



TEXTS ADOPTED

P9_TA(2021)0095

Shaping digital education policy

European Parliament resolution of 25 March 2021 on shaping digital education policy (2020/2135(INI))

The European Parliament,

- having regard to Articles 165 and 166 of the Treaty on the Functioning of the European Union (TFEU),
- having regard to the Charter of Fundamental Rights of the European Union, in particular Article 14 thereof,
- having regard to Article 2 of the Protocol to the Council of Europe Convention for the Protection of Human Rights and Fundamental Freedoms, concerning the right to education,
- having regard to Directive (EU) 2019/790 of the European Parliament and of the Council of 17 April 2019 on copyright and related rights in the Digital Single Market and amending Directives 96/9/EC and 2001/29/EC¹,
- having regard to the motion for a resolution of the Committee on Culture and Education of 22 September 2020 on the future of European education in the context of COVID-19,
- having regard to its resolution of 17 April 2020 on EU coordinated action to combat the COVID-19 pandemic and its consequences²,
- having regard to its resolution of 11 December 2018 on education in the digital era: challenges, opportunities and lessons for EU policy design³,
- having regard to its resolution of 12 June 2018 on modernisation of education in the EU⁴,
- having regard to its resolution of 14 September 2017 on a new skills agenda for

¹ OJ L 130, 17.5.2019, p. 92.

² Texts adopted, P9_TA(2020)0054.

³ OJ C 388, 13.11.2020, p. 2.

⁴ OJ C 28, 27.1.2020, p. 8.

Europe¹,

- having regard to the Council conclusions of 9 June 2020 on shaping Europe’s digital future²,
- having regard to the Council conclusions of 26 May 2020 on European teachers and trainers for the future³,
- having regard to the Council conclusions of 18 November 2019 on the key role of lifelong learning policies in empowering societies to address the technological and green transition in support of inclusive and sustainable growth⁴,
- having regard to the Council recommendation of 22 May 2018 on key competences for lifelong learning⁵,
- having regard to the Council recommendation of 22 May 2017 on the European Qualifications Framework for lifelong learning and repealing the recommendation of the European Parliament and of the Council of 23 April 2008 on the establishment of the European Qualifications Framework for lifelong learning⁶,
- having regard to the Council conclusions of 30 May 2016 on developing media literacy and critical thinking through education and training⁷,
- having regard to the Council recommendation of 19 December 2016 on upskilling pathways: new opportunities for adults⁸,
- having regard to the Council conclusions of 27 May 2015 on the role of early childhood education and primary education in fostering creativity, innovation and digital competence⁹,
- having regard to the Council recommendation of 20 December 2012 on the validation of non-formal and informal learning¹⁰,
- having regard to the Commission communication of 30 September 2020 entitled ‘Digital Education Action Plan 2021-2027: Resetting education and training for the digital age’ (COM(2020)0624) and to the accompanying staff working document (SWD(2020)0209),
- having regard to the Commission communication of 30 September 2020 on achieving the European Education Area by 2025 (COM(2020)0625),

¹ OJ C 337, 20.9.2018, p. 135.

² OJ C 202 I, 16.6.2020, p. 1.

³ OJ C 193, 9.6.2020, p. 11.

⁴ OJ C 389, 18.11.2019, p. 12.

⁵ OJ C 189, 4.6.2018, p. 1.

⁶ OJ C 189, 15.6.2017, p. 15.

⁷ OJ C 212, 14.6.2016, p. 5.

⁸ OJ C 484, 24.12.2016, p. 1.

⁹ OJ C 172, 27.5.2015, p. 17.

¹⁰ OJ C 398, 22.12.2012, p. 1.

- having regard to the Commission communication of 1 July 2020 on a European Skills Agenda for sustainable competitiveness, social fairness and resilience (COM(2020)0274),
 - having regard to the Commission communication of 17 January 2018 on the Digital Education Action Plan (COM(2018)0022),
 - having regard to the Commission communication of 14 November 2017 on strengthening European identity through education and culture (COM(2017)0673),
 - having regard to the Commission communication of 30 May 2017 on school development and excellent teaching for a great start in life (COM(2017)0248),
 - having regard to the Commission communication of 7 December 2016 on improving and modernising education (COM(2016)0941),
 - having regard to the report by the Organization for Economic Co-operation and Development (OECD) entitled ‘Education responses to COVID-19: an implementation strategy toolkit’,
 - having regard to the report by the OECD entitled ‘OECD Skills Outlook 2019: Thriving in a Digital World’,
 - having regard to the report by the UN Educational, Scientific and Cultural Organization (UNESCO) entitled ‘Skills for a connected world’,
 - having regard to the report by the European Centre for the Development of Vocational Training of 4 June 2020 entitled ‘Digital gap during COVID-19 for VET learners at risk in Europe’,
 - having regard to Rule 54 of its Rules of Procedure,
 - having regard to the opinion of the Committee on Employment and Social Affairs,
 - having regard to the position in the form of amendments of the Committee on Women’s Rights and Gender Equality,
 - having regard to the report of the Committee on Culture and Education (A9-0042/2021),
- A. whereas inclusive, equitable and properly funded quality education is a key driver of the green and digital transitions; whereas education represents an investment in our common future, contributing to social cohesion, sustainable economic growth, job creation and employment and thereby to a fair a society; whereas education is a critical instrument in individual development and self-realisation and enhances participation in democratic life;
- B. whereas equality between women and men is a core value of the EU enshrined in Articles 8 and 19 TFEU;
- C. whereas digital technologies are reshaping society, making basic digital skills and digital literacy now essential for all citizens;

- D. whereas the first principle of the European Pillar of Social Rights (EPSR) outlines the importance of maintaining and acquiring skills to ‘ensure equal opportunities and access to the labour market’ and stipulates that everyone has the right to ‘quality and inclusive education, training and lifelong learning in order to maintain and acquire skills that enable them to participate fully in society and manage successfully transitions in the labour market’;
- E. whereas mastering basic transversal skills, such as numeracy, critical thinking and social communication skills, is a fundamental prerequisite for the acquisition of digital skills and competences; whereas, at the same time, there will be an increased need in the future for digital skills, such as coding, logistics or robotics, which will impact not only IT education, but the curriculum as a whole; whereas the Digital Competence Framework for Citizens acknowledges the importance of soft skills, including communication, collaboration and content creation, which are often taught through the humanities, arts and social sciences; whereas an interdisciplinary approach to the study of science, technology, engineering, arts and mathematics (STEAM) can lead to a better, more human-centric design of digital solutions;
- F. whereas basic education in cyber hygiene, cyber safety, data protection and media literacy must be appropriate to the age and oriented to the development of learners in order to help them become critical learners, active citizens, internet users and shapers of a democratic digital society, make informed decisions, and be aware of and able to counter the risks associated with the internet, such as online disinformation, harassment and personal data breaches; whereas cybersecurity-related teaching programmes should be introduced in curricula;
- G. whereas the digital transformation is shaping the labour market, with, according to Commission estimates¹, in a number of job categories as much as 90 % of jobs expected to require some form of digital skills in the future and 65 % of children entering primary school today ultimately expected to work in jobs that do not yet exist; whereas advanced digital skills are in high demand, which will likely entail an increased focus on the STEAM fields;
- H. whereas the impact of new technologies, such as robotics and Artificial Intelligence (AI), on employment needs to be fully explored; whereas it is already clear that digital proficiency is quickly becoming ubiquitous skill required for jobs with little or no previous connection with the digital sphere, including manual labour jobs; whereas reskilling and upskilling are necessary to enable people to adapt to the changing needs and realities of an increasingly digitised labour market; whereas the COVID-19-driven shift to teleworking presents new digital skills, communication and other challenges; whereas employers should provide digital training and digital equipment to employees, paying due attention to specific needs, such as the provision of reasonable facilities for persons with disabilities; whereas the vocational education and training (VET) sector plays a crucial role in equipping future workers with the skills and qualifications they need for the evolving labour market;
- I. whereas 42 % of Europeans still lack even basic digital skills², with significant

¹ <https://ec.europa.eu/digital-single-market/en/news/ict-work-digital-skills-workplace>, <https://futureskills.pearson.com/research/assets/pdfs/technical-report.pdf>

² Digital Economy and Society Index (DESI) Report 2020, European Commission.

disparities within and between Member States and based on socioeconomic status, age, gender, income, level of education and employment; whereas only 35 % of people aged 55-74 possess basic digital skills, compared to 82 % of 16- to 24-year-olds¹, making older people more vulnerable to digital exclusion; whereas the Skills Agenda aims to ensure that 70 % of 16- to 74-year-olds have basic digital skills by 2025, an average increase of two percentage points per year as against an annual increase of 0,75 percentage points between 2015 and 2019; whereas learners will never be on an equal footing to acquire digital skills, with such large gaps in basic skills levels;

- J. whereas inequalities in access to digital infrastructure and equipment persist, with rural and remote areas and deprived urban areas often suffering from poor connectivity and lower-income households often not having access to computers; whereas 10 % of households in rural areas of the EU do not have access to fixed-line internet and a further 41 % are not covered by broadband;
- K. whereas there is a digital skills gender gap of 11 %²; whereas, according to Eurostat, only one in three STEM graduates is a woman, despite 54 % of higher education students being female; whereas attitudes to STEM subjects do not differ between boys and girls in primary education, but interest among girls appears to wane from the age of 15; whereas less than three per cent of teenage girls express an interest in working as an ICT professional;
- L. whereas gender disparities in education and training translate into the workplace, with only 17 % of jobs in the ICT sector held by women and the share of men working in a digital sector 3,1 times greater than that of women³, the gender gap is particularly evident in the AI sector, where only 22 % of professionals globally are female; whereas such disparities impact the scope for women to work in well-paid, future-oriented sectors and similarly limit diversity within digital sector, for example with respect to technology design;
- M. whereas it is important to understand the factors that influence girls 'and women's education and career choices, including gender bias, and to motivate them to pursue STEM and ICT studies and careers; whereas, in this regard, it is necessary to further develop solutions for career guidance;
- N. whereas digital technologies harbour substantial potential for teachers, trainers and educators and learners across education sectors and settings in terms of accessible, open, social and personalised technologies that can bring about more inclusive learning pathways; whereas smart use of digital technologies, driven by innovative teaching methods and empowering learners, can equip citizens with core competences for life, such as creative thinking, curiosity and problem-solving skills; whereas the use of digital must never be considered as a cost-saving measure; whereas teachers' freedom to choose the best combination of teaching methods and content should remain at the heart of the educational process;
- O. whereas teacher-student interaction is crucial to the well-being and development of

¹ DESI Report 2020.

² European Commission 'Women in Digital Scoreboard' 2019.

³ Commission communication of 5 March 2020 entitled "A Union of Equality: Gender Equality Strategy 2020-2025" (COM(2020)0152).

students and in-person learning must therefore remain at the core of education provision; whereas digital tools and technologies cannot substitute the role of the teacher, but nevertheless offer a range of benefits as a complement to in-person learning, including in the form of hybrid models of education; whereas excessive use of technology and digital equipment can cause problems, such as sleep deprivation, addiction and a sedentary lifestyle; whereas special attention must be paid to younger children and learners with special educational needs or disabilities, for whom online learning poses a particular challenge;

- P. whereas digital technologies should be introduced in a learner-focused, age-appropriate and development-oriented way; whereas digital learning strategies need to take into account research on the effects that early use of digital technology may have on the development of young children;
- Q. whereas the development of digital infrastructure and technologies in education requires significant public investment, including in IT staff in educational establishments; whereas private investment also contributes substantially to developing e-learning solutions;
- R. whereas access to digital infrastructure, including high-speed internet and to equipment and content of high quality and tailored to educational needs is a prerequisite for digital learning; whereas the COVID-19 pandemic and the sudden digital transition to distance or online education laid bare the gaps in access and connectivity within and between the Member States, with different effects on the different education sectors; whereas as many as 32 %¹ of pupils and students in some Member States did not have access to the internet and digital tools during the COVID-19 lockdown in the spring of 2020;
- S. whereas the sudden shift to online and distance learning also revealed a lack of readiness within education systems in most parts of Europe and gaps in the digital skills of teachers, educators, parents and learners and in their ability to use digital technologies effectively and safely; whereas, prior to the crisis, only 39 % of teachers in the EU felt well or very well prepared to use digital technologies for teaching, with significant differences among Member States; whereas teachers have nonetheless shown that they can adapt to profound changes within education systems if they are empowered through sufficient flexibility and autonomy and make best use of the innovation potential of online and distance learning;
- T. whereas the shift to online and distance learning has exacerbated existing inequalities, leaving disadvantaged and vulnerable learners, learners with special educational needs and learners with disabilities further behind, increasing drop-out rates across education sectors, and revealing an absence of pastoral and social support in the digital environment; whereas inequalities in early childhood have negative impact on learning outcomes and employment prospects in later life; whereas there is an urgent need to improve the quality and inclusiveness of online education;
- U. whereas the COVID-19 pandemic will herald profound changes for our way of life and has underscored the need to deliver full-scale quality education for all in order to

¹ <https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/how-families-handled-emergency-remote-schooling-during-covid-19-lockdownspring-2020>

prepare for potential future crises, enhance longer-term resilience in education systems and lay the foundations for a successful digital transition;

- V. whereas the content of teaching and the organisation of education systems is a national competence, new challenges nevertheless call for effective coordination, and where appropriate European Union digital education policies and tools for the medium and longer term as an important dimension of the European Education Area;
- W. whereas availability of quality online education is often not an alternative, but the only option for certain groups such as those working full-time or out of work in rural and remote regions or for disabled people;
- X. whereas education is an investment in the future and an important instrument for the development and self-realisation of each individual; whereas digital education could help to address challenges such as disinformation, radicalisation, identity and data theft, cyberbullying and online scams; whereas education, training and lifelong learning will play a key role in the just transition to the digital economy;

The revised Digital Education Action Plan: vision, governance, funding and measuring performance

1. Highlights that a rights-based approach to digital education, in accordance with the European Pillar of Social Rights, must be guiding principle in digital education policy to ensure that the right to inclusive and quality education for all becomes a reality; underlines that the post-pandemic recovery and revitalisation of education policy is inextricably linked to other challenges the Union and the world are facing and emphasises the need to link digital education policy to other policy areas to promote a more inclusive, gender-balanced, innovative and greener society;
2. Welcomes, in this regard, the updated Digital Education Action Plan and its extended scope and ambition, with specific targets addressing notably persistent gaps in digital skills, the promotion of quality computer and IT education, or better connectivity in schools, as a further step towards a more comprehensive digital skills and education strategy; considers that the Plan will have been a success if, by its end, digital education has truly become part of education policy with clear, consistent and positive results in terms of availability, access, quality and equity across the Union; acknowledges the different starting points of Member States in this process, which should be factored into the roll-out of the Plan;
3. Commends the decision to align the Plan with the 7-year multi-annual financial framework (MFF) since this enables a longer-term perspective and ties it in with the relevant funding instruments; underlines the importance of the Plan in delivering the European Education Area and, in turn, the importance of the European Education Area in delivering the Plan, which should ensure transparency and accountability in its implementation;
4. Notes, however, that effective delivery of the Plan also depends on coordination across a broad range of programmes and among the Member States; calls on the Commission to ensure effective synergies between the different programmes and more consistent and effective coordination across all relevant digital education policies at the EU level with a view to reducing fragmentation and avoiding overlaps between national and European

funding instruments and policies and thereby increasing impact;

5. Points to the contribution of the European Structural and Investment Funds, the Connecting Europe Facility, Horizon Europe, the European Solidarity Corps, Creative Europe and Erasmus+ to funding different facets of the Plan; welcomes the significantly reinforced budget for the Erasmus+ programme and guards against overburdening it with new policy ambitions given that the overriding focus must be to make the programme more inclusive;
6. Points to the importance of the ‘Connect’ and ‘Reskill and upskill’ investment priorities in the Recovery and Resilience Facility for driving the digital education agenda; encourages the Member States to dedicate at least 10 % of the Facility’s funding to education; reiterates its position in encouraging the Member States to significantly increase public spending on education in recognition of the key role education plays in strengthening growth, creating jobs and boosting economic and social resilience; recalls as well that at least 20 % of the funds to be supplied under the Recovery and Resilience Facility (RRF) have been earmarked for the digital transition and urges the Member States to use funds under the Facility to strengthen the digital capacity of education systems and invest, for example, in digital infrastructure for schools, pupils and vulnerable groups, particularly in excluded areas;
7. Underlines the value of pilot projects and preparatory actions (PPAs) initiated by Parliament in ensuring more Union-wide cooperation to tackle the educational gaps between Member States, regions and rural and urban areas, for example the new preparatory action aimed at increasing accessibility to educational tools in areas and communities with low connectivity or access to technologies; calls for their the mainstreaming of successful PPAs into Union programmes; welcomes, in this regard, the inclusion of a media literacy action in the new Creative Europe programme, building on the successful ‘Media literacy for all’ pilot project and preparatory action and calls for sufficient funding to ensure the new action is effective;
8. Notes that the new Plan sets specific targets to address persistent digital education gaps, such as with respect to connectivity, digital skills and online learning content; welcomes the Commission’s scheduled mid-term review of the plan and its intention to ramp up data collection; calls on the Commission to develop comprehensive monitoring system for all digital education policies which should be used to share good practice across the EU and feed into the mid-term review; reiterates the need for a clear implementation timetable and for clear benchmarks and milestones to be presented to both Parliament and Council; remains convinced that the plan needs a clearer governance and coordination structure, in which Parliament should be involved, to monitor developments and performance on an ongoing basis; calls on the Commission, therefore, to establish a forum bringing together the Member States, Parliament and other relevant stakeholders and experts, including education providers and civil society organisations;
9. Urges the Commission to increase the role and visibility of education, including digital education, in the European Semester exercise and include in its focus references to the economic impact of education to include social objectives and the quality of educational provision; notes that Member States will come out of the COVID-19 crisis with historically high debt levels; points out that the classification of education as expenditure in national accounting has sometimes led to a sizeable cut in education

budgets in previous crises; stresses that the digital transition in education will not be possible without substantial investment;

10. Notes that the COVID-19 crisis has emphasised the need for the Member States to coordinate digital education policies and measures more effectively and to share best practices through a multi-stakeholder approach to education policy to ensure that it meets the needs of EU citizens and put learners at the centre; welcomes, therefore, the Commission's commitment to establish a European Digital Education Hub as a first step towards a co-creation process and ongoing monitoring system that links national and regional digital education strategies and involves key stakeholders and experts, including civil society organisations, representing different approaches from inside and outside mainstream education; considers that the new hub offers a channel through which the Member States should promote cooperation between education and training institutions to improve digital education provision; commends the ambition to use the hub to establish a strategic dialogue with the Member States on the key enabling factors for successful digital education in view of a Council Recommendation; urges the Commission to work quickly to bring forward the date of publication of the draft Recommendation to 2021;
11. Calls on the Commission, while respecting the principle of subsidiarity to supervise implementation at national level and ensure fair representation and independence within the hubs and advisory services and in stakeholder consultation; calls on the Commission to fully involve Parliament increasing European and national hubs and advisory services and in nominating relevant stakeholders; reminds the Commission, when it develops the concept for the planned European Exchange Platform, to avoid overlap and duplication with the aims of the hub;
12. Underlines the need for the European Union to act as a global reference in terms of quality digital education and calls on the Commission to work closely with relevant global and regional institutions and stakeholders to boost access to quality digital education across the world;
13. Underscores the pivotal role of research in delivering the plan and achieving effective and appropriate digital education for all and welcomes the Commission's recognition of this; calls on the Commission and the Member States to invest more in interdisciplinary research to assess the long-term impacts of digitalisation on learning and the effectiveness of digital education policies, thereby informing their future design and implementation, including by anticipating new types of jobs and skills and adjusting education curricula accordingly; underlines, the need for ongoing research into the various impacts of digital technologies on the education and development of children, linking education sciences, pedagogy, psychology, sociology, neuroscience and computer science so as to achieve as deep an understanding as possible of how the minds of children - and adults - respond to the digital environment and the attendant digital education challenges;

Fostering a high-performing digital education ecosystem

14. Underlines that the COVID-19 pandemic has shown that not all learners can access and therefore benefit from digital education and distance and online learning; notes that gaps exist between and within the Member States and have a disproportionate impact on people from disadvantaged backgrounds and those living in remote or rural areas;

deplores the persistent digital divide in the Union; regrets that in some Member States, efforts to provide access to quality digital education have failed, leaving too many pupils without access to education for several months; shares the Commission's analysis that fast and reliable internet and quality digital equipment in educational establishments, non-formal settings and the home are prerequisites for effective digital education; points out that, by the same token, certain Member States are far ahead in providing digital infrastructure and equipment and therefore in delivering digital education solutions; underscores the need to counter the digital divide as an absolute priority and believes that public-private partnerships - driven by the needs of educational establishments can speed up the pace of delivering solutions;

15. Insists that broadband should be considered a public good and its infrastructure adequately funded to ensure that it is universally accessible and affordable as a critical step in closing the digital divide; notes, furthermore, the potential that the deployment of 5G may offer and calls on the Commission to study the potential contribution of 5G to digital education initiatives; calls for specific measures and funding schemes to enhance access for all educational institutions, especially those in remote, rural and mountain areas with low connectivity and limited access to emerging technologies such as artificial intelligence (AI), robotics, block chain, open source, new educational devices or gamification, in the light of their growing importance and potential;
16. Welcomes the plan's focus on supporting school and university connectivity through the Connecting Europe Facility and efforts to publicise EU funding opportunities; calls on the Commission to work closely with Member States, local authorities and stakeholders to ensure that EU support dovetails with national schemes, in particular to support disadvantaged groups; calls on the Commission to target support beyond schools to reach all formal and non-formal educational establishments; recalls the need for educational establishments to benefit from support from trained staff to oversee networks and applications and to provide training and assistance on data protection;
17. Stresses the importance of the Union taking the lead in digital education by facilitating access to innovations and technologies for teachers, learners and parents; calls, in this regard, for new initiatives in education by making full use of new technologies such as AI and robotics, that will also raise awareness about the opportunities and challenges associated with them in educational settings; recalls that an ethical and human-centric approach should be ensured for the use of AI and robotics; notes that smart use of AI can ease the workload of staff, make educational content more engaging, facilitate learning in a number of disciplines and support more tailored teaching methods adjusted to the needs of individual students; is concerned by the lack of AI-specific higher education programmes and research in the Union, which risks undermining the EU's competitive edge; calls for increased public investment in AI;
18. Encourages the European Commission and the Member States to provide schools (teachers and students) not only with technical support and Internet connection, but also a necessary support on safe and reliable software and to promote flexible models of education and support for distance learners using such means as e-resources, e-materials, videos, e-mentorship and free online training; highlights, in that regard, that local cultural and community institutions, such as libraries and museums, are key providers of such digital resources; warns against the negative effects of the vendor lock-ins of educational resources on pedagogical independence and calls on the Commission and the Member States to guarantee such independence from any

interference or interests; insist on the need for an open and transparent digital education ecosystem with regard to content, devices and technologies; underlines that open technologies support a sense of cooperation and that free and open source solutions, reuse of content in the public domain and interoperable hardware and software solutions enhance access and create a more balanced digital space;

19. Underlines the need to recognise the legal and ethical principles related to intellectual property in the context of the increased creation and dissemination of educational digital content; welcomes and endorses the Intellectual Property in Education network managed by the European Union Intellectual Property Office and encourages the development of Intellectual Property-related skills among learners and teachers; recalls the exception to copyright with respect to the use of works and other subject matter in digital and cross-border teaching activities laid down in Article 5 of Directive (EU) 2019/790;
20. Points to interesting innovative initiatives making the online environment and playground safe, interesting and fun, at every stage of education; underlines the relevance of bringing together pedagogical, cognitive and psychological approaches to education and adapting online and offline formats accordingly; notes in this respect the approach proposed in the European strategy for early childhood education and care;
21. Recalls the importance of offering teachers, students and parents high-quality, accessible digital education content from diversified sources and encourages the Member States to earmark funding for the acquisition of professional and secure digital educational resources developed using European innovation, including quality educational content co-created with experts; calls on the Member States to promote initiatives enabling businesses and civil society organisations to share high-tech innovation with the education community;
22. Considers that the Union can play a key role in helping develop and make available high-quality educational content; notes with satisfaction the growing number of digital education platforms being set up to enable access to resources and the sharing of good practices, such as eTwinning, the Electronic Platform for Adult Learning in Europe (EPALE) and the School Education Gateway; calls on the Commission to further promote and scale up such successful initiatives through relevant programmes such as Invest EU and Erasmus+ and for the Member States to better tap into their potential; considers the European exchange platform to have potential as a tool to ensure better cooperation between stakeholders and education actors at European level and calls on the Commission to complete its planned feasibility study with due speed;
23. Encourages the Member States to embrace innovation and digital technologies in their education and training systems in a smart, learner-centred way to achieve an effective blended learning approach going forward; recalls, nevertheless, the fundamental importance of in-person education and stresses that digital tools should be used to complement and enhance classroom teaching; considers that there is a need to reflect on the negative impact of prolonged “screen time” on the well-being of learners; underlines that the Covid-19 pandemic has exposed clear gaps in education provision that online learning cannot easily fill and needs to further address, notably with respect to school meals, pastoral support and physical exercise;

Enhancing digital skills and competences for the digital transformation

24. Believes that embracing and maximising the potential of digital technologies has to go hand-in-hand with modernising existing curricula and learning and teaching methods; stresses in this regard the importance of providing financial support for training courses designed for teachers; insists, therefore, that greater attention be devoted to accessible teacher training as the plan is rolled out so as to ensure that teachers and educators not only possess digital skills, but can also teach them; encourages, in this regard, investments in specialisation courses in digital teaching skills for both teachers and IT professionals aspiring to teaching; highlights the value of mentorship as a training and development tool; stresses the essential role of Erasmus+ and teacher mobility for the acquisition of skills; notes the potential of the future Teacher Academy and calls on the Commission to present to the Parliament a clear concept and budget; calls for a pan-Union initiative to develop new pedagogical and assessment methods for the digital environment, recognising specific digital challenges such as asynchronous learning and the importance of fostering critical engagement;
25. Underlines the increasingly important role played by parents, families and tutors in distance learning and the need for them to have good internet, digital and technical skills as well as the appropriate equipment and calls for them to be given special training and support mechanisms; stresses the need to assist families with digital tools in order to increase access to remote education calls on the Commission to conduct a dedicated study on digital parenting¹ to develop a consistent and effective approach across Member States to help parents;
26. Underlines the challenge of harmful and illegal content and activities in the digital environment, including in terms of mental health and well-being, such as online harassment including cyber threats and cyberbullying, child pornography and grooming, data and privacy breaches, dangerous online games, disinformation,; warmly welcomes, therefore, the increased focus on digital and information literacy through education and training in the revised plan; believes that healthcare professionals, educational institutions, civil society and non-formal education providers, in partnership with parents, need to develop an age-appropriate curriculum to enable learners to make informed and appropriate choices and avoid harmful behaviour;
27. Recalls that it is essential for people to have the tools and skills to navigate the various threats in the digital environment and in particular to detect and critically appraise disinformation and fake news; welcomes, in that regard, the swift adoption of the recent Media Action Plan and its focus on media literacy and calls on the Commission to review regularly the Code of Practice on Disinformation and take adequate measures to ensure social media counters online disinformation; looks forward to the planned guidelines for teachers and educational staff on fostering digital literacy and tackling disinformation; calls on the Commission to be more ambitious and to work with national and local stakeholders to launch large-scale digital literacy campaigns; notes the importance of widely promoting existing initiatives such as EU Code Week and the Safer Internet Day;
28. Highlights that any development in the field of digital education must go hand-in-hand with a robust framework of data protection and avoid any commercial exploitation of

¹ Digital parenting describes parental efforts and practices for comprehending, supporting, and regulating children's activities in digital environments, helping them notably to use the internet safely.

learners' data; stresses that the highest safeguards must apply to the data of minors, including for research and teaching purposes; calls on the Commission, in cooperation with the European Data Protection Board (EDPB), to address the specific nature of educational data and the data relating to pupils and learners;

29. Stresses that traditional, humanistic and soft skills, such as social skills, empathy, problem-solving and creativity, should continue to be nurtured as part of efforts to teach digital skills and literacy, notably through large-scale digital literacy campaigns; stresses the importance of the digital dimension of citizenship education and regrets the limited ambitions of the new Digital Education Action Plan with regard to the promotion of digital citizenship;
30. Recalls the need for advanced digital skills and encourages the Member States to set up national programmes in education that would promote an increase in the number of IT students and graduates; stresses that such classes could be developed under the umbrella of high-tech companies and universities;
31. Highlights the importance of green education and education about the environment and calls for the development of specially designed curricula across Europe taking into consideration the environmental impact of digital education;
32. Stresses that, in line with the European Social Partners' Framework Agreement on Digitalisation, companies deploying new and emerging technologies have a responsibility to provide adequate reskilling and upskilling to all employees concerned so they can learn how to use digital tools, adapt to the changing needs of the labour market and stay in employment; stresses the role of social partners through collective agreements on the definition and regulation of digital skills and continuing training, in identifying skills needs, in developing on-the-job training and in updating education and training curricula; recalls the new working realities generated by the pandemic, such as teleworking, and encourages educational and training institutions and employers to put in place proper training to prepare people for this new working environment;
33. Underscores the importance of digital skills assessment and monitoring and points in that regard to the value of existing tools, such as the European Digital Competence Framework and the SELFIE self-assessment tool; welcomes the extension of SELFIE to teachers; calls on the Commission to boost the currently limited take-up of such tools;
34. Stresses, furthermore, the need for better, more innovative recognition, validation and certification - and therefore portability - of digital skills, qualifications and credentials; applauds the plan to develop a European Digital Skills Certificate as a tool to facilitate validation and portability in line with the Digital Competence Framework; recalls the need for the scheme to be developed in close cooperation with the Member States to avoid duplication and overlap with existing schemes; calls on the Commission to build the Certificate into Europass and potentially the future European Student Card;
35. Welcomes the Commission's efforts to digitise education and qualifications, including the new Europass platform and the planned Europass Digital Credential Infrastructure; draws attention, at the same time, to the need to improve the functionality of the Europass platform as regards searching for and receiving job and course offers, to carry out relevant updates of the information on the platform concerning current courses, training, job offers, and to designate the institutions responsible for this process; calls on

the Member States to promote the new Europass platform better in education and training institutions and among their staff and with employers;

36. Underlines the need to enhance digital resources, tools and mechanisms at Union level to open up lifelong learning opportunities for all and to enable full and quality access to higher education courses and materials; takes note of the development of a new, globalised digital environment and market for higher education and the need for higher education organisations in Europe to remain relevant and thrive in this environment; calls on the Commission and Member States to create synergies among universities via an Online European University platform for diverse, multilingual distance and online education content and programmes to be accessible across Europe;
37. Recalls the vital role that VET and adult education play in providing reskilling and upskilling opportunities through a lifelong learning approach; welcomes the Council recommendation on VET for sustainable competitiveness, social fairness and resilience and its overall aims of modernising EU policy on VET, streamlining European cooperation in the process and simplifying VET governance; calls on the Commission to adopt a holistic approach to VET and adult learning that encompasses formal, non-formal and informal learning and enables learners to acquire a diverse range of skills that are important for the digital and green transitions, contribute to social inclusion, active citizenship and personal development and enable people to adapt to an evolving labour market; underlines the importance of green skills acquisition;
38. Underlines the difficulties faced by VET institutions, which rely on hands-on training, in adapting to the digital environment; calls for adequate solutions and proper funding in order to ensure that VET education can be effectively delivered; welcomes the planned expansion of the Digital Opportunity traineeships to VET learners and to teachers, trainers and educational staff;
39. Recalls that digital skills acquisition is a lifelong endeavour and that policies should therefore focus on all demographics, not only those of working age; stresses that this requires a cross-sectoral, holistic approach to education, based on the recognition that learning happens within and outside compulsory education and frequently takes place in non-formal and informal settings; calls, therefore, for support to non-formal learning providers to increase capacity and resources to be able to offer accessible quality digital education and training; calls on the Commission to factor in differing levels of technological advancement between education sectors and institutions and to pay particular attention to harder-to-reach areas and groups when producing recommendations and guidance;
40. Warns that social and educational inequalities in early childhood have a negative impact on educational attainment and employment prospects in later life; reiterates the need for access to quality education and more efforts to develop digital and media skills from an early age; welcomes the announcement of the European Commission to introduce a European Child Guarantee in order to tackle child poverty; urges Member States to allocate a significant amount of the European Social Fund (ESF+) resources under shared management for the implementation of said Guarantee, in particular to support targeted actions and structural reforms that effectively address children's exposure to poverty or social exclusion; recalls that lower educational attainment often equates to lower digital proficiency and welcomes, therefore, the recommendation in the reinforced Youth Guarantee that people not in education, employment or training

undergo a digital skills assessment and receive training; notes the potential of the ESF+ programme to support lifelong learning;

41. Insists on the need to close the digital divide and recalls that special attention should be paid to ensuring access to quality digital education and content and improving digital proficiency for lower-skilled adults, persons with disabilities, persons from vulnerable or marginalised groups, older people and people living in remote or rural areas; points out that, in 2018, just 4,3 % of low-skilled adults used any form of adult learning;
42. Deplores, therefore, the continued absence of measures targeting lower-skilled adult learners and older people in the plan; stresses that this omission undermines the essential lifelong learning dimension of digital education and hampers efforts to ensure that everyone has essential life skills; calls on the Commission, therefore, to work with national, regional and local authorities to put further measures in place to incentivise digital education for adults by making it available and accessible, which would prepare people who have completed their formal education to live and work in the digital environment and ensure that they can truly benefit from and help shape the digital transition;
43. Stresses the importance of developing policies to ensure that people with disabilities have the same opportunities and access to quality digital education; encourages the Member States to work with organisations representing persons with different disabilities to examine the challenges and opportunities posed by digital education and to take account of the specific needs of persons with disabilities when developing effective digital education policies; urges the Commission and Member States to identify and invest in special features for digital education designed and adapted for people with disabilities; considers that digital education offers great opportunities for students with learning difficulties as it allows for tailored pedagogical approaches to their diverse abilities; calls for more investments to provide the support that these groups have too often been lacking;
44. Underscores the need for gender mainstreaming across education, skills and digitalisation policies and specifically within the action plan; considers that digital education has a key role to play in increasing the participation of girls and women in the digital age; stresses that the digital gender gap is an economic, societal and cultural issue and calls on the Commission and the Member States to address that gap through a multi-level, holistic policy approach; salutes the Commission's 'Women in Digital Scoreboard' and underscores the need for the collection of data disaggregated by gender and age to inform understanding of the digital gender divide;
45. Emphasises the need to focus on better inclusion of girls in digital education from a very young age; stresses that a concerted effort is required to encourage and motivate more girls to study STEM and STEAM subjects and to follow coding, computing and ICT courses at school and university; reiterates that the gender gap in education spills over into the jobs market and stresses the need to encourage and facilitate access for women to the high-tech and digital sectors, while also combating the gender pay gap with adequate strategies and funding;
46. Considers that it is essential to create a positive and inclusive environment that promotes female role models to motivate girls to choose STEM, STEAM and ICT subjects and to counter unconscious bias and gender stereotypes with respect to subject

and career choices; believes that the private sector has a role to play, in cooperation with education and training institutions, NGOs and other civil society organisations in developing effective initiatives and campaigns in this area; points to the value of the Commission's "Women in Digital" Task force and the "Digital4Her" initiative;

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47. Instructs its President to forward this resolution to the Council and the Commission.