

Foreword

The world is rapidly becoming a different place, and the challenges to individuals and societies posed by globalisation and modernisation are widely acknowledged. Increasingly diverse and interconnected populations, rapid technological change in the workplace and in everyday life, and the instantaneous availability of vast amounts of information represent but a few of these new demands. In this globalised world, individuals and countries that invest intelligently in education benefit socially and economically from that choice, and increasingly so. Among the OECD countries with the largest expansion of tertiary education over the last decades most – and few countries more so than Hungary – have still seen rising earnings differentials for tertiary graduates, suggesting that an increase in knowledge workers does not lead to a decrease in their pay as is the case for low-skilled workers.

The other player in the globalisation process is innovation and technological development, but this too depends on education, not just because tomorrow's knowledge workers and innovators require high levels of education, but also because a highly-educated workforce is a pre-requisite for adopting and absorbing new technologies and increasing productivity. Together, skills and technology have flattened the world such that all work that can be digitised, automated or outsourced can now be done by the most effective and competitive individuals, enterprises or countries, wherever they are. The scale of the impact of these developments was magnified by the collapse of communism, India's turn away from autocracy and China's shift to market capitalism. This allowed another three billion people who had previously been locked out of the global economy because they lived in largely closed economies with vertical, hierarchical political and economic structures, to collaborate and compete with everyone else. All of this has led to a growing productivity gap between those who are well educated and those individuals – and nations – who struggle with the transition to the knowledge economy.

For a long time, global educational comparisons suggested that Hungary was well positioned. Enrolment in education has traditionally been high and still two decades ago Hungarian students consistently outperformed their counterparts in much of the industrialised world in international tests of mathematics and science performance. However, the most recent PISA assessment in 2006 showed Hungarian 15-year-olds performing just around the OECD average level in science, Hungary's traditional strength, and in other subject areas below OECD standards. Equally important, the results showed large variations

in the quality of schooling and an unusually strong impact of social background on success in school. Even where this is not because Hungarian performance standards have declined but because those in other countries have risen faster, it does show that the yardstick for success has changed; as in this globalised world, it is the best performing education systems, not merely improvement by national standards, that shape the future life chances of today's students.

The problem is that Hungary's past success offers few solutions for the future. That is not just because the environment and incentive structures that shaped Hungarian schooling have fundamentally changed, but much more importantly so because the kind of skills that were valued in those past assessments in which Hungary excelled, are rapidly losing their relevance in today's labour markets. In the OECD's most flexible labour markets, it is now routine cognitive skills, no longer manual skills, that are seeing the sharpest decline in demand; that means, it is those middle-class white-collar jobs that build on the application of routine knowledge, that are most at threat today. The reason is that the skills that are easiest to teach, and that are easiest to test, namely those skills that involve the mastery of subject matter content, are also the skills that are easiest to digitise, automate and offshore: Because such tasks can be accomplished by following a set of rules, they are prime candidates for computerisation. Furthermore, rules-based tasks are also easier to offshore to foreign producers than other kinds of work: when a task can be reduced to rules – *i.e.* a standard operating procedure – the process needs to be explained only once, so the process of communicating with foreign producers is much simpler than the case of non-rules based tasks where each piece of work is a special case. By the same token, when a process can be reduced to rules, it is much easier to monitor the quality of output. The dilemma is mirrored in Hungary's performance on PISA: While Hungarian students tend to do well on tasks that focus on the reproduction of science or mathematics knowledge, they face much greater challenges in solving tasks that require them to extrapolate from what they know and apply their knowledge in novel, unfamiliar settings. Similarly, while they demonstrate reasonable subject matter knowledge in fields like physics, chemistry or biology, they show weaknesses in their knowledge about the nature and paradigms of science itself as well as in their capacity to see the personal and social life chances which science may open. In a world, where much of the science knowledge that today's 15-year-olds will require in their future lives does not exist at the time they go to school, that poses major challenges to the ways in which Hungarian students learn, Hungarian teachers teach and Hungarian schools operate.

The challenges which education systems face can no longer be successfully addressed by incrementally stretching 19th century school systems with 20th century teachers to teach 21st century students. In this world, where virtually everyone will have to acquire high-level skills, the task in many countries is to transform great sorting engines, that worked well when schools could afford to give everyone the same treatment with a one-textbook-system polished through decades in order to distinguish those who are more talented from those

who are less so, into mass-customised learning systems that identify and develop the extraordinary talents of ordinary students. As Chapter 9 lays out, this is about creating a “knowledge rich” evidence-based education system, in which school leaders and teachers act as a professional community and have the authority to act, the necessary information to do so wisely, and access to effective support systems to assist them in implementing change. Of course, everywhere education is already a knowledge industry in the sense that it is concerned with the transmission of knowledge; but in many countries education is still far from becoming a knowledge industry in the sense that *its own practices* are being transformed by knowledge about the efficacy of *its own practices*. In many other fields, people enter their professional lives expecting their practice to be transformed by research, that is not yet the case in education. There is, of course, a large body of research about learning but much of it is unrelated to the kind of real-life learning that is the focus of formal education. Even that which is, has an insufficient impact when practitioners work in isolation and build their practice on folk wisdom about what works. Central prescription of what teachers should do, which still dominates Hungarian schools, will not transform teachers’ practices in the way that professional engagement, in the search for evidence of what makes a difference, can.

At the same time, the very international comparisons that highlight challenges in a national context also point the way forward by showing what can be achieved with a combination of the right strategies and courageous, sustained leadership. Across the globe – whether it is Canada in North America, Finland in Europe or Japan and Korea in Asia – education systems demonstrate that excellence in education is an attainable goal, and at reasonable cost. They also show that the challenge of achieving a high and socially equitable distribution of learning outcomes can be successfully addressed and that excellence can be achieved consistently throughout the education systems, with very few students and schools left behind. In Finland, the best performing education system in all PISA assessments so far, the performance variation between schools amounts to only 5% of students’ overall performance variation – less than one tenth of the performance variability of Hungarian schools – so that parents can rely on high and consistent performance standards in whatever school they choose to enrol their children.

Cross-sectional international comparison alone cannot identify cause-and-effect relationships between certain factors and educational outcomes, especially in relation to the classroom and the processes of teaching and learning that take place there. However, they do reveal what is possible in education as well as some of the features associated with successful performance. With its science and evidence driven approach, the report takes up the challenge to evaluate the lessons that might be learned from policies and practices developed elsewhere, without rejecting experiences developed and applied in other socio-cultural contexts, as policymakers and practitioners alike so often do, following the principle that they would not take a medicine if they had not been chosen to take part in its clinical trial. At the same time, the report does

not fall into the trap of trying to copy and paste other educational systems or experiences, but rather seeks to develop an understanding of the policy drivers that contribute to the success of other education systems and then to situate and configure these policy drivers in the Hungarian context. Some lessons from internationally comparative analysis are worth recalling.

First of all, many of the high performing education systems have pursued a shift in public and governmental concern away from the mere control over the resources and content of education towards a focus on outcomes. This has driven efforts to articulate the expectations that societies have in relation to learning outcomes and to translate these expectations into the establishment of educational goals and standards, with the aim to establish challenging content at all grade levels; reduce overlap in curricula across grades; reduce variation in implemented curricula across classrooms; facilitate co-ordination of various policy drivers ranging from curricula to teacher training; and reduce inequity in curricula across socio-economic groups. Coupled with this have been efforts to devolve responsibility to the frontline, encouraging responsiveness to local needs, and strengthening intelligent accountability. The report takes this up too, calling for a similar shift from telling teachers what to teach towards defining demanding, clear, and rigorous standards that establish a shared vision of what good performance is through the stages of primary, secondary and vocational education (Chapters 2, 3 and 4). It does so building on an advanced concept of competency that moves beyond the mastery of subject matter content, requiring students to mobilise a broad range of psychosocial resources, including knowledge and skills, motivation, attitudes and other social and behavioural components to address complex demands.

Second, while many education systems have decentralised decisions concerning the delivery of educational services, they have often kept or even tightened control over educational goals, the design of curricula, standards and testing. What distinguishes the approaches to professional accountability developed in Finland, the use of pupil performance data and value added analyses in England, and the approaches to school self evaluation in Denmark, is that these strike a careful balance between using accountability tools to maintain public confidence, on the one hand, and to support remediation in the classroom aimed at higher levels of student learning and achievement on the other. These countries have gone beyond systems of external accountability towards building capacity and confidence for professional accountability in ways that emphasise the importance of formative assessment and the pivotal role of school self-evaluation. In Finland, for example, strategic thinking and planning takes place at every level of the system. Every school discusses what the national standards might mean for them, and decisions are made at the level of those most able to implement them in practice. Where school performance is systematically assessed, the primary purpose is often not to support contestability of public services or market-mechanisms in the allocation of resources. Rather it is to provide instruments to reveal best practices and identify shared

problems in order to encourage teachers and schools to develop more supportive and productive learning environments. Clearly, external accountability systems are an essential part of modern education, but they are not enough. Among OECD countries, we find countless tests and reforms that have resulted in giving schools more money or taking money away from them, developing greater prescription on school standards or less prescription, making classes larger or smaller, often without measurable effects. What distinguishes many of the high performing systems is that they place emphasis on building various ways in which networks of schools stimulate and spread innovation as well as collaborate to provide curriculum diversity, extended services and professional support. They foster strong approaches to leadership and a variety of system leadership roles that help to reduce between-school variation through system-wide networking and to build lateral accountability.

Third, comparative analysis suggests that the establishment of standards and accountability systems needs to go together with access to best practice and professional development in schools, in ways that support teachers to use data and evidence to expand their repertoire of pedagogic strategies in order to personalise learning for all students and to adopt innovative approaches to timetabling and the deployment of increasingly differentiated staffing models. Many of the high performing education systems share a commitment to professionalised teaching, in ways that imply that teachers are on a par with other professions in terms of diagnosis, the application of evidence-based practices, and professional pride. They succeed in attracting the best graduates to become teachers, realising that the quality of an education system cannot exceed the quality of its teachers. For example, countries like Finland or Korea recruit their teachers from the top 10 percent graduates. They also succeed with developing these teachers into effective instructors, through, for example, coaching classroom practice, moving teacher training to the classroom, developing strong school leaders and enabling teachers to share their knowledge and spread innovation. They develop good support systems so that individual teachers become aware of specific weaknesses in their own practices, and that often means not just creating awareness of what they do but changing the underlying mindset. They also seek to provide their teachers with an understanding of specific best practices and they motivate teachers to make the necessary changes and that is something that goes well beyond material incentives. Many of the high performing systems construct effective interventions at the level of the school, identifying schools that do not perform well and providing them with effective support systems. Countries like Finland go even further and intervene at the level of the individual student, developing processes and structures within the school that are able to identify whenever a student is starting to fall behind, and intervening to improve that child's performance. Intervention and support do not mean applying pre-packaged interventions in mechanical sequence, instead, they require diagnosing problems and tailoring solutions accordingly. The report takes much of this agenda is taken up in Chapter 8.

While Hungary's educational challenges are not limited to poor kids in poor neighbourhoods, but indeed extend to most kids in most neighbourhoods, the unusually tight relationship between social background and learning outcomes in Hungary is worrying, and the report devotes considerable attention to this in Chapters 1, 5, 6 and 8. In many of the countries achieving high and equitable performance standards, it is the responsibility of schools and teachers to engage constructively with the diversity of student interests, capacities, and socio-economic contexts, without having the option of making students repeat the school year, or transferring them to educational tracks or school types with lower performance requirements, still common in countries like Hungary. To achieve this, they seek to establish bridges from prescribed forms of teaching, curriculum and assessment towards an approach predicated on enabling every student to reach their potential. What distinguishes the education systems of, for example, Victoria in Australia, Alberta in Canada, or Finland is the drive to make such practices systemic, through the establishment of clear learning pathways through the education system and fostering the motivation of students to become independent and lifelong learners. Obviously such "personalised learning" demands both curriculum entitlement and choice that delivers a breadth of study and personal relevance. But the point is that the personalisation is in terms of flexible learning pathways through the education system rather than individualised goals or institutional tracking, which have often been shown to lower performance expectations for students and to provide easy ways out for teachers and schools to defer problems rather than solving them. Finally, it is noteworthy that many of the world's most successful education systems invest the money where the challenges are greatest, and they put in place incentives and support systems that get the most talented school teachers into the most difficult classrooms, which the report takes up in Chapter 10.

In conclusion, the report provides a science-based perspective for how Hungary can transform its education system to move from "hit and miss" policies to establishing universal high standards, from uniformity in the system to embracing diversity, from managing inputs and a bureaucratic approach to education towards devolving responsibilities and enabling outcomes, from talking about equity to delivery equity, and from a system where schools no longer receive prefabricated wisdom but take initiatives on the basis of data and best practice. The road from a comfortable, introverted, input-focussed, and evidence-light approach towards a demanding, outward-looking, results-focussed, and evidence-informed approach will be steep. But addressing the challenges will become ever-more important as the world has become indifferent to tradition and past reputations, unforgiving to frailty and ignorant to custom or practice. Success will go to those individuals and countries which are swift to adapt, slow to complain and open to change. The task for policy makers in Hungary will be to ensure that the country rises to this challenge.

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