*Plenary sitting*

**A7-0249/2014**

25.3.2014

# REPORT

on new technologies and open educational resources
(2013/2182(INI))

Committee on Culture and Education

Rapporteur: Cătălin Sorin Ivan

PR_INI

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# MOTION FOR A EUROPEAN PARLIAMENT RESOLUTION

**on new technologies and open educational resources**
**(2013/2182(INI))**

*The European Parliament,*

–   having regard to Articles 165 and 166 of the Treaty on the Functioning of the European Union,

–   having regard to Article 14 of the Charter of Fundamental Rights of the European Union,

–   having regard to the Commission Communication of 25 September 2013 entitled 'Opening up Education: Innovative teaching and learning for all through new Technologies and Open Educational Resources' (COM(2013)0654) and the accompanying staff working document on analysis and mapping of innovative teaching and learning for all through new Technologies and Open Educational Resources in Europe (SWD(2013)0341),

–   having regard to the Commission Communication of 11 July 2013 entitled 'European higher education in the world' (COM(2013)0499),

–   having regard to  the Regulation of the European Parliament and of the Council of 11 December 2013 establishing 'Erasmus+': the Union programme for education, training, youth and sport and repealing Decisions No 1719/2006/EC, No 1720/2006/EC and No 1298/2008/EC[1],

–   having regard to the Council conclusions of 24 February 2014 on efficient and innovative education and training to invest in skills – supporting the 2014 European Semester[2],

–   having regard to the Council recommendation of 20 December 2012 on the validation of non-formal and informal learning[3],

–   having regard to the Council conclusions of 14 February 2011 on the role of education and training in the implementation of the Europe 2020 strategy[4],

–   having regard to the Council conclusions of 11 May 2010 on the social dimension of education and training[5],

–   having regard to the Council conclusions of 11 May 2010 on the internationalisation of higher education[6],

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[1] OJ L 347, 20.12.2013, p. 50.
[2] OJ C 62, 4.3.2014, p. 4.
[3] OJ C 398, 22.12.2012, p. 1.
[4] OJ C 70, 4.3.2011, p. 1.
[5] OJ C 135, 26.5.2010, p. 2.
[6] OJ C 135, 26.5.2010, p. 12.

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– having regard to its resolution of 22 October 2013 on rethinking education[1],

– having regard to its resolution of 12 September 2013 on the digital agenda for growth, mobility and employment: time to move up a gear[2],

– having regard to its resolution of 13 September 2012 on education, training and Europe 2020[3],

– having regard to its resolution of 20 April 2012 on modernising Europe's higher education systems[4],

– having regard to its resolution of 26 October 2011 on the agenda for new skills and jobs[5],

– having regard to its resolution of 12 May 2011 on Youth on the Move – a framework for improving Europe's education and training systems[6],

– having regard to the opinion of the European Economic and Social Committee of 26 February 2014[7],

– having regard to the opinion of the Committee of the Regions of 31 January 2014[8],

– having regard to Rule 48 of its Rules of Procedure,

– having regard to the report of the Committee on Culture and Education (A7-0249/2014),

A. whereas education and training systems need to be geared towards achieving equal opportunities in learning and towards meeting an increasing need for the continuous updating of knowledge and skills and an increasingly international labour market while aiming at greater efficiency and equity;

B. whereas the Europe 2020 strategy aims to boost innovation, create new employment opportunities, improve social cohesion and build solid foundations for sustainable and inclusive growth in the EU through a highly skilled workforce that enjoys equal access to education;

C. whereas high unemployment levels, particularly among young people, including university graduates, coincide with a significant number of vacancies in Europe that cannot be filled, pointing to a marked skills gap that could best be overcome, inter alia, through dual vocational training models; whereas in 2012 15.8 % of young people in the EU were neither in employment nor in education or training (NEET), and thus at risk of being excluded from the labour market due to increased skills mismatches;

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[1] Texts adopted, P7_TA(2013)0433.
[2] Texts adopted, P7_TA(2013)0377.
[3] Texts adopted, P7_TA(2012)0323.
[4] OJ C 258 E, 7.9.2013, p. 55.
[5] OJ C 131 E, 8.5.2013, p. 87.
[6] OJ C 377 E, 7.12.2012, p. 77.
[7] Not yet published in the Official Journal.
[8] Not yet published in the Official Journal.

D. whereas it is expected that by 2020, 90 % of jobs will require digital skills, and whereas by 2015 there will be up to 900 000 unfilled information and communication technologies (ICT)-related vacancies in the EU;

E. whereas the number of university graduates is expected to quadruple by 2030;

F. whereas 18-28 % of students in the EU have few possibilities to access and use the internet either at school or at home; whereas only 30 % of students in the EU can be considered as digitally competent; whereas only 20 % of students in the EU are taught by digitally confident and supportive teachers; whereas 70 % of teachers in the EU do not consider themselves digitally confident and would like to further develop their ICT skills; whereas 40 % of Europeans aged 16-74 have low or no ICT skills;

G. whereas open educational resources (OERs) can play a crucial role in facilitating lifelong learning for all learners and in improving the quality of content and the distribution of both formal and informal education providers, and whereas, at the same time, a digitally inadequate education system can hamper the development of learners' knowledge and skills;

H. whereas the EU has still not fully grasped the potential of ICT in terms of cultural and educational wealth and diversity, access to information and the exchange of good practices;

I. whereas the modernisation of education systems in Europe requires investment in education facilities that are well equipped in terms of information and communication technologies;

J. whereas, it is therefore vital that broadband access become more widespread, including in the rural, mountain and outlying areas of the Member States;

K. whereas schools should also train children and young people in the practical and critical use of digital technologies and the internet;

*Opportunities and challenges*

1. Welcomes the Commission communication which sets out a Union agenda in the field of OERs, and which focuses on the potential of these resources to widen access to and equity in education and further diversify it, and acknowledges the relevance of OERs in an increasingly digital society; believes that the emergence of a European framework for the development of OERs may allow for improvement in the Member States' education systems;

2. Notes that, in order to realise the benefits of OERs, actions leading to universal digital education should be supported, with a focus on good practices and their promotion in various environments;

3. Emphasises that OERs create opportunities for both individuals, such as teachers, students, pupils and learners of all ages, and educational and training institutions to teach and learn in innovative ways; calls on educational institutions to further assess the

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potential benefits of OERs in the respective educational systems and in view of possibly creating an organisational environment in which such innovation is welcomed, internalised, applied and promoted; calls, in this connection, on the Member States and regions, as part of smart specialisation strategies, to establish innovation and start-up centres of excellence which make full use of the potential of ICT;

4. Deplores the lack of differentiation in the Commission communication between school levels as regards the deployment of new technologies and digital content for learning and teaching purposes; stresses that learners acquire different skills and competences depending on their age, and that consequently curricula and learning methods vary according to school level;

5. Notes that quality assurance plays a crucial role in increasing the trust in and use of OERs; encourages research on and the dissemination of good practices to facilitate the effective use of OERs, investing, in particular, in the areas of methodological experimentation, meta-skills (reflexive, proactive and critical thinking skills) and soft skills; notes that research should also be encouraged with regard to the methods of assessing the skills acquired for such courses which cannot be restricted to peer assessment or automated systems, as occurs in communities of practice;

6. Acknowledges the fact that OERs are generally produced in a limited number of languages and mainly, although not exclusively, by higher education institutions (especially as regards massive open online courses (MOOCs)); encourages education and training institutions at all levels across the Member States, as well as other relevant stakeholders, to produce OERs in their own languages in order to exploit the full potential of digital technology and multilingualism; recalls that the availability, accessibility and innovativeness of materials plays a key role in terms of using e-learning materials in education;

7. Points out that ICT and OERs are currently mainly used in higher education; encourages, where appropriate, their use in primary and secondary education, as well as in vocational education and in other informal learning settings, where student-centred learning combined with ICT also carries huge potential;

8. Notes that proper contextualisation is a critical factor in making educational software effective; points out that this process must be suitably embedded into teaching and learning processes, and must take into account pedagogical and curriculum objectives, tools and individual learning paths;

9. Stresses the need to facilitate the recognition of knowledge and skills acquired through OERs by means of further dialogue with stakeholders, and calls on the Member States to incorporate appropriate measures into their national qualification frameworks for the validation of such learning;

10. Points to the need to make it easier to obtain recognition for skills acquired abroad, in order to boost and facilitate the use of OERs and MOOCs by pruning bureaucratic structures;

11. Highlights the fact that availability of and access to free, high-quality and suitable online

teaching materials is crucial;

12. Stresses the need for the harmonisation of existing limitations and exceptions in copyright for the purpose of illustration in non-commercial teaching, in order to facilitate OERs and distance learning across borders, and to allow European platforms to compete globally by creating economies of scale;

13. Urges the Commission to put forward a proposal to review Directive 2001/29/EC, with the aim of establishing a harmonised and flexible system of copyright and related rights in the EU which is fit for the digital age and acknowledges the public value of access to knowledge;

14. Encourages Member States to explore the predicted potential of OERs for reducing the public and private costs of education, in particular the costs of education materials, without neglecting quality;

15. Notes the importance of ensuring sustainable models for the creation of OERs and MOOCs; calls on the Commission to support further research into the formation, usage and uptake thereof, in dialogue with stakeholders;

16. Acknowledges that the adoption of OERs should be done in a manner that fosters development of 21st century learning solutions, and creates new business opportunities for small and medium-sized innovative European providers of learning solutions;

17. Calls on the Member States to strengthen informal education on online safety and to provide for online safety policies in schools by offering appropriate training to teachers;

18. Calls on the Member States to ensure coordinated and progressive education on internet safety in schools; notes that parents and legal guardians should be regarded as partners in ensuring web safety, and recommends that complementary strategies targeting them be developed, thereby strengthening the role of parental mediation; stresses the fact that these efforts should be aimed at strengthening young people's independence so that they can take ownership of their actions and responsibilities on the web and develop e-skills; insists that the protection of the physical and psychological integrity and privacy of teachers and learners using OERs must be assured;

19. Calls on the Commission to support the exchange of good practices between Member States in the formal and informal education sectors with regard to online safety, the creation of relevant educational content and the formation of public-private partnerships with the aim of involving young people, their parents and teachers and all those who work with young people, including the non-governmental organisations involved in the Safer Internet network;

*Skills for teachers and learners*

20. Notes that new technologies and OERs allow for a more interactive learning experience and are valuable instruments in placing the learner at the centre of the educational process;

21. Stresses that teachers at all levels of education have a fundamental role in facilitating

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access to and the use of online learning materials by all learners and in assisting them in acquiring digital skills;

22. Stresses the urgent need for all learners to have the fastest and best possible technical equipment, as well as vital access to broadband internet;

23. Recalls the crucial importance of high-quality training for teachers and trainers that must be complemented with mandatory career-long professional training focusing on innovative teaching methods and instructing learners about approaches to education ('learning how to learn');

24. Urges the Member States to support teachers in their professional development by offering them modern curricula in their initial education, and by providing them with in-service training geared to equip them with the necessary competences for the use of digitally supported teaching methods;

25. Emphasises, in particular, the proven benefits of European experience abroad for teachers and trainers, for example through the Erasmus+ programme, and calls for a massive expansion of this and other related programmes;

26. Points out that basic literacy and numeracy skills, in addition to meta-skills and soft skills, as well as transversal skills, such as critical thinking and learning to learn, are a prerequisite for developing digital skills and using online educational materials, including OERs, effectively; calls, in this context, on the Commission to further assess the impact of digital and/or online learning materials on the learning performance of learners according to their age and school level;

27. Recognises the importance of traditional ways of teaching and learning, and calls on the Commission to support further research into the question of whether and how OERs and MOOCs can enhance individuals' learning outcomes in addition to, or as an integral part of, traditional teaching methods;

28. Recalls that innovative teaching methods facilitated through ICT and OERs contribute to the development of soft and transversal skills, such as critical thinking, decision-making, communications skills and problem-solving, which are crucial for employability and job market realisation;

29. Stresses that education policies should primarily aim at assisting learners in the development of crucial cognitive and social skills; calls on the Commission to further assess the impact on learners of deploying digital devices and contents for pedagogical purposes while ensuring their physical and psychological integrity;

30. Points out that OERs geared towards the needs of adult learners should be developed so as to ensure greater lifelong learning opportunities for low-skilled European citizens, bearing in mind the fact that many learners have low ICT skills;

31. Underlines the fact that digital skills and knowledge are vital for citizens in an information-driven society that aims to become the most dynamic knowledge-based economy in the world;

32. Notes that digital literacy, in opening up new channels for communication and education, has a positive impact in terms of strengthening social cohesion, personal development, intercultural dialogue and active citizenship;

33. Highlights the fact that ICT and online educational materials, including OERs, can support the teaching and learning of foreign languages at all levels of education and training; stresses that social interaction is a prerequisite for learning a foreign language;

34. Urges the Member States to improve and deepen digital skills also by including coding and programming in their respective curricula, in order to foster economic competitiveness and equip students with the right skills for the job market of the future;

35. Reiterates that continuous updating of knowledge and skills is essential for successful labour market integration, and notes that OERs can contribute to facilitating the lifelong learning that is necessary in order to remain competitive on the labour market; encourages a more gender-balanced use of ICT with a view to ensuring that women who remain outside the labour market for a given period, for example for maternity or other family care tasks, are also able to benefit from this type of training to update their skills and educate themselves, thereby improving their future re-employment opportunities on the labour market;

36. Points out that public libraries and education centres can offer free access to computers and the internet and training on internet resources;

### *Widening the reach*

37. Stresses the importance of access to education and training and IT equipment for all learners in all age groups, as well as for those with disabilities, those coming from disadvantaged backgrounds, young people currently not in education, employment or training (NEET) and those coming from geographically remote regions, as well as anyone wishing to improve their qualifications;

38. Notes, once again, that not everyone has access to ICTs under equivalent pricing arrangements and in terms of service quality, and that, in general, urban areas are better served than rural areas, thereby creating a digital divide that undermines the notion of equal opportunities for all citizens, wherever they may be in the EU;

39. Stresses the growing importance of adult education, particularly in the context of lifelong vocational training, and calls for the Europe-wide recognition, strengthening and promotion of all adult education organisations;

40. Highlights the advantages of inter-generational learning, and points to the great educational potential offered by digital learning and OERs, also as regards wider access to education and training for all age groups;

41. Acknowledges that new technologies and OERs,  in particular MOOCs, have made it possible for education and training institutions to reach thousands of learners in the Union, including in its outermost regions, and around the world; recognises that education and knowledge now travel easily across borders, which increases the potential for international

cooperation and helps to promote European educational institutions as centres for innovation and the development of new technologies;

42. Notes that it is important to keep a fair balance between the quality and accessibility of education; highlights the fact that new technologies can be used to ensure that more accessible education does not mean a reduction in the quality of education;

43. Notes that the EU risks falling behind other regions of the world, such as the United States or Asia, where heavy investments are made in research and development, new technologies and OERs; insists that the Union must build on its strength in cultural and linguistic diversity and adapt investments in e-learning material, including OERs, and in new technologies to best support its population;

44. Recalls that new technologies can contribute to the competitiveness of European education on the global stage, offer opportunities for the internationalisation of European higher education, and, as a result, increase Europe's attractiveness as an educational destination;

45. Stresses that OERs can contribute to improving the quality of European education; encourages, in this connection, cooperation with educational institutions around the world, in particular in the United States;

46. Reiterates that successful OER strategies and MOOCs can support internationalisation strategies by improving the quality and visibility of European (higher) education institutions and attracting students and researchers in an increasingly global competition for talent;

47. Calls on the Member States to promote cooperation and synergies in the field of lifelong learning, in particular to make it as easy as possible to gain access to learning and to adapt and modernise the curricula of educational institutions to the rapidly developing potential and possibilities of digital learning and OERs, in order to address the new challenges of the contemporary world as effectively as possible;

48. Encourages strengthened cooperation between European education and training institutions, and with international organisations and stakeholders, to facilitate a better understanding of new teaching and learning methods and the impact of ICT on education; encourages the development of common platforms for such cooperation;

49. Stresses that the use of new technologies in education should be well targeted to respond to the needs of the job market and overcome the present skills gap; stresses the need for improved communication and cooperation between educational and training institutions and the business sector;

50. Notes that new technologies and e-learning have the added value of providing an international learning experience for those who do not participate in mobility schemes;

51. Points out that digital technologies are not fully exploited in education and training across the Union; fears that this situation may lead to a further fragmentation of teaching and learning approaches; calls on the Member States to apply equity principles to the new

markets, given that OERs should remain a tool to broaden access to education and not become a purely economic endeavour;

52. Stresses that digital technology is an important learning tool for citizenship, facilitating the participation of many citizens living in peripheral areas and especially of young audiences, allowing them to benefit fully from freedom of expression and online communication;

*The contribution of EU programmes*

53. Welcomes the launch of the Open Education Europa portal in all EU languages, providing a single gateway to European OERs, and calls for the portal to be vigorously developed and promoted in the Member States;

54. Notes that an appropriate digital infrastructure based on commonly used, popular technologies is a prerequisite for reaching the highest possible number of learners with OERs;

55. Calls on the Commission to organise an annual European regional planning conference to ensure that all citizens have access to ICT services wherever they may be in the EU;

56. Points out that local and regional authorities have a key role to play in developing infrastructures, disseminating and publicising various measures to a wider public, involving other local stakeholders and disseminating and implementing the relevant European initiatives at national, regional and local level;

57. Calls on the Member States and the local and regional authorities to use the funding available through the European Structural and Investment Funds to overcome the territorial digital divide by improving infrastructure and networks and promoting training in ICT and the effective use thereof, taking into account the needs of educational institutions, in particular in rural and remote regions; notes that the smart and comprehensive use of EU funding requires synergy between the different programmes and instruments, including Erasmus+, Horizon 2020 and the structural and investment funds;

58. Calls on the Commission to encourage the exchange of good practices between Member States and between educational institutions, drawing on existing projects and experiences;

59. Welcomes the Commission initiative to develop indicators to closely monitor the integration of ICT in teaching and training institutions, and to support Union-wide quantitative surveys;

60. Calls on the Commission to promote and extend the network and action of European Schoolnet;

61. Appreciates that all educational materials drawn up with support from Erasmus+ will be available to the public under open licences; encourages similar practices for other Union programmes, including a broad roll-out of open access under the Horizon 2020 programme;

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62. Highlights the fact that Erasmus+ and Horizon 2020 can play an important role in generating OERs through communities of practice, such as that of school teachers using the eTwinning platform; encourages an extension of the use of these platforms to other educational sectors;

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63. Instructs its President to forward this resolution to the Council, the Commission and the governments and parliaments of the Member States.

# EXPLANATORY STATEMENT

On 25 September 2013, the Commission presented its communication entitled 'Opening up Education: Innovative teaching and learning for all through new Technologies and Open Educational Resources'. The document identifies challenges in three fields:
- o (1) Innovation in education and training institutions;
- o (2) Use of Open Educational Resources (OER);
- o (3) Availability of information and communication technology (ICT) infrastructures and equipment.

The Commission's suggestions for the Member States and education & training institutions include:
- o (1) Increasing recognition of skills acquired online and supporting teachers' acquisition of digital competences;
- o (2) Promoting open access to publicly-funded educational materials;
- o (3) Improving broadband connectivity and ICT equipment at the classroom level.

The rapporteur believes that, in light of the current economic crisis, and against the backdrop of high youth unemployment, one increasingly important challenge facing the Member States is to provide young people with a quality education.

The uneven availability of digital infrastructure across the Union poses a second challenge. The rapporteur believes that the resolution to this problem lies in the use of EU programmes, and in cooperation between Member States and regions.

Moreover, the rapporteur fears that the Union could fall further behind the United States and Asia in the digital competence of its workforce. European education and training systems are still unable to integrate ICT in their mainstream practices. There is a major difference between the day-to-day use of digital technologies and their use in education and training institutions. Cooperation between European education and training institutions should be encouraged to facilitate the development of OER.

Ground-breaking shifts are happening in the field of education and training. We are witnessing a massive growth in educational courses and other resources available via the internet, either free as OER or as paid-for resources: knowledge is increasingly available for everyone, and often for free.

Furthermore, our lives are becoming increasingly digital. This presents both opportunities and challenges for the education sector: the benefits of new technologies must be reaped without neglecting the value of traditional methods.

Making more use of digital technologies is creating opportunities for education and training institutions, teachers, students and pupils to teach and learn in innovative ways. Educational institutions will have the chance to choose individual resources and modify them according to their specific needs, thereby creating a greater diversity of learning environments. OER can

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help to enhance collaborative approaches and personalise the learning process.

While a 'digital native' generation is fast emerging, today's educators must be properly trained to embed ICT in their pedagogical practices. For this reason, the rapporteur believes that the European Union should support teachers' education and professional development on ICT and promote the use of OER.

Many institutions use OER materials. While open licences allow the free exchange of digital educational resources, there are still some challenges to be faced related to the copyright of teaching and learning materials. It is important to properly monitor and analyse these issues.

In the field of education and training, it is essential to continue to improve existing and promote innovative methods of teaching and learning. OER can make a strong contribution towards reaching the goals of the Europe 2020 strategy and making lifelong learning a reality.

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# RESULT OF FINAL VOTE IN COMMITTEE

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|---|---|
| **Date adopted** | 18.3.2014 |
| **Result of final vote** | +: 24<br>–: 0<br>0: 0 |
| **Members present for the final vote** | Zoltán Bagó, Piotr Borys, Silvia Costa, Santiago Fisas Ayxela, Lorenzo Fontana, Mary Honeyball, Cătălin Sorin Ivan, Petra Kammerevert, Morten Løkkegaard, Emma McClarkin, Emilio Menéndez del Valle, Marek Henryk Migalski, Doris Pack, Chrysoula Paliadeli, Monika Panayotova, Gianni Pittella, Marie-Thérèse Sanchez-Schmid, Hannu Takkula, László Tőkés, Helga Trüpel, Sabine Verheyen, Milan Zver |
| **Substitute(s) present for the final vote** | Iosif Matula, Isabelle Thomas |