Building a Digitally Literate Europe through Education

Overview

It is essential that core skills and knowledge associated with the use of technology and computers are embedded into education systems. A mixture of technical skills and conceptual knowledge must form a central part of students' school experiences, both as a subject in its own right and as a way of facilitating learning and development. Greater efforts must now be made at both the European and national levels to further embed digital literacy into schools and thus ensure that the skills acquired are those that will be needed by Europe's citizens of tomorrow. Formal skills development programmes such as ECDL provide an externally defined structure that can be readily adopted by schools and national education systems.

The Importance of Digital Literacy

Digital literacy is often viewed as consisting of the set of enabling skills that are required to efficiently use commonly available technology, including computers. Young people need to be equipped with these enabling skills if they are to be able to function both as a participant in the knowledge economy[1] and an active citizen in the knowledge society. Although young people will acquire these skills in a range of ways, formal and informal learning through education will be crucial. In particular, education will be especially important for ensuring that digital literacy is accompanied by other essential enabling skills. For example, wider use of the World Wide Web has increased the importance of critical thinking, or media literacy[2], skills for young people. There are obvious benefits to having an enormous range of resources accessible in a matter of seconds, but this information is not being mediated or validated to the degree it was in the past.

The Value of Skills Development Programmes

So what practical tools exist to enable educational institutions to develop digital literacy among young people? Skills development programmes, such as those based on a standard set of knowledge and skills, can be effective in a number of ways.

Digital skills must be embedded in the breadth of activities in which children are engaged. Digital literacy, like reading, writing, and arithmetic, must be a foundation on which learning and personal development is based. Research by the OECD had clearly demonstrated that those students who are established computer users tend to perform better in key school subjects, such as mathematics, than those with limited experience or low confidence in their ability to carry out basic computer functions[3].

This informal integration of digital skills must, crucially, be supported by formal skills development programmes. These give students a clear target to aim at and, once completed, provide them with a concrete tool to demonstrate their skills levels to others and to take with into the workplace or higher - even lifelong - education.

Skills development programmes can also act as a starting point for curriculum development. A publicly-available syllabus can facilitate teachers in the development of engaging and relevant resources to support the acquisition of digital skills. These programmes can also provide a continuous professional development path for teachers. Teachers, as much as students, need to have an opportunity to develop their digital skills. They are more likely than students to be "digital immigrants" and not "digital natives"; therefore, formal skills development programmes are a means of ensuring that they are equipped to pass on key skills and knowledge to their students.

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[1] Expert Group on New Skills for New Jobs "New Skills for New Jobs: Action Now" (February 2010). See pg. 25 "The right skills portfolio".
[2] The Council of the European Union "Council conclusions on media literacy in the digital environment" (November 2009) stresses the importance of the education systems in developing and improving digital literacy.
[3] Organisation for Economic Cooperation and Development, 2006 "Regular computer users perform better in key school subjects, OECD study shows"

The Experience of ECDL[4]

ECDL is a successful example of a skills development programme that has been implemented in education systems within Europe and globally. Austria, Italy, and Ireland are just three examples of countries where students have directly benefited from ECDL.

- In Austria, the ECDL in schools programme has been operating for more than a decade. In 2008, the 10th anniversary of the programme, 1200 schools were participating, and it was estimated that one in three students in Austria were taking part in the programme. At that point, approximately 1 million ECDL tests had been administered in Austrian schools.
- In 1999, ECDL was adopted as the official standard for evaluating computer skills in the Italian education system. One of the specific policy goals being targeted by this national level policy is the diffusion of digital literacy. Up to the end of 2009, 640,000 students engaged with ECDL through the public school sector, with the programme being operated by 80 middle schools and 1900 high schools.
- The ECDL programme in Ireland has seen more than 400 schools certify 120,000 students since its inception. An interesting characteristic of this programme is that, over time, the age at which students are engaging with the ECDL programme is falling; some schools are now offering the programme to 12-year-olds.

Conclusion

In summary, it is possible to draw some recommendations for decision makers who wish to ensure that the young Europeans who will leave school over the coming years are equipped to make the most of and contribute to a vibrant European digital knowledge economy:

At a national level:

- ICT and education policy formation needs to give an appropriate emphasis to digital literacy to ensure that crucial enabling digital skills, both for working and for living, are fostered among young people;
- Specifically, formal skills development programmes should continue to be rolled out in schools to provide a structure for teaching digital skills and to provide a concrete outcome for students to take with them into the workplace;
- Investment in ICT infrastructure in education systems should be undertaken in conjunction with the skills development programmes necessary to ensure that both students and teachers fully benefit;
- Teachers should be specifically targeted with formal digital skills development programmes in order to ensure that they have developed the appropriate skills and knowledge to assist in the integration of technology as a standard element of students' learning.

At a European level:

- Guidelines and targets should be provided to assist Member States in embedding digital literacy into curricula at all levels of education;
- Incentives and support via priority funding should be channeled to Member States to facilitate digital literacy in education systems;
- Objective measures should be employed to gauge the implementation and effectiveness of skills development programmes relating to digital literacy in schools.

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About ECDL Foundation

ECDL Foundation's mission is to enable proficient use of ICT that empowers individuals, organisations and society, through the development, promotion and delivery of quality certification programmes throughout the world. Further information on ECDL Foundation is available at www.ecdl.org.

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[4] For further information on ECDL in Schools, see the "For Teachers & Students" section of www.ecd.org