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At a glance
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Digital opportunities for education in the EU

The world of education is currently undergoing massive transformation as a result of the digital revolution. In the European Union (EU), children become active online from the age of 7, and 76% of EU households have access to broadband Internet. However, research shows that early use of digital technologies is not necessarily linked to good digital competencies. As jobs are becoming more 'knowledge and digital skills-intensive', continued investment in upgrading education and training systems will be instrumental to maintaining the EU's competitiveness and attractiveness.

Background

Skills and qualifications are one of the key factors determining the economic success of the EU. Yet more than half the EU countries have reduced their investment in education and training between 2008 and 2011. It has been estimated that by 2015, 90% of all jobs will need at least basic computer skills. Paradoxically, 49% of EU citizens have no or low computer skills. A recently launched EU initiative - Opening up education - aims to bridge this skills gap by bringing the digital revolution into education. In February 2014, the 28 EU ministers responsible for education confirmed this strategy, encouraging Member States to exploit the potential of new technologies and digital content to complement traditional educational approaches.

Keeping pace with the digital revolution: pros and cons

Digital learning is expected to offer multiple advantages enabling people of all ages to learn at their own pace. The potential benefits include diverse knowledge sources, often provided for free, no geographical limits, flexible timetables and methods that can be easily personalised, and the possibility for teachers to share and create content with colleagues and learners from different countries. Most importantly, digitally supported learning is believed to reduce costs for educational institutions and for students. There is, however, little scientific evidence of the concrete contribution of ICTs to the learning process. Studies tend to find small positive educational outcomes. Moreover, the cost advantage of digital learning is disputed. A recent comparative study (2012) suggested that the idea that online learning is less expensive is based more on intuition than on fact, since most existing studies lack rigorous control and use self-reported data.

Taking advantage of digital learning opportunities

Transforming education requires pedagogical, organisational and technological innovation. The increased use of ICT, particularly the Internet, brought in a new era in course design and delivery in ways never before experienced in the mainstream model of traditional

Helping teachers keep pace

An EU-wide survey shows that while 70% of teachers recognise the importance of digitally-supported methods, only 20% of students are taught by digitally confident teachers and the percentages of teachers using information and communication technologies (ICT) in more than 25% of lessons has not increased since 2006. Although ICT training forms part of initial teacher instruction in over half of EU countries, implementation varies according to the higher education institutions providing the training, and in a large portion of EU countries those institutions are free to adopt their own approach.

There is a debate on whether the major obstacle to ICT use is inadequate ICT infrastructure and technical support or pedagogical considerations. However, the authors of the survey argue that for infrastructure to be used effectively, digitally competent and supportive teachers are needed. In other words, policies and actions to increase ICT use in schools are essentially a matter of teachers' professional development as well as global strategies at school level about the relevance of ICT use.

The majority of EU countries have online platforms, blogs, fora or other social networking sites facilitating the sharing of experience and exchange of materials between teachers. One such example at EU level is the Learning Resource Exchange for Schools which offers more than 200 000 open educational resources based on language, subject, source type, and age range.

In a recently adopted resolution, the members of the EP's Culture and education committee urged EU countries to help teachers acquire and maintain the necessary high level of digital literacy.

Author: Ivana Katsarova, Members' Research Service
European Parliamentary Research Service
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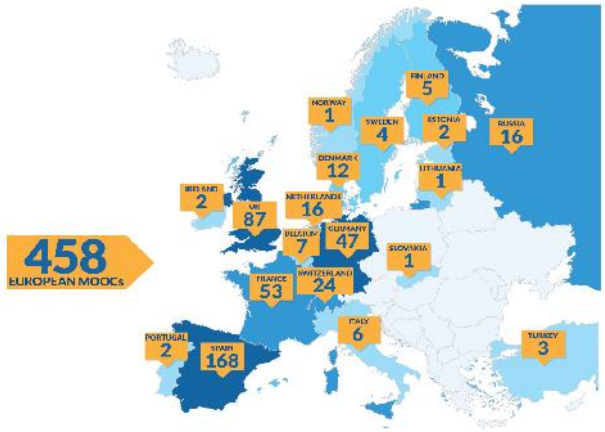
education. That is particularly true for open educational resources (OERs) and massive open online courses (MOOCs). Statistics suggest that while EU universities took more time to get involved, they now account for approximately one-third of MOOCs in the world (see fig. 1). Open Education Europa, the EU portal for quality OERs produced in the EU, indicates that in March 2014 there were over 450 MOOCs. Generally, there seems to be a very strong interest in MOOCs in Spain, and also in the United Kingdom, France, and Germany.

The **Spanish** Universidad Nacional de Educación a Distancia has a significant share of the more than 150 MOOCs in Spain. The latest platform - Miríada X - is designed to facilitate exchanges and cooperation between Spanish and Latin American institutions. The **British** platform FutureLearn, led by the Open University, comprises 26 partners in total, including the British Library, the British Museum and the British Council. In France, the Government has launched France Université Numérique, the first **French** digital learning portal. Its MOOC platform is one of the 18 actions in a five-year strategic plan for the digitalisation of learning and teaching in France. The **German** platform for online teaching - iversity - offers MOOCs in German and English, and has announced that two higher education institutions from its platform will award ECTS credits. So far, there is not much information about MOOC development in Eastern Europe.

The pan-European MOOC platform OpenupEds set up by the European Association of Distance Teaching Universities unites partners from 11 countries and currently provides access to over 60 free courses in 12 different languages. Recently, the media group Euronews and the Compostela Group of Universities, set up the 'Euronews Campus' initiative intending to use audiovisual content as a tool for online education.

Press sources indicate that an increasing number of business schools in the EU are entering online education. Interestingly, seven of the top ten online and distance MBA programmes are offered by European schools. A MOOC offered by the French business school HEC Paris via Coursera drew over 30 000 students to its debut class 'Understanding Europe', 60% of whom came from outside Europe.

Figure 1 - European MOOCs



Data source: EU open education portal, March 2014.

A growing number of European schools are developing 1:1 computing projects involving mobiles devices such as laptops, notebooks, and netbooks (1:1 stands for one device per user). Different communities of practitioners exist at EU level to provide solutions for exchanging good practice. One such example is the Open Discovery Space which offers an open multilingual learning interface to encourage the adoption of e-learning resources.

Criticism of OERs and MOOCs

Concerns linked to OERs include quality assurance, accreditation, and sustainability. Criticism has also been voiced over the fact that many MOOCs are not truly innovative, but use fairly traditional learning approaches, and are therefore just an attempt to further commercialise higher education. Creating a MOOC platform requires considerable financial and technical resources. This accounts for the increasing pressure on MOOC platforms either to transfer costs to course participants or to generate income from other sources.

Doing more with less

From 2009, the economic downturn and the underlying need to cut back spending led many EU countries to reduce investment in education and training. However, the European Commission stresses that while it is important to choose appropriate funding mechanisms, considerations of efficiency should go in parallel with concerns on equity and access to education. The degree to which EU students are expected to contribute directly to the cost of their higher education remains widely debated. However, in contrast to the United States where the cost of higher education has surged 1 120% over the past 35 years, in the EU, tuition fees are generally low or non-existent. Experts argue that it is very hard to assess the return on investment from the use of ICT for learning purposes. They warn that costly investments in educational technologies take funding away from alternative investments in education, and it is therefore essential that the return on investment from ICT-based learning be at least as valuable as alternative forms of educational investment.