



European Economic and Social Committee

CCMI/034
IT-supported lifelong
learning and industrial
change

Brussels, 13 September 2006

OPINION

of the

European Economic and Social Committee

on

The contribution of IT-supported lifelong learning to European competitiveness, industrial change and social capital development

(Own-initiative opinion)

On 19 January 2006 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 contribution of IT-supported lifelong learning to European competitiveness, industrial change and social capital development.

The Consultative Commission on Industrial Change, which was responsible for preparing the Committee's work on the subject, adopted its opinion on 31 August 2006. The rapporteur was Mr Marian Krzaklewski. The co-rapporteur was Mr András Szücs.

At its 429th plenary session, held on 13 and 14 September 2006 (meeting of 13 September), the European Economic and Social Committee adopted the following opinion by 181 votes to six with eleven abstentions.

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1. **Proposals and recommendations**

- 1.1 The European Economic and Social Committee is convinced that the use of electronic media in teaching and training – (*e-Learning*)¹ should help the European Union to carry out activities aimed at increasing the effectiveness and quality of education, including job-based education and training. This, together with other measures, will reduce staff training costs, substantially improving the competitiveness of businesses, especially small and medium-sized enterprises.
- 1.2 The Committee believes that learning and training supported by information and communications technologies (ICT) are still inconsistent in the EU. This is caused by linguistic and cultural diversity and the immaturity of the relevant markets.
 - 1.2.1 In order to change this, all educational institutions, including those active in the field of lifelong learning (LL)², should be more open to new forms of learning and be ready to use them on an ever wider scale, supporting the integration of knowledge and experience with a view to achieving synergy with the planned technological and economic development.

¹ *e-Learning* - The use of new multimedia technologies and the Internet to improve the quality of learning by facilitating access to resources and services as well as remote exchanges and collaboration.

² *Lifelong learning (LL)* - An expression used to indicate that acquiring new knowledge is now considered a continuous process which does not end when one leaves school or university, but continues uninterrupted throughout one's professional life and even after retirement, spreading to embrace all stages of life and all social groups thanks, to a large extent, to the possibilities offered by e-learning (source: www.elearningeuropa.info).

- 1.2.2 The Committee believes that the European Commission is best placed to establish a new policy in this context. The issue of communication and coordination is therefore particularly important for the Commission services, especially in the fields of education and the information society.
- 1.2.3 The time has come to acknowledge that e-learning has moved into the mainstream and the consolidation of professional knowledge in this field. This will ensure the application of consistent approaches and help to realise the added value of e-learning.
- 1.3 The EESC is convinced of the need for a greater awareness in the EU of ICT, in particular of the way these technologies can support training in industry and lifelong learning, e.g. through:
- training provided mainly in the workplace, geared towards solving existing problems in a particular context;
 - methods and approaches recognising prior learning achievements – including those obtained through work and experience – and encouraging active involvement in learning activities, both independent and collaborative.
- 1.4 The EESC appeals to the EU institutions and the Member States to remember, when implementing development programmes connected with the establishment of the information society, that these processes must not lead to any form of exclusion. In other words, there should be no social, economic or regional barriers to access to electronic infrastructure as a learning tool.
- 1.4.1 The Committee stresses that the key condition for using ICT in lifelong learning, particularly in the Community's rural areas and small towns, is support from the EU and the governments of Member States for broadband internet connections³ that provide access to e-learning systems. The situation is exceptionally difficult for such areas in the new Member States. This adds even more weight to the argument that there can be no place for any kind of barrier as far as access to broadband connections is concerned.
- 1.4.2 In this context, the EESC appeals to the Commission to recognise access to broadband as part of a wider strategy aimed at ensuring that eAccess is accorded the status of general interest.
- 1.5 The Committee believes that, as far as e-distance learning and training are concerned, special consideration must be given to the risk of a generation gap emerging, especially since an increasing number of activities in the field of adult lifelong learning will be undertaken using ICT.

³ *Broadband Internet access* - Communications channel with high capacity, enabling quick, easy access to information and e-learning systems (source: www.elearningeuropa.info).

- 1.6 In addition, the EESC would like to draw attention to the fact that e-learning should also be designed in a way that meets the needs of blind people. Given that the technical solutions in this area are well known, the authors of e-learning textbooks should take as a basis the set of rules drawn up by organisations representing the blind community.
- 1.7 The EESC is convinced that e-learning should be an effective tool for improving the competitiveness of enterprises and increasing their business potential, especially the potential of small and medium-sized enterprises, which have a key role to play in generating economic growth and creating jobs.
- 1.8 The Committee believes that broadening the scope of ICT-supported lifelong learning in the EU will have a major influence not only on increasing the competitiveness of businesses but also on enhancing the social capital of the people they employ, which should increase the value of European business capital.
- 1.9 The EESC notes that there is an urgent need to define a new role for civil society and for dialogue among the social partners as regards the promotion and establishment of IT-assisted lifelong learning in the EU's labour markets. Preparing all European societies for ICT-supported lifelong learning will help to build a European Knowledge Area as well as a knowledge-based society⁴.
- 1.10 The Committee notes that less progress than expected has been made in the integration of ICT into learning and the professional consolidation of e-learning. Therefore, the competent authorities at EU and national level are called upon to take measures that will significantly increase the number of people taking up e-learning. Such a development has the potential to make a considerable contribution to the competitiveness and productivity of industry.
- 1.11 The EESC calls on the EU institutions to pay particular attention to the needs of SMEs, their networks and representative organisations with a view to ensuring they make the most of ICT for training purposes.
- 1.12 The Committee believes that teachers of modern technology and methodology (IT education) should be given long-term, systematic support through comprehensive programmes and incentives.
- 1.13 The EESC would like to stress that the European Commission should also pay special attention to the question of intellectual property rights in the field of IT education.

⁴ *Knowledge-based society* - A society whose processes and practices are based on the production, distribution, and use of knowledge for the continued improvement of skills and full involvement in family and professional life and in society, COM(2001) 678 final.

1.14 In the final conclusion of its proposals and recommendations, the Committee suggests following the example of terms already in use in the EU such as *e-Europe*, *e-learning*, *e-skills* etc. by introducing the term – *e-LL (e-lifelong learning)*, thereby stressing the role of this form of learning and the need to develop and extend it within the *eEurope action plan* and the subsequent i2010 initiative.

2. Introduction and reason for opinion

2.1 This opinion will examine the contribution of ICT-supported lifelong learning to competitiveness, industrial change and social capital development in the European Union.

2.2 In connection with the implementation of the Lisbon Strategy, lifelong learning is becoming one of the most important concepts in the EU's education policy and new educational programmes for the period 2007-2013⁵. Flexible and open methods of learning and training using ICT will certainly play a key role in the development of the knowledge-based economy.

2.3 Following the groundbreaking *eEurope* programme and measures to introduce e-learning, which have already led to some promising developments, there must be consideration of how to build on these accomplishments in terms of changes in industry, how to develop opportunities related to these accomplishments and how to sketch out future prospects.

3. General comments

3.1 The importance of information technology in developing human resources was recognised by the European Parliament and the Council of the European Union⁶, which approved a multi-annual programme (2004-2006) for the effective integration of ICT in education systems in Europe. The basic aim of this programme is to use ICT to facilitate high-quality education and training in the context of lifelong learning.

⁵ *An integrated action programme in the field of lifelong learning*, COM(2004) 474 final, 14.7.2004.

⁶ Decision of the European Parliament and of the Council, No 2318/2003/EC on the eLearning Programme of 5 December 2003.

- 3.2 Open, flexible distance learning, together with e-learning, dominated the last decade, but it is now being looked at once again, this time in a broader context. ICT-supported learning or e-learning make our lives, education and work more flexible and are regarded as one of the main paths to achieving the goals of the Lisbon Strategy. Non-formal⁷ and informal learning⁸ and also job-based training are becoming more important.
- 3.3 The EESC opinion of 2004 on *Improving the implementation of the Lisbon Strategy*⁹ highlighted the need to examine the new opportunities provided by the knowledge-based economy and the importance of the increased expansion of information technologies and innovation processes.
- 3.3.1 It also drew attention to shortcomings in education systems and to the need for better integration of the social dimension.
- 3.4 Some of the initiatives taken by the Union in the last decade in the field of ICT-assisted learning produced exceptional results, while others demonstrated a lack of consistency and did not have the intended outcome in terms of numbers and quality.
- 3.4.1 Early models for e-learning were focused on individuals and the transfer of predetermined knowledge. They included virtually no tutorial support or assessment and were something of a disappointment to those who made early attempts to adapt to this form of learning.
- 3.4.2 Rapid technological progress, increased economic pressures and the different pace of government policy measures over the past few years, which were supposed to introduce ICT into education and training, have not done enough to promote the development of vocational skills.
- 3.5 It is planned that in 2010, 12.5% of adults in the EU aged 25-64 will be involved in various forms of lifelong learning, compared with a current average of 10%¹⁰. Only by stepping up the expansion of ICT-assisted education and training can these objectives be achieved.

⁷ Non-formal learning takes place alongside the mainstream systems of education and training and does not typically lead to formalised certificates. Non-formal learning may be provided in the workplace and through the activities of civil society organisations and groups (such as in youth organisations, trades unions and political parties). It can also be provided through organisations or services that have been set up to complement formal systems. *EU Commission, SEC(2000) 1832.*

⁸ *Informal learning* - Learning based on everyday situations at work, in the family and during leisure time. It is neither organised nor formal (in terms of set goals, duration or resources). For the learner, non-formal learning often takes place unwittingly and does not usually lead to a certificate. *EU Commission, SEC(2000) 1832.*

⁹ EESC opinion 1438/2004 on *Improving the implementation of the Lisbon Strategy.*

¹⁰ Modernising education and training: a vital contribution to prosperity and social cohesion in Europe, COM(2005) 549 final 30.11.2005.

- 3.5.1 The challenges facing the education and training programmes of the Commission and the Member States are all the greater, given that over the next five years only 15% of new jobs will be for unskilled workers while 50% will require highly qualified staff¹¹.
- 3.6 A new EU initiative undertaken in connection with the *i2010* Commission communication¹² is the *e-Inclusion* initiative. The term *e-Inclusion* refers to both the inclusion of ICT and the use of ICT as a means of achieving inclusion¹³. The *e-Inclusion* policy aims to remove barriers to ICT use and to promote ICT usage with a view to preventing exclusion, improving economic productivity and employment opportunities.
- 3.6.1 An important aspect of *e-Inclusion* is *e-distance learning*, which is aimed at reducing or preventing the social marginalisation of occupational groups with limited access to traditional forms of education owing to their geographical location, social situation or special educational needs.
- 3.6.2 The benefits of distance learning are: not being tied to a fixed place of learning, the possibility of adapting the pace of learning to meet individual learning needs, the opportunity to make use of modern information technologies, the possibility for people from disadvantaged groups to improve their skills, etc.
- 3.6.3 In its recent opinion¹⁴, the EESC called upon representatives of governments and business sectors to draw up and support measures on the subject of ICT education and training for the various social groups facing e-exclusion¹⁵.
- 3.6.4 The implementation of the *e-Inclusion* programme is also linked to the promotion of digital literacy¹⁶, which has become synonymous with the modern knowledge-based society. The recognition in the near future of digital literacy as one of the key skills in lifelong learning in the context, inter alia, of the recent EESC opinion¹⁷, seems not only necessary but indisputable, too.

11 Conclusions of the Council on education, youth and culture of 21.2.2005.

12 COM(2005) 229 final.

13 Ministerial Conference "ICT for an inclusive society", Riga, 11.6 2006.

14 EESC opinion – TEN/228: eAccessibility.

15 e-exclusion – exclusion from participation in electronic communication.

16 Digital literacy - one of the basic skills required to actively participate in the information society and the new media culture. It focuses on the acquisition of skills and abilities linked to new technologies, increasingly essential in everyday life. *E-Learning Programme*, 5 December 2003.

17 EESC opinion, SOC/227 - Key competences for lifelong learning, May 2006.

- 3.7 The promotion of *e-skills*¹⁸ is having an important influence on various aspects of industrial change. The term *e-skills* covers ICT practitioner, ICT user and e-business skills. Within the framework of the promotion of a wide-ranging e-skills agenda, the Commission recently proposed a series of measures, many of which were concerned with industry and boosting e-skills in the labour market as well as developing and promoting new e-competences¹⁹.
- 3.7.1 The partnership between stakeholder representatives plays a key role in measures relating to both e-skills and the body of issues linked to the introduction of ICT-supported lifelong learning. Such stakeholders include:
- trade unions;
 - representatives of businesses (as ICT users) who are dependent on a skilled workforce;
 - representatives of various industries who are responsible for introducing new technologies and are better informed about what type of qualifications are required;
 - representatives of the ICT industry;
 - researchers in the field of ICT and developers in this area;
 - researchers of the quantitative and qualitative aspects of e-skills;
 - policy makers in the field of education, research, business, innovation and the information society;
 - forecast specialists with a broad view of changes in society and the interaction between society and technology.
- 3.8 The expansion of broadband Internet access is of central importance to the achievement of the goals of the i2010 Strategy and those of the e-Inclusion projects. It cannot be limited exclusively to large towns and cities, but should also be available to the inhabitants of less developed regions²⁰.
- 3.8.1 It is worth considering that in the EU 15 some 90% of businesses and households in urban areas have access to a broadband connection, but only 60% in rural and remote areas; these differences are much greater in the new Member States.
- 3.8.2 Broadband is vitally important not only for enhancing business competitiveness and for the economic growth of regions, but also for the education and training sector, especially where e-learning is used in training programmes.

18 Report - RAND Europe, "The Supply and Demand of E-skills in Europe", IX 2005.

19 E-competences – competences in the field of ICT and skills and attitudes relating to ICT usage, which make it possible to carry out professional tasks at the appropriate level.

20 Communication of the European Commission: Bridging the Broadband Gap of 21.3.2006.

3.9 A policy discourse on this matter would currently be highly advisable if we are to improve the practice of lifelong e-learning and thus make this form of training more effective. The EU is best placed to give policy in this area a new direction.

3.9.1 Current policies give de-facto priority to introducing ICT into formal education institutions, notably schools and universities; far less attention is devoted to ICT and far fewer resources are allocated to promoting ICT usage in lifelong learning and non-formal/informal learning among adults.

4. **Specific comments**

The contribution of IT-supported lifelong learning to European competitiveness and productivity

4.1 In keeping with the general thrust of the Commission communication of 2002²¹ and the EESC opinion on *Training and Productivity*²², productivity can be said to be the key to making businesses and the European economies more competitive and also to economic growth. Improved productivity is to a large extent dependent on progress in ICT usage by businesses and on the ability of the workforce to adapt to the requirements of modern industry.

4.1.1 Despite the fact that electronic technology, which was the subject of much hype, failed to meet expectations in the initial stages of development, the e-sectors of society and the economy are actually showing unprecedented development and still have great potential.

4.1.2 In this context, the European Commission rightly recognises and values the importance of modern ICT in stimulating competitiveness and innovation and in the knowledge-based economy, especially in small and medium-sized enterprises.

4.2 The path to improving the competitiveness of the European economy has to be vocational education, through programmes and training that make use of ICT. The creation of cohesive, mobile and flexible education and training systems for job seekers, those preparing for work as well as for people employed in industry will increase the growth rate of knowledge and lead to important technological changes and innovations in manufacturing enterprises, which will increase their competitiveness.

4.2.1 In this context, the introduction of IT-supported lifelong learning in businesses and related areas should make them more competitive and help to enhance the social capital of the people they employ, and in so doing increase the value of European business capital.

21 COM(2002) 262 final.

22 CESE 1025/2004 fin.

- 4.3 Around 1994, there was a breakthrough in the implementation and use of e-learning when the industry – chiefly large corporations – started using this method on a wider scale in their in-company training and human resource development. This was a sign of maturity, when e-learning demonstrated the ability to deliver consolidated and sustainable solutions, overcoming the earlier period of simplistic promotional and marketing messages. In the meantime, SMEs have, for a number of reasons, come to represent a practically disadvantaged group of users of e-learning, where the application of this training method – and frequently, that of ICTs as well - is limited, and most SME employees risk being excluded from opportunities in the field of continuing education. Greater e-learning uptake could be a considerable boost to the competitiveness of SMEs and help to make them more effective. Competent authorities, both at EU and national level, should raise awareness of this and implement measures to promote the use of ICTs for training purposes in the SME sector.

The contribution of IT-assisted lifelong learning to the development of social capital

- 4.4 Social capital covers skills, information, culture, knowledge and individual creativity as well as relations between people and organisations. The importance of these resources for economic growth and its accompanying industrial changes should be assessed by examining the relationship between the development, promotion and use of such resources and the added value they create.
- 4.4.1 A high level of social capital has a direct impact on the ability to form a knowledge-based society that is creative, innovative, open to change and capable of forging long-term economic and social ties. One of the cornerstones of such a society is investment in research, education and training.
- 4.4.2 Social capital may be increased through the ability of the relevant stakeholders (see 3.7.1) to cooperate in the form of a partnership in all programmes and activities relating to ICT-assisted education and training, especially lifelong learning.

The contribution of IT-assisted lifelong learning to industrial change, with particular reference to investment in employee skills, the development of human resources and tackling unemployment.

- 4.5 E-distance learning and training can enable the systematic, faster and cheaper transfer of knowledge that is of key significance particularly in industry where it forms an important element of its human capital and facilitates the transfer of knowledge from research institutes to industry.
- 4.5.1 Well-educated workers who continually improve their qualifications are an important factor in determining the value of a particular firm or enterprise. They facilitate changes in production technology, its profile and adaptation to meet the needs of the labour market.

- 4.6 The European Commission has stressed²³ that, given rapid technological development and changing economic conditions, there is a need for long-term investment in the development of human resources, involving private individuals, businesses, social partners and public authorities. Unfortunately, EU countries show no clear trend towards greater public expenditure on education, which averages around 5% of GDP, with significant and sometimes even dramatic differences between individual States.
- 4.7 Investment in the development of human resources has a direct impact on productivity growth and is also an attractive form of investment on both a microeconomic and a social level. Studies²⁴ show that each year of learning directly increases economic growth by around 5% in the short term and by around 2.5% in the long term. This is confirmed in the proposals of the European Council²⁵, which stressed that investment in education and training brings considerable benefits which far outweigh the associated costs.
- 4.8 Rapid technological development is leading to the emergence of modern production equipment that often has IT systems that can only be operated by ICT-literate staff. It is not always possible to recruit such staff immediately, but thanks to the large scale use of ICT in teaching and training, particularly in lifelong learning, it will certainly be easier to find such staff in the labour market.
- 4.9 For the reasons mentioned above, given the current changes in industry, it would be worth taking active steps to introduce ICT into lifelong learning without delay. This action should enable employees of European manufacturing firms and unemployed persons undergoing training to acquire new knowledge and skills more quickly. Unemployed people in particular should be guaranteed access to State-funded ICT training²⁶.
- 4.9.1 Unemployed people have little motivation to learn independently as they still have too few opportunities to apply the knowledge they have acquired. The best motivation is the real possibility of a new job resulting from a specific form of training or retraining, ideally provided by the company offering the employment.
- 4.9.2 This could create favourable conditions for ICT- supported lifelong learning, but in the areas where this would be most appropriate (agricultural areas with bankrupt production businesses, which is becoming common in the new Member States), the infrastructure is inadequate.

²³ Commission communication: Investing efficiently in education and training: an imperative for Europe COM(2002) 779 of 10 January 2003 (5269/03).

²⁴ De la Fuente and Ciccone: Human capital in a global and knowledge-based economy. Final report for the Directorate General for Employment and Social Affairs, European Commission, 2002.

²⁵ Conclusions of the Presidency, European Council 23-24 March 2006 (7775/06).

²⁶ EESC opinion –TEN/220: i2010 – A European Information Society for Growth and Employment.

4.9.3 Infrastructure in these areas requires government and Union support, since IT companies are unwilling to cover the costs of Internet access for poor areas (small towns and rural areas).

Brussels, 13 September 2006.

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