European Economic and Social Committee

TEN/548
The digital society: access, education, training, employment, tools for equality

Brussels, 10 July 2014

OPINION

of the

European Economic and Social Committee

on

The digital society: access, education, training, employment, tools for equality

(own-initiative opinion)

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Rapporteur: **Isabel Caño Aguilar**

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On 22 January 2014 the European Economic and Social Committee, acting under Rule 29(2) of its Rules of Procedure, decided to draw up an own-initiative opinion on

The digital society: access, education, training, employment, tools for equality.

The Section for Transport, Energy, Infrastructure and the Information Society, which was responsible for preparing the Committee's work on the subject, adopted its opinion on 18 June 2014.

At its 500th plenary session held on 9 and 10 July 2014 (meeting of 10 July) the European Economic and Social Committee adopted the following opinion by 128 votes to none.

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1. **Conclusions and recommendations**

1.1   The European Union must stop being merely a digital user and become a designer and producer too, and in order to do this it must promote talent. Informing, training and educating are thus priorities.

1.2   The EESC considers that access to the digital society must be a priority objective for the whole of European society. The policies implemented in this field are insufficient for tackling the digital divide, which is continuing to widen.

1.3   The EESC points out that appropriate measures must be taken to ensure that people with disabilities have access to the digital society and enjoy equal conditions in relation to new technologies.

1.4   The digital society must not be an additional cause for exclusion. The EESC lays particular stress on the need to adopt appropriate policies to ensure that older people are not excluded and can make full use of the technologies that are now part of daily life.

1.5   The EU and national authorities should act jointly to ensure that IT programmes and equipment are available at more affordable prices and respect multilingualism.

1.6   European education policy should prepare people for life. The EESC stresses that professional organisations from the education sector should be consulted.

1.7   Within Member States' financial possibilities, the EESC considers that support for public education is essential for achieving equality.

1.8   The EESC stresses the importance of public libraries when it comes to education and training in the digital society.

1.9   The EESC advocates the promotion of models for Open Innovation and Open Standards. Care must be taken to avoid unjustified measures to protect intellectual property when these could restrict innovation processes in the digital economy.

1.10   The EESC suggests following the recommendations of the European Foundation for Quality in e-Learning (EFQUEL) with regard to education.

1.11   The EESC reiterates the important role of vocational training and education in combating the economic crisis and fostering recovery, and stresses the role played here by Cedefop. The EESC therefore advocates:

        −   paying more attention to initial and further training for teachers;
        −   promoting language teaching;
        −   channelling open educational resources into vocational training.

1.12   The Horizon 2020 initiative must help to strengthen Europe's position in the digital technology field, where businesses post a lower level of investment than their competitors in Asia and the USA.

1.13   The EESC considers it essential to promote Europe's small and medium-sized enterprises (SMEs) in the information and communication technology (ICT) sector, as they can drive innovative projects that are vital in a constantly changing industry. The resulting measures and improved funding facilities for SMEs will also do much to help combat the economic crisis.

1.14   Support for start-ups in the digital technology sector can help boost the EU hardware and software industry. The EESC appreciates the move to support high-risk programmes under the Digital Agenda, but calls for greater support from the financial system.

1.15   The EESC proposes a series of measures to improve women's participation in the digital society.

2.   **Background**

2.1   There are a number of political decisions, programmes and initiatives taken by the EU which relate to the use of ICTs in education. They include:

        −   the eLearning programme (2004-2006);

- the Lifelong Learning Programme (2007-2013), which makes promoting ICTs in education a cross-sectoral priority, through the Comenius, Erasmus, Grundtvig and Leonardo subprogrammes;
- the Erasmus+ programme - which falls under the Europe 2020 strategy, the Education and Training 2020 strategic framework and the Rethinking Education strategy;
- the Communication on new technologies and open educational resources (Opening up Education: Innovative teaching and learning for all through new Technologies and Open Educational Resources, COM(2013) 654 final).

2.2   The Digital Agenda for Europe (2010), which is a key EU strategy for meeting the objectives of Horizon 2020, provides for a wide range of measures, including measures relating to:

- interoperability and standards;
- ultra-fast broadband;
- e-learning;
- access for people with disabilities;
- literacy, e-skills and digital inclusion.

2.3   The EESC has addressed these aspects in various opinions[1].

2.4   This own-initiative opinion discusses issues relating to access to the digital society, learning, equality and employment.

3.   **General comments**

3.1   **Access to the digital society**

3.1.1   The tools provided by ICTs are being used more and more in people's lives. Access to the digital society is a right and a source of opportunities which should be fully exploited.

3.1.2   The EESC has frequently noted the importance of broadband for European society and for the EU economy[2], and it thus welcomes the extension of satellite broadband to the 28 Member States. However, many causes of the digital divide still remain, and have been worsened by rising poverty which in turn has been increased by the economic and social crisis.

3.1.3   The digital divide is not closing, for reasons relating to factors including: education (people who have completed higher education are three times more likely to be internet users than the 33% with a lower educational level), age (internet use is frequent among young people and almost universal among students, but is much more limited among older people), the high

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[1]   OJ C 271, 19.9.2013, p.127; OJ C318, 29.10.2011, p.9; OJ C 214, 8.7.2014, p. 31.

[2]   OJ C67 of 6.3.2014, p.137.

price of IT, the fact that most information is in English, and differences between rural, urban and island regions.

3.1.4 Public authorities often face serious problems financing the cost of IT in education in a context of budgetary austerity, which seems to have been worsened by the Stability Pact. One possible financing method - charging the user - could undermine accessibility and equality in education.

3.1.5 Accessibility is a human right[3]. It should also be noted that in Articles 20, 21 and 26, the Charter of Fundamental Rights of the European Union, an integral part of the Lisbon Treaty, prohibits any form of discrimination on account of disability and recognises the right of persons with a disability to benefit from specific measures; for its part, the United Nations Convention on the Rights of Persons with Disabilities commits member states to take adequate measures to ensure access for people with disabilities, on an equal basis, to information and communications technologies, including the internet[4].

3.1.6 People with disabilities are twice as likely to be unemployed, and new technologies (including the internet) are a gateway to leisure, education, culture and many other public and private services; they also encourage participatory democracy. Accessible ICTs are thus vital for allowing people with disabilities to compete under equal conditions in a growing digital market and be part of the digital society.

3.1.7 The digital society must not be an additional cause for exclusion. Instead, it must provide vulnerable individuals with a means of overcoming their exclusion.

3.2 **Education in the digital society**

3.2.1 The digital society demands a commitment to openness to institutional changes. The EU must promote education and training systems that are universally accessible and serve to develop people's knowledge and skills across a wide range of subject areas, social, civic and cultural skills, taking in the ability to learn as well as creativity, innovation and teamwork skills.

3.2.2 All those responsible for the education system must cultivate an atmosphere in schools that is conducive to innovation, quality and cooperation in educational practice; all students must be stimulated during the educational process, with dissemination of good practice, civic participation and experiences at school, together with a culture of evaluation.

3.2.3 EU education policy has not adequately motivated national authorities to ensure educational use of ICTs by teachers, starting during their basic training, and in educational establishments, especially primary and secondary schools, and vocational education. In particular, it has not

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3   OJ C 177, 11.6.2014, p. 15.

4   OJ C 271, 19.9.2013, p.116.

sufficiently encouraged the Member States to make the investment required for a high-quality modern and innovative education system based on ICTs.

3.2.4   Education ministries should schedule specific training for teachers and encourage rethinking of the way people learn.

3.2.5   The EESC stresses the importance of public libraries when it comes to education and training in the digital society.

3.2.6   From their earliest schooldays, children could be introduced to the workings of computers and perhaps to programming as a "fun" activity, so that as soon as possible, Europeans can stop being mere users of ICT and become creators and producers of it too. The EU has centres of research excellence (e.g. research into electronic nano-components), but further progress is needed.

3.2.7   European education systems provide examples of high-quality education from primary education to vocational training and university. However, changes in curriculum are needed to incorporate the use and evaluation of ICTs in education.

3.2.8   The EESC advocates the promotion of models for Open Innovation and Open Standards. Care must also be taken to avoid unjustified measures to protect intellectual property when these could restrict innovation processes in the digital economy.

3.2.9   The SPI (Simple Publishing Interface) protocol, which was developed by the European Committee for Standardization (CEN), is intended to facilitate communication from tools that produce materials to applications that persistently manage learning objects and metadata.

3.2.10   Interoperability can also facilitate use of the enabling technologies which people with disabilities need in order to access ICT.

3.3   **Training. A tool for tackling the economic crisis**

3.3.1   Education and vocational training enrich people's lives and provide them with skills which are necessary in a democratic society. Social and economic development are heavily dependent on vocational training, as it gives access to skills and entry routes into the labour market. For underprivileged and marginalised groups in particular, it can help to bring a better life. However, vocational training is not just a bridge between education and employment: it is of considerable importance in itself. UNESCO's Institute for Statistics has noted the correlation between economic development and vocational training.

3.3.2   Erasmus Plus is the EU's main strategy in this field and, as the EESC has noted, "should be a key instrument for increasing support for education and training in order to enhance citizens' skills [and] help tackle the high levels of youth unemployment in many Member States".

However, it is up to the Member States - who have responsibility for this field - to make the effort to give vocational training the requisite resources and prestige within the education system.

3.3.3   The EESC points out that Cedefop's work on lifelong learning and vocational training addresses issues such as adult education, qualifications and skills, accreditation and quality guarantee procedures that are crucial for those who have most difficulty entering the labour market. Cedefop should be allocated more resources.

3.3.4   The EESC advocates:

– upgrading vocational training;
– paying more attention to initial and further training for teachers;
– promoting language teaching, as this is crucial for worker mobility;
– channelling open educational resources into vocational training.

3.4   **The digital economy and employment**

3.4.1   The EU has a high unemployment rate but at the same time - as the Commission has pointed out - it faces an immediate shortage of 900 000 skilled workers to fill vacancies in the ICT sector.

3.4.2   ICTs have a significant impact on employment, and the success of the Digital Agenda is tied to the existence of high-tech companies: in 2008 ICTs brought EUR 574 billion of value added to the EU and employed 8.3 million people. European companies face problems such as fragmented markets and insufficient funding, and need to strengthen their position vis-à-vis the titans that dominate world markets, most of which are North American.

3.4.3   Like any technological development, ICTs have a dramatic effect on employment. This must be looked at with a view to creating occupations, qualifications, skills and forms of certification both for people excluded from employment because of ICT and for those whom ICT can help to become integrated.

3.4.4   The Grand Coalition for Digital Jobs launched by the Commission in March 2013 addresses the main problems (training and matching of courses with jobs in the digital sector; mobility; accreditation; awareness-raising; innovative education and training), but it does not have a specific budget line. Other initiatives exist under the Digital Agenda, such as the e-Skills strategy, Employment Package, Opening Up Education initiative, Rethinking Education strategy, Youth Opportunities Initiative and the EU Skills Panorama.

3.4.5   This Coalition should include industry, but also the education world, so that work-experience periods in companies bring closer contact with the ICT sector.

3.4.6 It should be noted that these programmes do not take sufficient account of the special needs of people excluded because of disabilities, particularly when it comes to mastering e-skills and digital literacy and gaining a place in the digital work market.

3.4.7 Although Europe's big high-tech companies invest in R&D, they do so far less than Asian and US companies. The EESC hopes that Horizon 2020, with its EUR 78.6 billion budget, will help to strengthen Europe's position on the world markets.

3.4.8 The EESC considers it essential to promote European SMEs in the ICT sector, as they can drive innovative projects that are vital in a constantly changing industry. To help tackle the crisis, solutions must be found to the financing problems faced by small businesses and innovative projects (start-ups) involving technological innovation.

3.5 **Society in the digital age must be inclusive**

3.5.1 Currently, only 30% of the 7 million or so people working in the ICT sector are women; women are under-represented at all levels and above all in decision-making positions. Although a higher proportion of women than men complete higher education, they are still at a disadvantage compared to men when it comes to jobs, pay, working conditions and access to positions with more responsibility.

3.5.2 A change in policy is made particularly necessary by the drop in the number of women ICT graduates: currently, only 29 in every 1 000 women holds a postgraduate degree in an ICT subject, and only four in every 1 000 will be employed directly in the sector;

3.5.3 Although greater female participation in the ICT sector could increase the euro area's GDP by EUR 9 billion, there are a number of reasons (for example, cultural stereotypes and traditions) for their insufficient participation in this sector, which is a problem not just in Europe but also in the wider world.

3.5.4 The EESC therefore suggests:

- expanding research to determine which factors are implicated in the paucity of women in the ICT sector in general and why fewer women choose studies in the fields of science, mathematics and technology;
- considering the adoption of plans and robust measures, with funding, that address the issue of gender equality;
- considering the situation of women and girls with disabilities, who often face discrimination compared to their male counterparts when it comes to access to education and employment; they also have more difficulty entering the labour market, which makes it harder for them to lead independent lives;
- identifying career paths and models that can provide inspiration for women and girls;
- revising the status of the European Code of Best Practices for Women in ICT;

− analysing successful campaigns in social media;
− teaching children to use computers and introducing them to programming at an early age (from primary school), as this would help girls to become more involved with ICTs.

4. **Specific comments**

4.1 Accessibility must be a priority objective not just for the authorities but for the whole of society, supported by all economic and social players. However, EU policies and, in general, those of many Member States have proved inadequate.

4.2 The EESC suggests that the Union and national authorities promote joint projects to achieve a substantial reduction in the cost of online materials - including promoting the use of free, or open-source, software such as Linux - and to provide European content for information and knowledge.

4.3 An appropriate policy for the EU in the 21st century requires a mentality that is open to change. The main purpose of European education and training systems should be not just to meet specific labour market needs (something which the European Commission has made a central plank of its education policy), but also to prepare people for life. European associations of teachers and educational establishments should be involved in framing EU education policies, which is not happening at the moment.

4.4 Bearing in mind that the Member States face budget constraints and that, through their democratic institutions, they are taking the decisions that they consider best for their citizens, the Committee notes the imperative need to invest in public education to achieve the goal of equal access to education regardless of students' social background and their financial means.

4.5 The Commission should insist that educational metadata be free and regarded as of general interest, and not subject to proprietary patents held by private companies. The importance of eContentplus, a Commission metadata programme, should be noted in addition to the European SPI standardisation programme.

4.6 Control of educational content should rest with teachers and educational establishments, so as to guarantee the quality and suitability of education and training provided. The EESC thinks that the recommendations of the European Foundation for Quality in e-Learning (EFQUEL) should be taken into account with respect to legislation, harmonisation, intellectual property rights, etc.

4.7 The EESC has already expressed its dismay at the slashing of the Digital Agenda budget for the 2014-2020 period, from the EUR 9.2 billion initially proposed to the EUR 1.14 billion finally approved.

4.8   The EESC welcomes the financial support for high-risk innovative schemes carried out by SMEs, which was established under Horizon 2020. Measures to ensure that SMEs and start-ups receive more funding not only from the public authorities but also from the markets and the financial system are extremely important.

4.9   The EESC calls for accessibility aspects to be included in all initiatives in the digital field, ensuring that e-learning programmes, ICT, materials and tools (both online and offline) are accessible to people with disabilities and to all vulnerable individuals. Special care must also be taken to include people with disabilities in the new ICT posts which the EU intends to fill.

Brussels, 10 July 2014.

The President
of the
European Economic and Social Committee

Henri Malosse

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