



2018/2090(INI)

10.10.2018

OPINION

of the Committee on Industry, Research and Energy

for the Committee on Culture and Education

on education in the digital era: challenges, opportunities and lessons for EU
policy design
(2018/2090(INI))

Rapporteur: Tamás Deutsch

PA_NonLeg

SUGGESTIONS

The Committee on Industry, Research and Energy calls on the Committee on Culture and Education, as the committee responsible, to incorporate the following suggestions into its motion for a resolution:

1. Highlights the vital role of education, training and re-training, which are available to all, as the best investment in the EU's future; emphasises that education is of strategic importance for employability, growth, competitiveness, innovation and social cohesion; strongly believes that digital transformation has a great impact on education systems; stresses that digital competencies are of growing importance for every individual and will help to establish an inclusive society, and underlines that in the future, nearly all jobs, services as well as everyday activities, will require digital skills and data literacy;
2. Stresses that, in a context of rapid digital and societal transformation, the education system should support, from an early age and throughout life, a balanced set of skills and competences boosting individuals' resilience, critical thinking, well-being, and innovation potential; points out that a synergy between relevant digital skills and life skills¹, as well as key competences² (particularly personal, social and entrepreneurial skills), needs to be sought urgently;
3. Welcomes the Commission communication of 17 January 2018 on the Digital Education Action Plan (COM(2018)0022), as well as the Commission proposal to set up the Digital Europe Programme, recalls the importance of completing the digital single market by making full use of new technologies as tools for boosting innovation in Europe's education systems, and stresses the need for the effective development of digital competencies; underlines that digital transformation needs to be accompanied by educational support, enabling citizens to make the transition to new professional and society roles; points out that digitalisation has a twofold impact on education systems: firstly, citizens should be prepared for lifelong learning in a world that is becoming increasingly digitalised, and secondly, digital transformation should also be applied to education systems in order to equip educators with the right set of skills;
4. Underlines the importance of education in helping individuals to use information and communication technologies (ICT) effectively, in preparing for rapid adaptation to changes resulting from digitalisation, and for playing an active part in shaping the process of digitalisation; further underlines that sufficient infrastructure offering high-quality and accessible connectivity for all citizens is of great importance and that its roll-out should be accompanied by proper training to ensure efficient usage; highlights the need to close the digital divide and ensure digital accessibility by creating an investment-friendly environment and fostering digital infrastructure such as very high-capacity broadband networks; emphasises the importance of the Connecting Europe Facility in providing the physical infrastructure for high-capacity broadband networks; highlights the importance of increased financing and investment in order to achieve the

¹ Life skills are defined by the World Health Organisation as 'the abilities for adaptive and positive behaviour that enable individuals to deal effectively with the demands and challenges of everyday life [...] a core set of life skills are: decision making, problem solving, creative thinking, effective communication, interpersonal relationship skills, self-awareness, empathy, coping with emotions, coping with stress'.

² Council Recommendation on Key Competences for Lifelong Learning adopted on 22 May 2018.

EU's strategic connectivity targets;

5. Stresses the vital role of very high-capacity broadband networks, cybersecurity, blockchain and artificial intelligence as the backbone of future education and training schemes; underlines the importance of introducing coding classes in all schools, universities and colleges, and encouraging schools to participate in the EU Code Week; points out that coding classes can help avert the danger of scams and fake news online and on social networks, and emphasises the need for access to classes for people who may not have access to these schemes through education systems; stresses the significance of lifelong learning with a view to developing the digital skills and tools necessary to underpin processes linked to artificial intelligence and cybersecurity; points out that cybersecurity-related teaching programmes should be introduced in academic and vocational training curricula; calls for sufficient investments in research and innovation, e.g. in 5G, artificial intelligence and cybersecurity;
6. Stresses the urgent need to develop the full range of digital skills that individuals and companies will require in an increasingly digital economy; highlights the role that Digital Innovation Hubs can play in this context; emphasises the importance of digital competencies in assessing the reliability of online information; stresses the significance of designing special training solutions for people working in small and medium-sized enterprises (SMEs), of re-training unemployed people and of developing digital training content and infrastructure accessible to all; underlines the need to strengthen connections and active dialogue between education and employment and recognises the importance of fostering work-based learning apprenticeships; notes that digital transformation will be a factor in the disappearance of some of today's jobs and the emergence of new jobs in the future; recalls the need to encourage young people to pursue ICT and STEM (science, technology, engineering and mathematics) studies; welcomes, as a step in this direction, the Digital Opportunity traineeship initiative, and underlines that equal access and the learning of digital skills for women and girls should be incorporated and encouraged; emphasises that recommendations for a minimum level of digital competencies that students should acquire during their studies should be drawn up and that privacy, security and basic safeguards to protect against malicious activity should have a place in the learning curricula; stresses the need to boost entrepreneurial competences and an entrepreneurial mind set and to support digital entrepreneurship; underlines the role of the European Institute of Innovation and Technology and the Knowledge and Innovation Communities in bringing together business, research and education into a knowledge triangle; highlights the role of campus incubators and stresses the need to develop more university-linked incubation programmes in European universities;
7. Stresses that the digital transformation within the workplace encompasses changes and challenges of adaptation for the human resources themselves; highlights, therefore, the importance of supporting training and lifelong learning focusing on the development of digital skills in synergy with life skills and key competences, which are essential for the resilience, empowerment and well-being of the workforce in transition;
8. Recalls that digital technology and access to data are enablers of innovation in education; stresses the importance of open data as an educational resource, as well as a tool for further developing Open Science.

INFORMATION ON ADOPTION IN COMMITTEE ASKED FOR OPINION

Date adopted	9.10.2018
Result of final vote	+: 48 -: 1 0: 3
Members present for the final vote	Zigmantas Balčytis, Bendt Bendtsen, Jonathan Bullock, Jerzy Buzek, Reinhard Bütikofer, Angelo Ciocca, Edward Czesak, Jakop Dalunde, Christian Ehler, Fredrick Federley, Ashley Fox, Theresa Griffin, Igor Gräzin, András Gyürk, Hans-Olaf Henkel, Eva Kaili, Barbara Kappel, Krišjānis Kariņš, Seán Kelly, Jeppe Kofod, Jaromír Kohlíček, Peter Kouroumbashev, Zdzisław Krasnodębski, Miapetra Kumpula-Natri, Christelle Lechevalier, Tilly Metz, Csaba Molnár, Nadine Morano, Dan Nica, Morten Helveg Petersen, Miroslav Poche, Carolina Punset, Julia Reda, Paul Rübig, Sven Schulze, Dario Tamburrano, Patrizia Toia, Vladimir Urutchev, Kathleen Van Brempt, Martina Werner, Lieve Wierinck, Flavio Zanonato, Carlos Zorrinho, Pilar del Castillo Vera
Substitutes present for the final vote	Pilar Ayuso, Pervenche Berès, Tamás Deutsch, Jens Geier, Françoise Grossetête, Benedek Jávor, Werner Langen, Sofia Sakorafa

FINAL VOTE BY ROLL CALL IN COMMITTEE ASKED FOR OPINION

48	+
ALDE	Fredrick Federley, Igor Gräzin, Morten Helveg Petersen, Carolina Punset, Lieve Wierinck
ECR	Edward Czesak, Ashley Fox, Hans-Olaf Henkel, Zdzisław Krasnodębski
ENF	Angelo Ciocca, Barbara Kappel, Christelle Lechevalier
PPE	Pilar Ayuso, Bendt Bendtsen, Jerzy Buzek, Pilar del Castillo Vera, Tamás Deutsch, Christian Ehler, Françoise Grossetête, András Gyürk, Krišjānis Kariņš, Seán Kelly, Werner Langen, Nadine Morano, Paul Rübig, Sven Schulze, Vladimir Urutchev
S&D	Zigmantas Balčytis, Pervenche Berès, Jens Geier, Theresa Griffin, Eva Kaili, Jeppe Kofod, Peter Kouroumbashev, Miapetra Kumpula-Natri, Csaba Molnár, Dan Nica, Miroslav Poche, Patrizia Toia, Kathleen Van Brempt, Martina Werner, Flavio Zanonato, Carlos Zorrinho
VERTS/ALE	Reinhard Bütikofer, Jakop Dalunde, Benedek Jávor, Tilly Metz, Julia Reda

1	-
EFDD	Dario Tamburrano

3	0
EFDD	Jonathan Bullock
GUE/NGL	Jaromír Kohlíček, Sofia Sakorafa

Key to symbols:

+ : in favour

- : against

0 : abstention