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Introduction to *ICT and Learning: Supporting Out-of-School Youth and Adults*

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Abstract
In attempting to raise levels of educational achievement and attainment, countries will obtain the greatest increase in overall national performance if they raise the performance of the lowest achievers and of those with the lowest level of qualifications. These are the groups whose improvement will make the greatest difference to the national average. Policies that specifically target low achievers and those with few formal qualifications have a special relevance to two groups outside the education system: youth who have dropped out of school without having completed a secondary education qualification, and low-skilled adults. The pressures for public policy to focus on these groups come from many sources. Equity, both within and between nations, is a powerful motive. But there are also strong economic pressures to raise the educational performance of low-skilled adults and out-of-school youth. In OECD countries with ageing populations, the prospect of a shrinking labour force leads policy makers to seek ways to increase the supply of labour, and to improve overall educational performance through raising the skills of the existing workforce. These pressures intensify as countries seek to compete in the global economy on the basis of the quality of their human capital.
Across both the industrialised and the developing worlds, educators have high hopes for information and communications technology (ICT). ICT has been seen as a potentially powerful tool for raising educational performance and increasing access to learning by the disadvantaged. Can it live up to these hopes? And does it have particular relevance to the needs of out-of-school youth and adults with inadequate educational qualifications and low literacy skills?

This volume contains important lessons for educators and policy makers. First, raising motivation is a key factor in encouraging disenchanted and under-confident learners, whether out-of-school youth or adults, to re-engage in structured learning. Second, ICT is not a panacea. It is not an alternative to good teachers, interesting and relevant curricula, and accessible and learner-friendly places for learning. ICT can, however, be a useful complement to each of these.

This publication reveals a number of interesting examples of innovative programmes using ICT that can increase access to learning by the disadvantaged. The papers show that ICT can be one way – but by no means the only way – to improve pathways to learning. It can do this by tailoring learning to the needs and preferred learning styles of the disadvantaged, and it can make learning more interesting by providing immediate feedback. A third message is that just as adult learning itself has been the under-funded and under-appreciated Cinderella of the formal learning spectrum, so the application of ICT within adult learning has tended to lag behind much of the rest of the education system. The present volume provides some cautionary remarks on the recent past and opens up some significant opportunities for the future.
ICT and Learning

SUPPORTING OUT-OF-SCHOOL YOUTH AND ADULTS
ORGANISATION FOR ECONOMIC CO-OPERATION
AND DEVELOPMENT

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Chapter 1

Introduction

Daniel A. Wagner and Richard Sweet

In attempting to raise levels of educational achievement and attainment, countries will obtain the greatest increase in overall national performance if they raise the performance of the lowest achievers and of those with the lowest level of qualifications. These are the groups whose improvement will make the greatest difference to the national average. Policies that specifically target low achievers and those with few formal qualifications have a special relevance to two groups outside the education system: youth who have dropped out of school without having completed a secondary education qualification, and low-skilled adults. The pressures for public policy to focus on these groups come from many sources. Equity, both within and between nations, is a powerful motive. But there are also strong economic pressures to raise the educational performance of low-skilled adults and out-of-school youth. In OECD countries with ageing populations, the prospect of a shrinking labour force leads policy makers to seek ways to increase the supply of labour, and to improve overall educational performance through raising the skills of the existing workforce. These pressures intensify as countries seek to compete in the global economy on the basis of the quality of their human capital.

In many circles, information and communication technology (ICT) has been seen as an important part of strategies to deliver basic education to the low-skilled, the poorly qualified and the hard to reach. These high hopes for ICT within OECD countries find a parallel in developing nations, and they have risen as the cost of ICT has fallen and the educational possibilities afforded by the Internet have widened. They can be seen within the United Nations World Summit on the Information Society, and within the United Nations Millennium Development Goals. Concerns about the relationship between ICT, low-skilled adults and poorly qualified youth have been sharpened by the growing awareness that, in information-rich societies, digital literacy is becoming a key generic skill. The fear is that the digital divide and the literacy divide may overlap so strongly as to be identical.

Evidence from OECD surveys shows that countries facing these challenges actually face quite different circumstances, which call for very
different policy approaches and programme responses. For example, the International Adult Literacy Survey (IALS) can tell us something about the literacy skills of 20- to 25-year-olds who have not completed upper secondary school. The OECD's Programme for International Student Assessment (PISA) gives us some data on the extent to which schools are computer-intensive, as well as data on the number of computers in the homes of 15-year-old students. Putting these two sets of data together shows that countries such as Denmark, Finland and Sweden have relatively high levels of basic literacy among out-of-school youth and that, at the same time, a relatively high proportion of homes in these countries have computers. The number of computers in Canadian homes is also very high, but low-qualified Canadian youth have far weaker basic literacy skills. In Hungary it is a compound problem: relatively few computers in the home coincides with low literacy skills among poorly qualified youth. PISA data also show that there are wide differences between countries in the availability of computers in the homes of good versus poor readers. In the United States, poor readers have only half as many computers in the home as good readers. In the United Kingdom, there is very little difference.

Personal participation in this technology-knowledge-economic development cycle must begin with basic education and literacy. The connection between literacy and technology (in both industrialised and developing countries) is the focus of this book. In particular, ICT is viewed as a set of potential delivery and instructional tools that can be used to help people acquire skills needed for their society’s knowledge economy. In this approach, out-of-school youth and adults are a crucial target population in a world increasingly concerned about literacy, employability and lifelong learning.

This publication is the result of a joint OECD/National Center on Adult Literacy (NCAL) roundtable held at the University of Pennsylvania in November 2003. The meeting, one of a series in which the OECD and NCAL have collaborated over the years, brought together some 70 participants from both OECD countries and developing nations to seek a clearer understanding of key policy questions, and to explore possible solutions.

The meeting examined a number of key policy questions. Are the expenses associated with providing the hardware, software and delivery infrastructure for joining the global knowledge society through ICT on a par with those required to provide this training by some other means? Or if not less expensive, are ICT-based methods more effective than traditional means, and sufficiently so to justify the added costs? From a policy perspective, the costs and uses of ICT are, therefore, considered in a broader educational, social and economic context. The rationale for ICT investment
is not seen merely in terms of a more efficient or effective means to deliver education. It also results in an environment, one that sustains an educated citizenry by providing a range of productive tools and information through which literate people can use their skills to promote their own personal improvement and the social and economic development of the country. A significant benefit is that this new ICT infrastructure would be used not only for supporting skills learning but also to improve, for example, community service and welfare, and the development of global commerce. The result would be a “high road” spiral of continuous development and use of new knowledge to benefit the economy, society and its citizens. A further significant issue explored in the meeting was motivation: can ICT be used to improve the motivation to learn, whatever its objective value in raising literacy and skill levels? And how does the motivation to use ICT relate to literacy skills? Are the low-qualified and low achievers more, or less, motivated to use ICT than the highly qualified and high achievers?

The meeting occurred two years after the dot-com (high-tech) bubble had burst, and a similar period after the publication of some influential critical reviews of the impact of ICT upon the quality of teaching and learning, such as *Oversold and underused: Computers in the classroom* by Larry Cuban (2001). Both lent a greater tone of sobriety to the meeting. Robert Kozma, in his roundtable presentation, termed this “techno-realism”. Thus, ICT and schooling were not viewed as the major combined panacea for radical global change; nor was the solution a stronger emphasis on the importance of access to ICT for its own sake. Rather, the strong emphasis was placed on access to learning opportunities as the vital key to giving youth and adults access to ICT, for both returns to individuals and returns to enterprises and society.

In the roundtable, there seemed to be broad acceptance that policy questions needed to be asked not only in terms of whether or not ICT was of value, but also in terms of the circumstances under which different uses of ICT might produce different types of benefits for different types of people. Closely allied to this was a theme concerning the importance of ICT having an integrated role in learning: combined policies were needed to put multiple pieces on the table, such as teacher development, software, and organisational change – not just hardware solutions.

Roundtable attention also gave serious consideration to the organisational and institutional forms through which to use ICT in youth and adult learning, including formal classrooms (school, post-secondary, tertiary), community settings, workplaces and the home as venues for ICT-delivered or ICT-mediated learning. Questions were raised about whether the institutional forms needed to meet the needs of adult learners were the same as those needed for out-of-school youth; about the nature of formal
school versus that of community settings; and about whether policy reform might lead to organisational changes needed for the most effective returns from investments in ICT.

An important set of issues arose about costs and benefits, as well as the broader area of monitoring and evaluation. There seemed to be general agreement that the case study (and anecdotal) evidence, as well as, to a lesser extent, the research evidence was generally positive about the potential value of ICT in youth and adult learning. However, there was also evidence of poor investments in ICT, and many questions were raised about the opportunity costs of ICT investments compared to those of other methods to provide access to and deliver learning. Related to this were questions about the appropriate scale of technology used in youth and adult learning, and the pitfalls of using technology that was too complex. Overall, there was concern that too little has been invested to date in the monitoring and evaluation of ICT efforts with out-of-school youth and adults. New efforts are under way to try to rectify this situation by developing a set of measures that can be used widely.

Another major issue raised in the roundtable was that of supply and demand in ICT for education. While everyone recognises the demand for ICTs in general, with respect to the content that runs on ICTs, supply seems to outstrip demand. That is, the content providers (from Microsoft to smaller educational software firms) tend to supply what they believe the market desires. Within education, at least, it would seem that demand for effective educational software could be enhanced so that such software could cater more directly to out-of-school youth and adults. A simple example of this phenomenon is the need for educational software in a multiplicity of languages so that linguistic minorities – often the most disadvantaged – can have equal access to ICT solutions.

In sum, there is little doubt that much more can and will be done to utilise ICT to foster improvements in the quality of learning that takes place outside formal educational institutions for out-of-school youth and adults. The question we are left with is how soon the field will be able to achieve and substantiate results.