global network: the Internet. The availability and the use of computers at home have become almost universal in most OECD countries as has access to the Internet. More and more people use it on a daily basis to find information; communicate *via* email, audio or visual conferencing; make use of online services such as banking and shopping; and

take advantage of the massive amount of multi-media entertainment on offer. With the emergence of platforms built to enable user-generated content, Internet users increasingly interact, collaborate and create their own materials online. The growth in the availability of portable devices means that access to a computer and the Internet is no longer restricted to a location but is available almost everywhere.

The full potential of the expansion of information and communication technologies – from computers to mobile phones to user-generated content online – has yet to be unravelled and will continue to evolve. Most recently, with the combination of these technologies, increasing numbers of mobile phones have the ability to engage with *Twitter*, *Facebook* and other online applications. Recent global events have shown the potential for collaborative effort online. After the Haiti earthquake in early 2010, for instance, these technologies helped quickly to map the changing terrain and the locations of shelters through the collection and visualisation of crowd-sourced information from local people via portable devices and computers using SMS, *Twitter*, email and the web.

### **In conclusion**

This section has summarised some of the major findings to emerge from this overview of trends, but it is meant only as an introduction; a simple narrative cannot do justice to such a complex set of developments. In each section, we discuss the issues raised for education, as well as some of the outstanding questions they give rise to for those in positions of responsibility within education systems. The wording “shaping education” is deliberate – these are developments in the wider context that impact in many ways on education, from provision aimed at young people to that for older adults. But it would be artificial to understand them as something apart from education. These trends are themselves shaped by education and manifest within it. They are intended to offer a valuable complement to the educational statistics and indicators that measure the developments taking place within education and training systems themselves.

## **HOW TO USE THIS RESOURCE**

The future is inherently unpredictable. Yet, everyone – including policy makers and managers in education – needs to make plans that take the future into account. Looking at trends informs our ideas about what might happen through better understanding what is already changing in education’s wider environment.

Using trends is not straightforward. Opinions differ on historical developments and, even when there is agreement, the future is rarely just a smooth continuation of past patterns. Moreover, we do not know in advance which will continue as in the recent past and which will change course.

*“Stocks have reached what looks like a permanently high plateau”* (Irving Fisher, Professor of Economics, Yale University, just before the 1929 Wall Street Crash).

Similarly, it is not guaranteed that the trends that were important in the past or seem so now will remain influential in the future; emerging trends, barely visible at the moment, may become of central importance in the future. For example, when aircraft were just beginning to become operational, the military leader who was to become Commander-in-Chief during World War I declared:

*“Airplanes are interesting toys but of no military value”* (Maréchal Ferdinand Foch, École Supérieure de Guerre).

Hence, bringing an awareness of trends to bear on our professional lives in education is not so much a science as a means of broadening our horizons and informing the base of decision-making. This book is a starting point for consideration about what is setting directions for the future. The following questions are intended to help draw out how the trends may be addressed and interpreted.

***Is this trend relevant in my context?***

Trends may differ both in size and direction in different countries, regions, districts or even schools. Ageing populations, for example, may be a bigger problem in rural than in urban areas or concentrated in certain parts of the county or districts in a city. International trends may have different impacts in different places: rising sea levels are potentially disastrous for Bangladesh but perhaps not for Nepal.

***Are there other trends to take into account?***

The trends in this resource are certainly not the only relevant ones, and not all of them apply equally in each location or context. There may be other, perhaps local, trends that will be just as important to consider. Different places face different challenges: some, for instance, are declining and de-populating while other areas even in the same country are booming and attracting new people. Each user will need to think of what are the important trends for their purpose.

***How predictable is this trend?***

Trends differ as to the predictability of their continuation. Some trends, for instance, to do with population growth or environment, lend themselves more easily to long-term planning. Others are less predictable, such as those to do with youth culture or international conflict. For these, devising scenarios of what would happen if a particular trend would develop in a certain way may well be more appropriate than extrapolation.

***What is the pace of this trend?***

Some trends develop slowly (global temperatures went up around 0.74°C in the last 100 years) while other trends are more dynamic (the number of active *Facebook* users went up from zero to 400 million in six years). Slow trends allow more time to think about what they mean and how to respond but they may also be relatively impervious to change.

***What is the impact of the trend?***

Climate change may be slow but its potential impact is enormous, possibly threatening life on our planet. Other trends like changing fashion are more short-lived, but have less impact on education. Generally, the more impact the trend has, the more important it is to anticipate it.

***Can we anticipate this trend?***

When trends are predictable, long-term planning is greatly facilitated. With fairly accurate demographic forecasts and as it is expected that all children should go into primary education, the capacity needed in primary education ten years from now under different assumptions about class sizes is open to calculation.

### ***Can we influence this trend?***

If trends are not predictable it may still be possible to influence them. Universities have great difficulty in predicting the number of students who will choose a certain study programme. However, they can attempt to influence the numbers of students applying through advertising campaigns.

### ***Can we react to this trend?***

If both predicting and influencing are impossible, creating the flexibility to be able to react after events occur may be the best option. For example, someone starting a business who does not know how it will take off is better advised to lease offices than buy them.

### ***Finally***

Above all, we hope that the different users to whom this report is targeted will ask the question: “what might this trend mean for my work?” better still, “how do these trends taken in combination redefine the context in which I am making decisions?” A large body of CERI work has been founded on the need for educational decision-making to be better informed by evidence, by awareness of what is taking place in other countries, and by the need to consider the bigger, long-term picture. This volume is squarely in that tradition.